

An Inquiry into PYP Transdisciplinary Understanding in Two Remote Schools

in Indonesia

by

Anita E. Erikson

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved June 2019
Graduate Supervisory Committee:

Sandra Stauffer, Chair
Margaret Schmidt
Jill Sullivan

ARIZONA STATE UNIVERSITY

August 2019

ABSTRACT

This research investigates teachers' understanding of and feelings about transdisciplinary education and the International Baccalaureate's Primary Years Programme (PYP) as utilized by two remote schools in the province of Papua, Indonesia on the island of New Guinea. A goal of transdisciplinary education is to make learning through inquiry authentic, broad, student-centered, and relevant to the real world. In this study I examine educators' perspectives of how transdisciplinary education is manifested in the two different and yet related elementary schools.

Both schools are supported by a multinational mining company. One school is for expatriate students and the language of instruction is English. The second school, which is for Indonesian students, follows the Indonesian National Curriculum of 2013, with instruction delivered in the Indonesian language by Indonesian teachers. A single expatriate superintendent oversees both schools.

Teacher experience, teacher PYP experience, implications of the PYP framework, cultural implications of the location, and demographics of the school stakeholders were considerations of this research. To acquire data, homeroom teachers, specialist teachers (music, art, physical education, and language), administrators, and PYP coordinators completed a survey and were interviewed. Additional data were collected through document examination and observation.

A broad range of experience with transdisciplinary education existed in both schools, contributing to some confusion about how to implement the PYP framework and varying conceptions of what constitutes transdisciplinary education. Principles of the

PYP were evident in curriculum documents and planning and discussed by the teachers in both schools. Educators at the expatriate school identified with the international-mindedness and approaches to learning in the PYP. Educators at the national school valued to character education elements of the PYP, which they viewed as consistent with Indonesian principles of *pancasila*. The mission and vision statements of the schools in this study aligned with the PYP in different ways. Challenges faced by educators in these schools are acquisition of professional development, experienced teachers and teaching materials due to the remote location of the schools. While transdisciplinary education was described, it was not necessarily implemented. The findings of this study suggest that transdisciplinary education is a mindset that takes time, experience, and commitment to implement.

Keywords: Transdisc education, music education, international education, Primary Years Programme, International Baccalaureate, arts education, curriculum

DEDICATION

I would like to dedicate this dissertation to my husband, Peter Erikson and to our children, Benjamin, Colin, Charles, and Rebecca Arden, Beth and Ryan Foley, and Matthew Erikson.

To all of you, thank you for your patience, understanding and support as I timed-out from family activities in order to accomplish this goal. Your belief in me is appreciated beyond measure.

Peter, you encouraged and supported me in so many ways as I worked on this project, not the least of which was accompanying me to a very different life on the other side of the world and embracing the moniker of “trailing spouse” with flair and commitment. On our next holiday, the laptop will stay home.

ACKNOWLEDGEMENTS

Nothing is accomplished alone. My learning journey to this point has had many moments of inconsistent motivation. Through the years, colleagues, family, friends, and sometimes almost-strangers have encouraged and supported me. I will not try to individually name you, as I fear inadvertently leaving someone out. Please know I appreciate and thank you all from the bottom of my heart.

The company I work for, Freeport-McMoRan Copper and Gold, provided material and financial help, and allowed me insight into a rare world.

I am especially grateful to the administrators and teachers of Mt. Zaagkam School and *Yayasan Pendidikan Jayawijaya* for the time, patience, and openness they afforded me in the research and writing phases of this project.

To my Drs. S: even through the tyranny of distance, your support and leadership sustained me. Observing and working with you all has made me a better teacher.

Dr. Stauffer – you somehow broke down a very complicated process into workable chunks and allowed me to focus on the present need without too much worry about the next step. You inspired me, helped me to understand difficult ideas and taught me ways of observing. Our weekly meetings encouraged me to keep going and helped to build my confidence for the long haul.

Dr. Schmidt – your presence was an underlying safety net for me. You were always available when I had insecurities, problems, and questions. I appreciate your patience, your clarity of thought and most of all, your questions, which encouraged me to expand my ideas.

Dr. Sullivan – your passion for your research into women’s bands made me want to find a topic I could be equally enthusiastic about. You encouraged me to appreciate the the backstory and to see the value of connections through time and place. Your drive for information is inspiring.

“The value of education is not in knowing the answer, but in knowing how to seek out the answer.” Nell Rogers Coyle, my mother, 1971

TABLE OF CONTENTS

	Page
LIST OF TABLES	x
LIST OF FIGURES	xi
COMMON ABBREVIATIONS.....	xiii
GLOSSARY	xv
CHAPTER	
1 WHAT HE WAS TALKING ABOUT.....	1
What I Want to Know	2
Delimitations.....	5
Organization of the Dissertation	6
2 BACKGROUND INFORMATION	9
A Brief History of International Education	10
Modern International Schools.....	19
Social and Educational Movements in International Education.....	24
Cosmopolitanism	24
Comparative Education.....	27
Peace Education	31
Values Education	38
What is an International School.....	42
How do we Teach These Students?	45
Making the PYP Happen	51
Disciplinarity in Education	55

CHAPTER	Page
What’s Wrong With this Picture.....	57
The Question of Curriculum Integration.....	58
Concerns about Interdisciplinary and Transdisciplinary Models	63
Who are the Students that International Schools Serve	65
Meet Maarten	65
Stepping Back a Bit	66
The Paradox	69
3 METHODOLOGY	74
Uniquely Situated.....	76
Gathering the Information.....	83
Learning the Basics.....	84
Accessing the Written Record	85
Expanding on the Basics.....	87
Observing for Information	89
Taking It Apart and Putting It Back Together	91
Trustworthiness.....	93
Researcher Role	97
Ethics, Confidentiality, and Disclosure of Data.....	101
4 WHERE WE ARE IN PLACE AND TIME.....	103
Introducing Freeport	109
The Second Town: Kuala Kencana.....	121

CHAPTER	Page
Music in Papua.....	125
School in Papua.....	133
5 THE TWO CASES	137
Case 1: Mt. Zaagkam School	137
Philosophy and Curriculum at MZS	145
The Programme of Inquiry.....	148
Teacher Perspectives of the PYP at MZS	153
Strengths	154
Challenges.....	160
Teacher Perspectives on Transdisciplinary Teaching and Learning.....	168
What Teachers Value	179
Case 2: <i>Yayasan Pendidikan Jayawijaya</i>	182
Philosophy and Curriculum at YPJ.....	188
The Programme of Inquiry.....	191
Teacher Perspectives of the PYP at YPJ.....	194
Strengths	195
Challenges.....	200
Teacher Perspectives on Transdisciplinary Teaching and Learning.....	202
What Teachers Value	208
6 REFLECTION	212
Overview and Review of Research Questions.....	212
Logistics of Place and Time.....	214

CHAPTER	Page
Connections to the PYP	217
Impact of Culture	224
Disciplinarity.....	227
Thinking Forward	235
REFERENCES	241
APPENDIX	
A SURVEYS	255
B SAMPLE INTERVIEW QUESTIONS	316
C PRIMARY YEARS PROGRAMME UNIT PLANNER	318
D PERMISSIONS	323
E MT. ZAAGKAM SCHOOL DOCUMENTS	335
F <i>YAYASAN PENDIDIKAN JAYAWIJAYA</i> DOCUMENTS	346

LIST OF TABLES

Table	Page
1 Growth of International Schools.....	20
2 TCK's Relationship To Dominant Culture.....	70
3 Alignment of MZS, PYP, CGC	145
4 Curricula Adopted By MZS.....	147
5 The UOI "How We Express Ourselves" Through the Grade Levels.....	151
6 Outline for A UOI: How We Organize Ourselves.....	157
7 Three Types of Disciplinarity	169
8 Human Migration Unit Outline.....	175
9 The Five Principles of Pancasila.....	184
10 Foundational Guidelines for YPJ.....	189
11 Unit Outline - How We Organize Ourselves	206
12 Vision - Mission Alignment	223
13 Disciplinarity.....	227

LIST OF FIGURES

Figure	Page
1 The Island of New Guinea. The Pointer Marks Kuala Kencana.....	75
2 Topographical Map of New Guinea	104
3 Kamoro Man in the Jungle Near Kk.....	105
4 Mission Aviation Fellowship Plane in Nabire, 2013	106
5 Inside Tembagapura.....	111
6 The PTFI Concession Area and MSR.....	112
7 Grasberg Mine 2016	113
8 Aerial View of the Heat Road.....	114
9 Aerial View of Tembagapura.....	117
10 Bus Convoy From Lowlands To Highlands	119
11 Kuala Kencana, Courtesy of Google Earth.....	122
12 Trumpet-Like Instrument.....	126
13 Kamoro Drummers in the Village of Ajkwa.....	127
14 Students in A School in Pogapa.....	133
15 Village School in Zotadi	134
16 Kamoro Homes Along the River Near Portsite	135
17 International School Tembagapura 1973	136
18 Mt. Zaagkam School 2019	138
19 Continuum of Understanding of Transdisciplinarity	173
20 Yayasan Pendidikan Jayawijaya.....	181
21 Worksheet for Planning	192

22 Pictures From YPJ Exhibition 2019 198

COMMON ABBREVIATIONS

- ATLs – Approaches to Learning, previously known as transdisciplinary skills
- COW – Contract-of-work area – In this case, the area of land designated to be used by Freeport for the purpose of mining.
- CIS – Council of International Schools
- DIKNAS – Program of Education in Indonesia (Indonesian acronym)
- DP – aka IB-DP, Diploma Programme, or International Baccalaureate Diploma Programme, the original International Baccalaureate program designed for students in their last two years of high school.
- IB – International Baccalaureate (same as IBO)
- IBO – International Baccalaureate Organization, previously known as International Baccalaureate Office
- ISCP – International Schools Curriculum Project – the precursor to the IB-PYP
- KK – Kuala Kencana – Freeport town located in the lowlands
- MOE – Ministry of Education of Indonesia (English acronym)
- MSR – Main Supply Route – the main Freeport road connecting Portsite to the Mine
- MYP – aka IB-MYP, Middle Years Programme, or International Baccalaureate Middle Years Programme. A curriculum framework designed for students 11 – 14 years old.
- MZS – Mt. Zaagkam School, previously known as Mt. Zaagkam International School
- PAUD – *Pendidikan Anak Usia Dini* – Early Childhood Education programs
- POI – Programme of Inquiry – matrix of the units of inquiry that will be taught through the school year at each grade level.

PTFI – PT Freeport Indonesia – the Indonesian subsidiary of the American company Freeport-McMoRan Copper and Gold. PT is a legal designation, similar to “Inc.” in the United States.

PYP – aka IB-PYP. The Primary Years Programme, or International Baccalaureate Primary Years Programme – the educational framework of the IB for students ages 3 – 12.

SD – *Sekolah dasar* (basic school) – Elementary School (Indonesia)

SMP – *Sekolah menengah pertama* - Middle School (Indonesia)

TE – Technical Expert – title given by the Indonesian government to expatriate workers who are here to pass on their knowledge to Indonesian counterparts.

TPRA – Tembagapura – Freeport town in the highlands

UOI – Unit of Inquiry – the outline for development and teaching of a specific transdisciplinary theme in the PYP

WASC – Western Association of Schools and Colleges – an American Accrediting agency for over 5000 schools, both inside and outside of the United States.

YPJ- *Yayasan Pendidikan Jayawijaya* (Jayawijaya Education Foundation) – National school on the Freeport contract-of-work area.

GLOSSARY

Approaches to Learning –skills that help students to understand the transdisciplinary nature of knowledge

Bahasa Indonesia – Indonesian language

Expatriates (Expats) – people who live and work outside of the country of their nationality.

Key Concepts – specific understandings that are to be developed over the course of implementation of the POI. They are form, connection, change, responsibility, perspective, reflection, function, and causation

Learner Profile – specific characteristics that are to be developed over the lifetime of the student in the PYP program: communication, risk-taker, principled, open-minded, knowledgeable, reflective, balanced, caring, inquirer, thinker

Panca Sila, or Pancasila – the five principles; the foundation for the Indonesian government and for all organizations in the country of Indonesia.

Transdisciplinary Skills – now called Approaches to Learning (ATL's), they are Thinking skills, Social skills, Communication skills, Self-Management skills, Research skills

Transdisciplinary Themes – broad themes designed to lead learning beyond the boundaries of specific subject areas: Who We Are, Where We Are in Place and Time, How We Organize Ourselves, How We Express Ourselves, How the World Works, Sharing the Planet

Tujuh suku (Seven tribes) – the seven tribes that originally claimed the land around the mine and between the mine and the coast. They are the Amungme, Kamoro, Damal, Dani, Nduga, Mee and Moni.

An Inquiry into PYP Transdisciplinary Understanding in Two Remote Schools in Indonesia

“We are an IB-PYP school,” the school Superintendent said in the first email. “Candidates interested in employment must have the IB-PYP level one training before reaching jobsite.” My first thought? Well, everyone knows the International Baccalaureate is a high school program. What is he talking about?¹

Chapter 1: What He Was Talking About

The International Baccalaureate (IB) is indeed a high school program (DP, for diploma program)...and a middle years program (MYP)...and a primary years program (PYP), or rather ‘programme’², as it has its roots in Europe. At that time, 2011, in Arizona where I lived, the middle years and primary years programmes were not well known. A quick internet search revealed the growing popularity of the PYP in international schools around the world. One year later, in 2012, close to 989 schools around the world offered the PYP. As of 2017, 1468 schools offered the PYP, a five-year increase of 48.4 percent.

According to the International Baccalaureate Organization (IBO), the development of the PYP was based largely on the work of Ernest Boyer, the president of the Carnegie Foundation for the Advancement of Teaching (IBO, 2012a, p. 2). Boyer’s Basic School plan proposed four essential elements: the school as community, a curriculum with coherence, a climate for learning, and a commitment to character. He also proposed that students learn through exploration of a set of themes representing core

¹ Email from J. Barney Latham to Anita Arden (Erikson), 28 November 2010.

² In the names of the programs of the International Baccalaureate Organization (IBO), I use the British spelling of the word “programme,” as that is what the IBO uses. This refers to the Diploma Programme (DP), the Middle Years Programme (MYP) and the Primary Years Programme (PYP). Otherwise, I will use the American spelling “program”.

commonalities rather than learning everything as a part of an individual discipline. In the PYP, these organizing themes are called transdisciplinary themes and they are used to enable and encourage students to pursue inquiry across disciplinary boundaries in order to see natural connections in the world (Boyer, 1995; IBO, 2012b).

The reason for the superintendent's email to me was my application for a music teacher position in his school. After several interviews, a thorough medical exam, and completion of a level one PYP course, "Introduction to the Primary Years Programme," I was hired. That was the beginning of eight years of work in a remote PYP school in Indonesia. During that time, I took a discipline that I knew well, music, and strived to develop a program that not only taught students music skills but also did so in a conceptual manner and in a way that connected those skills and the love of music to other areas of students' study and their lives. This type of teaching and learning is transdisciplinary and is the foundation of the Primary Years Programme.

What I Want to Know

The purpose of this study is to look at how the transdisciplinary nature of the International Baccalaureate Primary Years Programme (PYP) is implemented in two remote schools in Indonesia. To ground this study, I developed the following questions:

1. How do educators in two remotely located schools understand the concept of transdisciplinarity?
2. How are the elements and aspects of the PYP framework (knowledge, approaches to learning, agency, action, key concepts, lines of inquiry, learner profile, international-mindedness, transdisciplinary learning) of the PYP framework

- implemented in each school? Are these elements and aspects of the PYP framework affected by or related to the curriculum in place in each school? If so, how?
3. What outcomes of the PYP do teachers identify with and value (or not value)?
 4. Do the elements align with the schools' mission and vision statements? Why or why not?

Curriculum evolves through time, based on social and economic needs (Brown, 2004). The PYP, a framework for curriculum, was the third programme of the International Baccalaureate Organization (IB) to be offered to schools. As its name implies, it was designed for primary age students, ages 3 to 12 (preschool to grade 5). Prior to the PYP the IB had successfully marketed the Diploma Programme (DP) for students in the last two years of high school and the Middle Years Programme (MYP) for students in grades 5 to 10. The creation of the IB itself was the result of the need for a standard leaving diploma for international secondary students that would be accepted by universities in many countries. This need had been discussed in international educational circles since the early part of the twentieth century (Bunnell, 2008b; Hill, 2002, 2003; Peterson, 1972; Sylvester, 2002b).

Having had its origins in international schools, the IB organization developed a specific framework that addressed various social and educational movements present in international education, specifically peace education, values education, cosmopolitanism, and comparative education. In this document, I will examine these movements and consider how they are currently manifested in the PYP. IB programmes do not specify curriculum, rather they are frameworks within which each school's curriculum sits. The

choice of curriculum is left to the school, as every school has its own demographics, social and cultural needs, and legal requirements.

The challenges that face schools and schooling are contextual. The two schools involved in this research have much in common, due to their remote location, and yet they still have differences that are likely to affect the implementation of the PYP. My purpose is not to place a value judgement on how these schools implement the PYP, and indeed, it would be arrogant of me to do so. The PYP itself allows considerable flexibility in the implementation of the program. Rather, I am curious about the understandings and opinions of the educators at each school who are working in the PYP framework.

My Experience with the Primary Years Programme

My interest in this study was inspired by my own journey in learning to be a PYP teacher. I took my first PYP course in 2011, as a condition for being hired to teach in a PYP school. My experience with the PYP is primarily as a music teacher, but also as a classroom teacher and as an administrator. I served as interim principal in preparation for a PYP accreditation visit in 2014, and at the time of this study I was the Creative Arts Coordinator and Vice-Principal for the same small PYP school in a remote location. Through the years, I have spoken with other PYP specialist and classroom teachers about their programs and found little consistency from one school to the next in how the program is implemented, particularly regarding the integration of specials classes (Music, Art, Physical Education, Foreign Language). This lack of consistency is partly due to inherent differences between the cultures and needs of the schools, which is expected when using the PYP framework. My informal observations, however, have also shown that educators are often confused about how to blend disciplines successfully in order to

achieve transdisciplinarity, and unsure about the program requirements in that aspect of the PYP framework requirements, as well as others. Areas of uncertainty identified by previous research include the ability to align the PYP framework with specific disciplinary curricula, collaborative planning time, integration with specialists, and integration with the values component of the PYP framework, among others (Getchell, 2010; Marshall, 2005; Randles, 2015; Savage & Drake, 2016).

Discrepancies also occur in how teachers, administrators, and school boards understand what transdisciplinary education is, how the PYP envisions transdisciplinary education being done, and how transdisciplinary education can enhance student learning. Some teachers consider the concept of integrating with other classrooms/disciplines as additional work rather than a primary means of teaching. While the flexibility of the PYP allows for variation in implementation, certain elements ingrained in the philosophy of the program should remain in place. I will expand on this idea further in Chapter 4.

Twenty-first century education, in the documentation of many countries and international programs, acknowledges the necessity for the arts and assumes the place of the arts in schools. From that perspective, this investigation into transdisciplinary education assumes the interrelatedness and necessity for all disciplines. My area of expertise is music, my advocacy is for powerful and effective education.

Delimitations

My research questions are specific to educators at the two remote schools that are the sites for this study. Therefore, my primary focus will be the perspectives of the school staff – teachers, administrators, and PYP/curriculum coordinators. Previous studies have examined the experiences of students in PYP and other international schools (Fail,

Thompson, & Walker, 2004; Hayden & Thompson, 1997; Oates, 2016; Walker, Bryant, & Lee, 2014) and it is not within the parameters of this study to explore student perspectives. I desire to gain an understanding of educator perspectives in these specific schools and to provide rich narrative describing the very unique situation of the two schools and how each implements the same internationally accepted framework. While characteristics of these staff and schools may be recognizable in staff and schools in other locales, it is not my intention for the results of this study to be generalized.

Organization of the Dissertation

In chapter two, I present a review of literature that examines international education and the IB-PYP through the following lenses:

- Social and Educational Issues, including peace education, Comparative education, Cosmopolitanism, Values education. These are the ideas and context for modern international schools. As international schooling expanded, these ideas continued to be a part of the mission and vision of many schools. These ideas directly led to and impacted the creation of the IBO, and the PYP framework still includes the ideals inherent in some of these educational movements, including international-mindedness, learner profiles and attitudes, and student action.
- Disciplinarity in Education. The PYP aspires to be a transdisciplinary educational framework. In order to understand what that looks like and how schools understand the PYP, it is necessary to understand differences between various modes of disciplinarity, specifically multidisciplinary, interdisciplinarity, and transdisciplinarity.

- Third Culture Kids (TCKs) is a term coined by Ruth Hill Useem in 1962 when she studied the children of expatriates living in India. The first culture is the culture of the parents, the second culture is the culture of the host country, and the third culture is the “in-between” space that allows the expatriate child to function in both the first and second cultures (A. Cottrell & Downie, 2012). TCKs are the students usually served in Type A and B international schools (to be discussed further). As a group, TCKs tend to have their own strengths and weaknesses, and understanding who these learners are can lead to better understanding of the best ways to educate them.
- Historical precursors of international education. Examining the history and traditional purposes of international schooling helps to understand the needs and values that have come to be a part of many international schools.
- International education in the twenty-first century has evolved from its early roots, and later in this document I describe what international schooling is at the time of this dissertation. Many types of international schools exist, and a variety of definitions of “international schools” as well as varying concepts of what international schools actually are . In this study specifically, discrimination will be made between a Type A international school and a national school.
- The Primary Years Programme, the elementary subset of the International Baccalaureate Organization, is one of the more common curriculum frameworks in international schools. Its use in national schools is growing every year.

Chapter three contains the methodology for this qualitative case study. I explain the design and the process through which I generated data, and I also provide an

overview of the location and participants, with an explanation of some specific challenges that are a part of their lives.

This study occurred in two schools in a remote location. I provide an in-depth history and context for the schools in chapter four, including descriptions of how they came to exist and relevant similarities and differences between the two schools and the teachers in them.

Findings from the study are discussed in chapter five. I identify themes that have emerged and review commonalities and differences in educator perspectives between the two schools. Through analysis of data, I make meaning of the information participants have shared in a way that reflects their ideas and convictions.

Finally, in chapter six I review the study and reflect on what I have learned and what the participants may have taken away from engaging in this project. I summarize new (for me) ideas on cultural considerations in implementing the PYP. I also review ideas that may be developed for future research.

Chapter 2: Background Information

In this chapter I discuss the movements in society and education that came together to shape modern international education. I begin with the historical precursors of international education. Examining the history and traditional purposes of international schooling helps to understand the needs and values that have come to be a part of many international schools.

Any attempt to look at international education today demands a look at what has been done in the past. Sylvester (2002b) credits Harley (1931) for writing the first definitive scholarly study of international education. At about the same time as Harley's document, Stoker (1933) discussed the waxing and waning of international education throughout history beginning with ancient Greece. In 1950, William Brickman published a research bibliography on the history of international education. Scanlon and Shields (1968) noted that there was a "complete lack of historical studies in international education that would assist in establishing a lineage, developing a conceptual framework and eventually denoting both an indicative methodology and descriptive content for international education" (Sylvester, 2003, p. 93). Leach (1969) attempted to categorize schools generally considered to be "international," but he recognized limits in his categorizations (Hayden & Thompson, 2008).

Next, I review the status of international schooling in the twenty-first century. Many types of international schools exist, as well as a variety of definitions about what "international schools" actually are. In this study specifically, I will distinguish between what is known as a type A international school and a national school.

A number of social and educational issues have been in play throughout the evolution of international education. I will examine four of the strongest in this chapter: peace education, comparative education, cosmopolitanism, and values education. These are the ideas and context for modern international schools. As international schooling expanded, these ideas were interwoven in the mission and vision of many schools. They impacted the founding of the IBO, and the IBO framework still includes these ideals in the elements of international-mindedness, learner profiles, and student action.

Following the discussion of these issues, I examine the history of the IBO, particularly its elementary subset, the PYP. The PYP is a common curriculum framework in international education and more specifically, is the one used by the schools represented in the case studies in this document.

Following the description of the IBO and PYP, I discuss disciplinarity in education. The PYP aspires to be a transdisciplinary program. In order to understand what that looks like and how schools understand it, it is necessary to understand various modes of disciplinarity.

In the final section of this chapter, I will examine third culture kids (Useem & Downie, 1976), the traditional and usual student body of international schools. As a group, these students tend to have their own strengths and weaknesses, and it is beneficial to understand who they are in order to understand the best ways to educate them.

A Brief History of International Education

After the Macedonian invasion of Greece in the 4th century BC, Alexander the Great established a learning center that drew students from all over the world, where they studied a wide range of languages, philosophies, and cultures (Stoker, 1933). Perhaps this

was the very first international school. According to Stoker, there was an international aspect to Medieval education throughout the civilized world, although for various reasons. For example, the Roman Catholic church “dominated practically all intellectual endeavor” where it had influence, though “not for promoting international understanding and good-will between peoples, but for the strengthening and development of the Church” (Stoker, 1933, p. xi).

In the seventeenth century, John Amos Comenius (1592-1670) established a Pansophic College where men from around the world would collect and “unify existing knowledge towards ‘international understanding’” (Sylvester, 2002b, p. 96; see also Brickman, 1960; Scanlon, 1960). By the nineteenth century, a time when the primary goal of education was to strengthen the nation state (Stoker, 1933; Sylvester, 2002b). People began looking around to see what was happening in education in other places. U.S. educator Horace Mann traveled to Great Britain, France, Germany, and Holland to compare their systems of education with that in Massachusetts and found Massachusetts to be “poor in comparison to the European schools” (Brickman, 1960, p. 12). Upon his return, he instituted massive educational reforms throughout the state.

Between 1851 and 1910, thirteen international education conferences were held, most in conjunction with International Expositions (World’s Fairs). The first was in

London and had delegates from four countries: England, Germany, France, and the United States. Each successive conference increased in size and the number of countries represented. In addition, a number of congresses were held between Expositions. In 1900, the Congress in Paris lasted two months and consisted of twenty sub-conferences that reviewed all phases of education. Discussions included the

establishment of an international teachers' association, which was founded in 1905. By 1910, the International Bureau of Associations of Teachers had a membership of 408,000 people from seventeen countries. The association became inactive at the beginning of World War I and did not resume activity. However, another association, the International Bureau of National Associations of Secondary Teachers, was established in 1912, and resumed activity after the war (Stoker, 1933, p. xviii).

By the middle of the nineteenth century, the idea of international schooling was being discussed with varying motivations. At the London conference in 1862, an essay contest was held on “the advantage of educating together children of different nationalities” (Stewart, 1972, p. 118 in Sylvester, 2002b). In addition, “many leading advocates of free trade hoped to realize their vision of international harmony by the creation of a new type of education which would enable the citizens of different countries to become international ambassadors” (Stewart, 1972, p. 118 in Sylvester, 2002b). In 1864, Charles Dickens wrote an article entitled “International Education,” the first recognized use of the term. His idea was that schools would be established throughout Europe, each of which boys would attend for a defined period. The schools would follow the same curriculum and method of study so that the students would progress as they would if they were attending one school. He specified that education should be conducted in a manner so that each student’s sense of nationality would not diminish (Sylvester, 2002a).

An early international school, The London College of the International Education Society at Spring Grove, opened in 1866. This was to be the first of four schools that would educate young men for seven or eight years. The other three schools were to be in

France, Germany, and Italy. Students were to spend two to three years at each school. Spring Grove began with 80 students, but soon grew to over 100 from France, Germany, Italy, Spain, Portugal, the United States, India, Brazil, Chile, and Nicaragua. There were fourteen masters, or teachers, including specialists in Music, Dance, French, and German (Bibby, 1956, p. 35) . The school remained open until 1889, when it became the Borough Road Training College. Although the sister schools in France and Germany were open for a short time, they were soon closed due to the Franco-Prussian war. According to Sylvester (2002a), Spring Grove should be considered to be the “first international school of the modern age in the West” (p. 14).

The search for improved and international education was not limited to the West. In 1872, one year after establishing a Japanese Department of Education, Prince Tomoni Iwakura headed a delegation to the United States and Europe, the purpose of which was to learn about education in those countries (Brickman, 1960; Sylvester, 2007; Wilson, 1994). During the Meiji era (1868 – 1912), the Japanese government issued over 11,000 passports for Japanese students to study in the United States and Europe. In addition, foreign educators were brought to Japan to revamp the Japanese education system (Ogawa, 1991).

The last few decades of the nineteenth century saw increasing interest in international education, as well as growth in the peace movement. In 1885, Herman Molkenboer, a Dutch educator working in Germany, laid out a plan for an international education agency, and in 1891, he started the *Journal for Correspondence on the Foundation of a Permanent and International Council on Education*. His purpose was twofold as his primary interest lay with education for world peace (Scanlon, 1960).

At the Columbian Exposition of 1893 in Chicago, where most of the countries of the world were represented (Sylvester, 2002b), the International Kindergarten Union was formed. The conference attendees had strong opinions towards education for the world; it should include literature, science and art, virtue, morals, and religion. A significant number of papers and addresses were presented by non-U.S. delegates. In his welcome speech, Chicago judge Charles Bonney addressed the potential of the gathering for the world:

The new education, extended as it will be throughout the world, will do as much as, if not more than, any other agency to promote the unity and peace of mankind. For by education we mean not merely the training of the intellect; we mean also the culture of the heart and the hand. The golden circle of education embraces not only literature, science and art, but it includes the whole broad domain of virtue, morals, and religion as well. (in Sylvester, 2002b, p. 98)

In 1899, Adolphe Ferrière established the International Bureau of New Schools (*Bureau International des Écoles Nouvelles*) in Geneva (Brickman, 1960; Meyer, 1949; Stoker, 1933). Ferrière was a firm believer in learning being experiential and created what was called an “activity school”. Ferrière believed that “education is life and that ‘life is a continuous growth...irregular no doubt in intensity and direction, but never at rest’” (Ferrière in Meyer, 1949, p. 126). In 1912, the *Bureau* became a part of the Rousseau Institute in Geneva.

Few European schools were coeducational in the nineteenth century. Bedales, an English school founded in 1893, accepted girls as well as boys by 1898. Teachers came from other countries as well as England. Bedales was a progressive school with the following aims and procedures:

- Freedom for normal and healthy development of body and mind, by the upbringing of girls and boys in an atmosphere that fosters understanding and cooperation.
- Care for the mental, moral, and physical needs of each child, without neglecting the needs of the community. There is to be cooperation rather than competition, as is evidenced by the school's motto: "Work of each for the weal of all."
- The creative urge is to have adequate opportunity for expression.
- Through the observance and treatment of religious matters, free from any trace of dogma and acceptable to all, regardless of creed, a sense of things of eternal value is developed.
- International goodwill is to be encouraged in every possible way.
- Between pupil and teacher there is to be a relationship of trust. Discipline is to come from self-control rather than from any superimposed authority. (Meyer, 1949, p. 137)

The inclusion of "international goodwill" and the emphasis on care, understanding, community, creativity, self-control, and cooperation are characteristics that were echoed almost one hundred years later in the learner profile and attitudes of the IB-PYP. Bedales is still open in the twenty-first century. It still includes "to foster interest beyond the school: engaging with the local community and developing a national and international awareness" as one of its aims (Bedales, 2017).

Odenwald School in Germany, another example of a Progressive school with an international element, was established in 1910 by Paul Gaheeb. Like Bedales, Odenwald was coeducational, with students from many countries attending. Both Odenwald and

Bedales were boarding schools situated in the country, and outdoor work was a part of the learning. Gaheeb left the school in 1934 because the educational principles did not align with those of the National Socialist party. He opened *Ecole d'Humanité* in Switzerland, which is still in operation today.

In the early 1900s several organizations were formed with the mission of encouraging world peace through education, among them the International School of Peace in Boston (later known as the World Peace Foundation), the Carnegie Endowment for World Peace, the School Peace League (Great Britain), and the American School Peace League. Peace Day was established by the United States Bureau of Education in 1912. Interested educators from several countries, including Fannie Fern Andrews from the United States, Franz Kemény from Hungary, and Edward Peeters from the Netherlands worked to establish an international bureau of education. A 1914 planned conference on the topic of an international bureau in The Hague, Netherlands was cancelled due to the outbreak of World War I. Following the war, the International Bureau of Education and the League of Nations Committee on Intellectual Cooperation were established, however both organizations struggled for financial support. The advent of World War II halted the activities of the organizations. After the war, some of the activities of the Committee on Intellectual Cooperation were carried on by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The International Bureau of Education joined UNESCO in 1969 and functions as “the global centre [*sic*] of excellence in curriculum and related matters.” (Andrews, 1948; IBE-UNESCO, 2019; Scanlon, 1960; Sylvester, 2007).

In 1921 Rabindranath Tagore, an Indian Nobel laureate, founded a school near Calcutta called *Santiniketan Visva-Bharati* (World University). Tagore believed it was the mission of schools to educate in the context of a world culture. He instilled in *Santiniketan* a “spirit of genuine international collaboration based on a definite pursuit of knowledge, a pursuit carried on in an atmosphere of friendly community life, harmonized with Nature, and offering freedom of individual self-expression” (Scanlon, 1960, p. 106). Tagore encouraged his followers and students to view themselves and others as a part of humanity, to respect human freedoms and rights, and he denounced nationalism as “protection for those within it” (Sampatkumar, 2007, p. 75).

In Europe, the International Folk (Peoples) High School (College) was established in Helsingør, Denmark in 1921 by Peter Manniche. Manniche had been a soldier during World War I, and his dream was that students from countries that had previously been enemies could “come together to learn to live in harmony and peace and play their part in building a better world” (Lawson, 1995, p. 3). The Danish Folk High Schools are still in existence in 2019 and cater to students aged 18-24, with no prior education requirement.

In the early 1920s, the League of Nations and the International Labour office established a base in Geneva. Representatives from many countries came to the city to work and brought their families. These families were committed to the beliefs of the organizations for which they worked and wanted their children to have an education that would include peace and international understanding as a part of the curriculum. In 1924, a group of parents, along with Adolphe Ferrière and Elisabeth Rotten, also from the Rousseau Institute, founded the International School of Geneva (*Ecole Internationale de Genève*, or *Ecolint*). The first classes were held in Ferrière’s family chateau with eight

students. Around that same time, the International Bureau of Education was also created by the Rousseau Institute in Geneva with Jean Piaget as director and Ferrière as assistant director (Hill, 2001). Classes were taught in French and English, with fluency expected in both. A strong connection between the International School of Geneva, the International Bureau of Education, and the Rousseau Institute still exists. Even today, the International School of Geneva (*Ecolint*) remains a leader in the world through its alliances with universities offering degrees in international education.

The founding of *Ecolint* introduced a new kind of international school. Students attended because the careers of their parents had brought them to Geneva. Parents and educators had the specific goal of educating students for international-mindedness. A challenge for the students who attended *Ecolint* soon became apparent. Each of the countries represented by students had their own leaving (graduation) exams and university requirements, as well as residence and citizenship requirements. In 1925, Ferrière introduced the idea of a *maturité internationale*—a school leaving certificate that would be accepted by universities in all countries. For the next forty years, this idea would come back in cycles before it was acted upon (Bunnell, 2008a; Hill, 2001, 2002; Sylvester, 2007).

During this same time (1920s), half a world away in Yokohama, Japan, expatriate parents were having the same conversations as the parents in Geneva. Within a few weeks of the opening of *Ecolint* in 1924, the Yokohama International School (YIS) was opened for six expatriate children, with a Swiss, Dr. Wild, as the first director. In 1929, the new school administrator, Dr. Peter, and parents were seeking a curriculum to better serve the needs of the diverse student body. According to Hill (2001), the board

considered an English system, an American system, and the European system used at the International School of Geneva. They ended up with a somewhat mixed curriculum that was closer to the English system (Hill, 2001). By 1939, the school had added a boarding facility and had 110 students from twenty-one different countries (NA, 2019).

These examples provide a brief history of schools whose purpose is to educate students of multiple nationalities, though they existed mostly in isolation from each other. What is now known as the international school movement gradually grew from the founding of *Ecolint* to the broad variety of international schools that are in the world today. Commenting on the development of international schools in the twentieth century and into the twenty-first, Sylvester (2002b) states:

It is important to note that international schools made their early appearance in an apparently rich environment of interest in education for international understanding and peace education. These international schools, numbering in the thousands today, are arguably potential inheritors of a rich heritage of universal and idealistic educational values. (p. 105)

Modern International schools

As described in Chapter 1, the last half of the twentieth century and early twenty-first century saw a huge growth in international schooling. Prior to that time, most international students were children of missionaries and children with diplomatic or military parents, as those were the typical family groups who lived abroad. Those children were usually taught either in homes or in schools that catered to their particular group.

Following World War II, an expansion in families living abroad due to the growth of multinational companies and government and civic agency centers, as described above, led to increased need for schooling that met the needs of expatriate children. While international schools have increased, the number of international schools worldwide varies depending on the definition used for an international school by those collecting data. Hayden and Thompson noted that in 1964, fifty schools worldwide could be considered international schools, however, they also note that record-keeping was not very good at that time (Hayden & Thompson, 1995).

ISC Research, a UK-based company, has tracked and analyzed English-language international school data in recent years. The majority of international schools ISC tracks are English-language or bilingual schools. The statistics ISC Research generates are considered to be reliable by researchers and show that in 2000 there were 2,584 international schools. Table 1 shows recent and projected growth as reported by this organization:

2002	3,000 schools
2006	3876 schools
2007	4563 schools
2009	5187 schools
2012	6400 schools
2016	8257 schools over 4.3 million students
2018	10,000+ schools Over 5,000,000 students
2026 (projected)	16,000 schools 8.75 million students

Table 1: Growth of international schools

Hayden and Thompson (2013) categorize international schools in three ways. Type A international schools provide a program that is different from that of the host country with students who are primarily foreign nationals and who are in the host country due to the occupation of the parents. Type B international schools have an ideological basis, “bringing together young people from different parts of the world to be educated together with a view to promoting global peace and understanding” (p. 29). Type C schools are those schools that were started to provide the children of host country nationals a “form of education different from, and perceived to be of higher quality than that available in the national education system” (p. 29).

Type A schools are the “traditional” model of international schools. These schools were created to cater to the expatriate children who live in a country other than their passport country due to the work requirements of their parents. Type A schools include, but are not limited to, U.S. Department of Defense schools, embassy schools, company schools such as those provided by Royal Dutch Shell, Chevron, Aramco, and Freeport-McMoRan for children of employees, and schools such as Yokohama International School, which was created for children of parents working for international organizations in Japan. ES (European Schools), which were founded in 1953 to educate European children not only in the language and culture of their own country, but also in that of two other European countries, are also considered Type A schools. Type A schools may or may not include host country nationals. They may provide the curriculum of a single country (other than the host country) or they may provide an international program. They may be supported by their home government or by tuition. Mt. Zaagkam school (MZS), one of the schools in this study, is a Type A international school.

United World Colleges (UWC) and Round Square schools are both examples of Type B international schools. These schools are based on the philosophy of Kurt Hahn, an early leader in experiential learning who strongly believed in the benefit of physical challenges and peace through education. UWC schools are boarding schools, with the students coming from countries other than the host country. Students attend UWC schools on scholarship, making them open to children of all socio-economic levels, apart from two UWC schools, those in Venezuela and Singapore, who continued to accept fee-paying students when they came into the UWC system. Simón Bolívar UWC Venezuela was closed in 2012 by the Venezuelan government.

Yew Chung schools were established in 1932 in China. The original school closed at the beginning of the second world war and re-opened in 1972 in Kowloon. Since then, five additional Yew Chung schools have opened – four in China and one in the United States. Yew Chung schools offer a bilingual program with a focus on harmony as the basis of education for sustainable development. This focus classifies Yew Chung schools as being a Type B international school. Students study all subjects in Chinese and English, with native speakers as teachers. Two administrators, one Chinese, one a native English speaker, make decisions by consensus (Bunnell, 2015).

Sometimes the purpose for a school changes. In 1967, the English Schools Foundation (ESF) was set up by the colonial government of Hong Kong for British students. When the colony became a part of China in 1997, the ESF schools no longer had government funding, so they became tuition-based for-profit schools. Their designation changed from Type A to the newer Type C schools designation (Hayden & Thompson, 2013) described next. Type C international schools, also known as

proprietary schools, are usually for-profit and privately owned. These schools are particularly prevalent in the developing countries of the Middle East, Asia, and South America. Nord-Anglia, Global Education Management System (GEMS) Education, Cognita, Educational Services Overseas Limited (ESOL), and American Community Schools (ACS) are well-known for-profit international schools. Another brand of Type C school are satellite schools of schools in a home country. For example, the prestigious Harrow School in England has satellite schools in Bangkok, Hong Kong, and Beijing (Hayden & Thompson, 2013). Affluent national parents enroll their students in these schools because they perceive that the education offered by the satellite school is superior to that of the national school system. They hope that their children will become fluent in English and comfortable in Western culture, and that this will enable the children to attend university in the United States or United Kingdom and provide a path for them to become successful adults. (Bunnell, Fertig, & James, 2016).

Yayasan Pendidikan Jayawijaya (YPJ), the second school in the study, does not fall into any of these categories. Rather, it is a national school, regulated by the Indonesian government, that has chosen to use the PYP as the framework that supports the Indonesian national curriculum.

Organizations exist to support international schools. The oldest is the International Schools Association (ISA), of which the International Baccalaureate Organization (IBO or IB) is a spinoff. The British International Schools Worldwide (BISW) and the European Council of International Schools (ECIS) support their respective member schools. International School Services (ISS) was originally founded to

support overseas American schools and other international schools with starting up, management, supplies, and curriculum (Hayden & Thompson, 1998; Thomas, 1974).

Curriculum in international schools varies from school to school. Specific curriculum frameworks are available to schools, such as the IB Diploma Program for Year 11 and 12 students, the IB Middle Years Program for Years 6 to 10, and the IB Primary Years Program for students ages 3 to year 5. Some schools offer the International General Certificate of Secondary Education (IGCSE), an international British qualification offered by Cambridge Assessment, or the American Advanced Placement program. Other schools offer a combination of the above, and still others choose to follow a national curriculum or create their own. Considering the projected growth of students who will be educated in some form of international school, an understanding of the different types and motivations for enrollment can be useful for international educators and curriculum designers.

Social and Educational Movements in International Education

In this section, I examine international education through the lenses of several established and defined views: cosmopolitanism, peace education, comparative education, and values education. An understanding of these viewpoints is helpful to appreciate the sequence of events in the history of what is generally known as international schooling.

Cosmopolitanism. Cosmopolitanism is not a subject taught in schools nor is it directly related to education. Rather, cosmopolitanism is a social movement. However, cosmopolitanism, as a way of being, is strongly reflected in the philosophy and mission

statements of many international schools and curriculum. For that reason, it should be considered an influence on the development of international education.

In his 2002 article, Sylvester references Fraser and Brickman (1968) when he says, “prior to the nineteenth century, the terms cosmopolitanism and universalism were accepted and understood, but the idea of internationalism was virtually unknown” (p. 95). Gunesch identifies internationalism as being a component of cosmopolitanism. He differentiates cosmopolitanism from globalism by pointing out that “Globalization is associated with uniformity and similarity; cosmopolitanism is concerned with diversity” (p. 177).

According to Gunesch (2004), the following are the areas of concern for a cosmopolitan person, according to the literature:

- a straddling of the ‘global’ and the ‘local’ spheres, with a decisive impact of the global (‘world citizen’);
- a ‘connaissance’ with respect to (local) cultural diversity wherever possible, otherwise an interested ‘dilettantism’;
- a general willingness and openness towards engagement with cultural diversity, which yet allows for ‘dislike’;
- the mobility to travel, with a discussion about whether this is sufficient
- an attitude not of the ‘typical tourist’, while the ‘occasional tourist’ accommodates fewer concerns;
- a notion of ‘home’ that can be extremely varied, while it is no longer undisputedly the ‘home culture’, it also is not ‘everywhere’;

- a critical attitude towards the (native) nation-state, which can range between ‘rooted’ and ‘unrooted’ identity expressions. (p. 265)

Hannerz (2002) describes cosmopolitanism as “first of all, an orientation, a willingness to engage with the Other” (p. 103). Generally speaking, Hannerz and Gunesch both identify cosmopolitanism as an attitude of being open and willing to participate in life in an unknown or unfamiliar culture. Hannerz specifies that being cosmopolitan is the result of actively making the choice to immerse oneself in a foreign culture and to what level. That level may vary with different cultures, as it is assumed that the cosmopolitan person has knowledge of a variety of cultures. The cosmopolitan person does not wish to be mistaken as a tourist and generally considers tourism to be a spectator sport (Hannerz, 2002, p. 105).

Gunesch (2004) looked at the relationship between multilingualism and cosmopolitanism and identified three types of cosmopolitan attitudes among the subjects of his studies: advanced tourist, traditional cosmopolitan, and interactive cosmopolitan. He thought of cosmopolitanism as a spectrum, with locals on one end and tourists on the other end. Placement on the spectrum was related to an individual’s competency in a culture. A cosmopolitan could be at varying places on the spectrum, but probably would not quite reach the “local” designation. By definition, the cosmopolitan person would most likely never have the commitment to a culture that a local person would have. In Gunesch’s view, cosmopolitanism is “a personal identity form” (p. 254).

A general comment often made about cosmopolitanism is that a cosmopolitan person is “at home in the world.” The desire to “straddle global and local spheres” and to travel and immerse oneself in foreign cultures are characteristics of the cosmopolitan. A

discussion in the literature regarding patriotism and cosmopolitanism questions the value of nationalism or patriotism (Nussbaum & Cohen, 1996). Generally speaking, patriotism refers to the sense of pride in one's country, while nationalism involves that pride as well as a belief that one's country is superior to other countries. One of the fears regarding international education is that students will not develop a sense of belonging to, and pride in, their passport country. Others do not see this as a loss, but as an asset, as students will become "citizens of the world". This discussion is particularly relevant in the field of international education, as it relates to the curriculum that is taught in schools.

Comparative Education. A long relational history exists between comparative education and international education. At times, it is difficult to distinguish between them, particularly in the early years of modern international education. Simply put, a comparative study is the measuring of something in one culture to its counterpart in another culture. For example, a comparative study could look past to present, country to country, wealth to poverty, or society to society. In comparative education, the comparison would be a structured study of education in one culture and education in another culture. Comparative studies look not only at similarities and differences in systems but go deeper to reveal the reasons for those similarities and differences.

The first use of the term "comparative education" appears in a pamphlet published by Marc Antoine Jullien in 1817. During the nineteenth century, educators traveled to other countries to examine their educational systems. Jullien developed a system for collecting data, categorizing it, and comparatively analyzing it (Dede & Baskan, 2011). Beginning in the late nineteenth century, national education data organizations were established in various countries, such as the United States Bureau of Education, the

Comenius Bücherei in Leipzig, the *Institut Pédagogique National* in France, the Pestalozzianum in Switzerland, and the Office of Special Inquiries and Reports in Britain. Their purpose was, and is, to collect information about education around the world and analyze the information to determine effectiveness of, or describe or compare, methods, structures, tools, and organization.

A common understanding in comparative education is that education in a society is subject to the beliefs, traditions, cultural patterns, political realities, economics, and experiences of the society. These elements shape the structure and content of education in each society. In order to gain an understanding of education, one must look at these elements and their interplay, so by necessity, the study of comparative education extends beyond the field of education. Kandel (1956) discusses this when he writes:

The value of comparative education as an academic study rests on the ability to analyze and compare educational systems and the factors that determine and shape them – Die Triebkräfte der Pädagogik, as Friedrich Schneider has called them. What makes the study of comparative education difficult is that, like the history of education, it is dependent on a command of many disciplines outside the field of education proper. It may even be claimed that a knowledge of political theory and practice, of anthropology or culture patterns, of economics, of public opinion, and of sociology is more relevant than a knowledge of the theory and practice of education. (p. 1)

Relative to this is the idea that a system of education is “not based on reason and experience, but on a reverence for tradition and prejudice” (Clarkson, 2009, p. 6).

The relationship between comparative education and international education has been widely discussed in the literature. It has been said that comparative education is the strand of education that is concerned with the how and why of education in a culture, and that international education is the application of education in a culture. Some insist that the comparative and international education, while historically related, function as two

completely separate fields of study, while others see the fields as interrelated (Bray, 2007; Clarkson, 2009; Epstein, 2008; Wilson, 1994).

Epstein (1992), a prominent comparativist and proponent for the separation of comparative education from international education defined comparative education as “a field of study that applies social scientific theories and methods to international issues of education. International education, by contrast, was defined as an organized effort to bring together students, teachers, and scholars from different nations to interact and learn about and from each other” (p. 409). Wilson (1994), on the other hand, strongly believes that educators and scholars both make strong contributions to both comparative education and international education. He coined the phrase “academic practitioner” to refer to those who not only research and analyze, but also teach.

Dede et. al (2011) consider comparative education to be “a field that attempts to establish the world’s education problems, and, by considering the similarities and differences between these problems, examine them in the context of a country’s values and conditions so as to develop proposed solutions that are unique to the country” (p. 3537). An example of this principle that is particularly relevant to Indonesia and the provinces of West Papua and Papua (the location of the schools included in this document) is discussed by Kandel (1961) in “Comparative Education and Underdeveloped Countries: A New Dimension”. Kandel notes that in the past,

education in colonial dependencies was unsatisfactory because it was organized on principles and practices of the respective suzerain powers and ignored both the needs and the environments of the indigenous peoples concerned. The tendency on the whole had been to assimilate colonial education to that developed under conditions of Western civilization. (p. 2)

Later in the same text, when referring to countries that had gained independence or were newly formed post-World War II, he states that:

the new start must be based on the recognition that while the process of modernization may be rapid, the kind of educational systems developed in the nineteenth and twentieth centuries under conditions of industrialization and technology is not suited to most of the underdeveloped nations. The economy of these nations is primarily agricultural (and that at a very simple level) and must remain so for some considerable time to come. (p. 131)

In this article, Kandel is primarily looking at the education of indigenous peoples post-World War II. He urges educationalists to first consider the development of a community or social spirit, so that everyone has a stake in education. He states the challenges this way:

“Nor have most countries had to face the problem of welding together into a national community peoples of different tribal loyalties, different dialects, and different customs and cultures by a process which would lift most of them from their almost primitive level to the civilization of the twentieth century” (Kandel, 1961, p. 134).

This “welding together” statement could have been written specifically for the island nation of Indonesia. Indonesia declared its independence from the Netherlands on August 17, 1945. It became a new nation, an archipelago with a broad range of cultures, religions, languages and customs. The provinces of West Papua and Papua, where the subject schools are located, were integrated into Indonesia through what many Papuan people believe was a political sleight of hand. In chapter 4, I look closely at the indigenous people and their historical, political, and educational situations.

The goal of comparative education should not be to transplant a system of education from one country to another (Blake, 1982; Clarkson, 2009; Kandel, 1956; Phillips, 2006), but rather to offer varying lenses with which one can analyze and interpret educational systems. No one best education system for the world exists. Positives and negatives are present in each system, and educationalists have the task and responsibility for determining what can be adopted and/or adapted for use in their own

system. Comparative studies can enable implementation of adapted ideas and systems by also identifying elements of education systems that could prove to be problematic, allowing educationalists to address possible issues ahead of time.

Comparative studies contribute to the understanding of cultures as well as of educational systems. In examining processes, methods, and motivations of an education system, comparativists gain insight into cultures. Because of this, they are a large part of the peace education movement as well as the international education movement.

Peace Education. Peace education and international education have a naturally symbiotic relationship as they both seek understanding of cultures other than one's own. This is not a new idea. Since the fourteenth century, people have advocated for the establishment of international schools in order to "improve education and advance international peace" (Meyer, 1949, p. 569). Most of the worlds' religions try to teach peace and understanding as a desired way of life. Harris (2004) identified five main postulates of peace education:

- It explains the roots of violence.
- It teaches alternatives to violence.
- It adjusts to cover different forms of violence.
- Peace itself is a process that varies according to context.
- Conflict is omnipresent.

In these postulates lie the *raison d'être* for peace education. Peace education varies according to the needs of the culture, as various cultures have differing needs for and understandings about peace. If peace is defined as the absence of conflict, the specific need for peace education can vary between communities and cultures. Peace

education can address the causes and effects of war or the impact of neighborhood gangs. It may address violence against the environment, human rights, bullying, racism, marginalization, or conflict due to lack of resources such as shelter or food. As well as educationalists, sociologists, psychologists, feminists, and environmentalists study peace as a strand of their respective disciplines.

In 1815, Noah Worcester, one of the founders of the Massachusetts Peace Society, observed that “there is nothing in the nature of mankind which renders war necessary and unavoidable—nothing that inclines them to it which may not be overcome by the power of education” (in Fink, 1980, p. 20). The New York Peace Society was formed the same year (1815), followed shortly by similar societies in Maine and New Hampshire. In 1828, these societies merged to form the American Peace Society.

Throughout the 1800s, there was a growing movement in Europe and the United States to educate youth about the problems of war. Because of the nationalism prevalent in the Western World, some people became concerned about the growth of prejudice and intolerance. In the 1880s, peace activists began efforts to influence school curriculum and to introduce internationalism into the schools. However, school curricula can be problematic. The idea that school textbooks are a source of international misunderstanding was part of the report from the First International Peace Congress in 1890. The report writers suggested that rather than teach the glories of battles, history teachers should teach the evils of war, and examiners, parents, and teachers should honor peaceful deeds and teach sorrow over losses in war (Fink, 1980).

The peace movement continued to grow during the late nineteenth and early twentieth centuries. More peace organizations were formed, and more activists sought to

teach international understanding in the hope that this would prevent conflict. In 1898, the International Federation of Students (Corda Fratres) was formed to promote world peace. The 1899 Peace Conference in The Hague sought a way to outlaw war, and Mahatma Gandhi's peace activism in India and South Africa in the first half of the twentieth century was an example of a way to elicit change without war.

At the thirteenth International Peace Congress in Boston in 1904, a session was devoted to "The Responsibility of Educators Creating Right Ideals of International Life". Education text publisher Edwin Ginn proposed a "school of peace". The American Peace League was formed two years later with the goal of reviewing school curriculum. The National Association of Cosmopolitan clubs was formed by American and foreign students to promote international understanding and friendship (Fink, 1980).

In 1908, the U.S. National Education Association (NEA) founded an educators' chapter of the American Peace Society (Harris & Morrison, 2003). And yet despite all of these efforts, the world experienced a major war from 1914 through 1918. Events in the world including the Bolshevik revolution in Russia and other eastern European countries, the passing of the Espionage Act in 1917, the Sedition Act in 1918, strike activity among American workers, and increased immigration of people from eastern Europe to the U.S. inspired fear and a perceived threat to the American way of life. This was known as the first Red Scare and during this time, many peace organizations changed their names, because "peace activist" came to be associated with "communist" (Dolby & Rahman, 2008). The American Peace Society became the American School Citizenship League and it was organized into state chapters and associated with NEA chapters. They

disseminated literature, organized speakers, held essay contests, and established Peace Day in schools.

The International School of Peace in Boston, founded in 1909 by Edwin Ginn, was the school he had proposed at the International Peace Congress in 1904. The mission of the school was to “educate the peoples of all nations to a full knowledge of the waste and destruction of war and of preparation for war, its evil effect on present social conditions and on the well-being of future generations and to promote international justice and the brotherhood of man” (Filene, 1963, p. 481). The name was changed to the World Peace Foundation in 1910, and Ginn secured its future with an endowment of one million dollars. It is still active today and is affiliated with the law school at Tufts University. That same year, Andrew Carnegie established the Carnegie Endowment for International Peace. The emphasis of the organization was research, but also included an education division.

In the United States, an early twentieth-century peace activist, Fannie Fern Andrews, became interested in education for peace. With her degree in International law from Harvard, Andrews was generally considered to be an expert on international relations in the early part of the twentieth century. She had worked as a teacher and combined her vocations toward the establishment of an international organization for education. She was the Secretary for the American School Peace League, and in that position, Andrews directed (and participated in) the creation of curriculum on United States History and a course on “Citizenship and Patriotism”.

Andrews was invited to serve as a Special Collaborator of the U.S. Bureau of Education. She had a plan to create an international bureau of education, which she

presented to President Taft in 1911, and to which he responded with great interest. President Taft requested that she organize a conference of educators from various countries to meet to develop an international bureau of education. Throughout the next three years, she traveled extensively in the capitals of Europe, seeking support for the conference, which she received in all countries she visited.

The date was finally confirmed for a meeting in The Hague in September of 1914, with sixteen governments planning to send representatives. Unfortunately, the first World War broke out two months prior to that, preventing the Conference from meeting; however, interest in the idea did not die. Andrews found that the representatives were still interested in the conference and looked forward to having it when the war was over. When the war ended, Andrews was appointed to represent the U.S. Bureau of Education at the Peace Conference in Paris. In this capacity she was able to “point out that education was a potent factor in the development of ... regions ... over which the League of Nations was to be the guardian” (Andrews, 1948, p. 115). This idea received great approval from the delegation, although no international bureau of education came out of the meetings.

In 1919, following the Peace Conference in Paris, a group of educationalists from the University of Geneva formed the International Bureau of Education, much along the same lines as the organization that had been discussed before the war. However, it was private and supported by membership dues.

Meanwhile, during and after World War I, the American School Peace League continued to work to educate students on the benefits of peace. In “Warned to Teach No Hate” (1917), Andrews wrote:

What is the special service which teachers may render in this war? Anger, hate of other nations, should be kept from the schoolroom. The schools should maintain a civic and moral stability among the youth of the land. This is an opportunity to inspire anew a love for American institutions and American ideals. (p. 1)

In the years between the world wars, the League of Nations worked to establish peace through international understanding. Although the United States never joined the League, it did sign the Kellogg-Briand pact, along with most of the countries in the world, promising never again to resort to war, but to find peaceful means of settling differences. Social studies teachers began teaching more about international issues, with the belief that extreme nationalism is what led to the Great War (Harris, 2010). Even so, the lessons went unheeded by many national leaders. By the end of the 1930s, the world was once more enmeshed in global conflict.

The preamble to the 1946 founding document for the United Nations Educational, Scientific and Cultural Organization (UNESCO) begins with a quote from Clement Attlee, “Since wars begin in the minds of men, it is in the minds of men that the defences [*sic*] of peace must be constructed” (Huxley, 1948, p. 27). A primary goal of UNESCO is to promote peace through education, science and culture. In 1949, UNESCO published the *Handbook for the Improvement of Textbooks and Teaching Materials as Aids to International Understanding*, which outlined UNESCO’s program, recommended activities and projects. As of 2019, UNESCO continues to maintain a clearinghouse for shared information and research on schools and education throughout the world.

Through the last half of the twentieth century, with the turbulence of the Civil Rights movements around the world, the war in Vietnam, the Cold War, and the threat of nuclear extinction, the perceived need for peace education in schools grew. Domestic violence, gang violence, drug violence, violence against the environment—all of these

things weighed heavily on the world, and still do. The hope of peace education activists has been that if children can be taught the value of differences and ways to settle differences, that they will act as a groundswell for peace as they became adults. In 1948, the National Education Association (NEA) in the United States published a document outlining a social studies curriculum that would include “international understanding, world peace and human welfare and education” with the goal of “developing American citizens who are conscious of their new obligations to mankind” (Sylvester, 2003, p. 187).

In Europe, Maria Montessori encouraged educators to allow students to make choices about their studies and stipulated that schools should be nurturing communities. She believed that student independence would promote empathy in students as well as their ability to think for themselves (Harris, 2004).

Johan Galtung, one of the founders of the International Peace Research Association in Finland, defined peace as being of two strands: negative and positive. Negative peace refers to the lack of direct violence, such as in avoiding war or stopping violence. Positive peace refers to the removal of the causes of violence, such as social injustice and poverty (Synott & Harris, 2002). He perceived tolerance as “putting up with the other” instead of seeing the other as a source of “potential richness.” Like Montessori, he believed learning should be student-directed, experiential, and the product of dialogue (Horowitz, 2010).

One of the most prolific and more recent writers on peace education in the United States, Betty Reardon (born 1929), looked at “patterns of thought” that have created violence (Harris, 2010). Reardon believes that human rights are the cornerstone of peace

education. In 1999, a group of educators at the Third Hague Appeal for Peace Civil Society launched the Global Campaign for Peace Education (GCPE). Their mission was to work towards implementing UNESCO's Integrated Framework of Action on Education for Peace, Human Rights, and Democracy in all of the schools in the world. In her dual role as Academic Coordinator of the GCPE and Director of the Peace Education Center at Teachers College, Columbia University, NY, Reardon directed an international group of graduate students in the development of lesson plans and teaching activities promoting peace (Harris, 2010; Reardon, 2002).

Conflict resolution and values education are two prominent movements in contemporary education that are related to peace education. Interpreting Galtung's strands of peace through these ideas, education on conflict resolution could be seen as negative peace education as it would deal with the stopping of violence. It could also be viewed as positive peace education in that conflict resolution can deal with the resolution of underlying causes of violence such as poverty, misogyny, or environmentalism. Values education, through Galtung's lens, would be seen as positive peace education because it is proactive in helping students to understand beliefs and traditions in their culture as well as in other cultures. Kandel paraphrased Attlee's statement when he said, "Since wars are put into the minds of children still in school, it is in the minds of children still in school that the defenses of peace must be constructed" (Kandel, 1956, p. 77).

Values Education. Values education has existed throughout the years under many names, including character education, emotional education, social education, moral education, and even peace education. Like international education and peace education, the definition of values education seems to flex depending on culture and need. As in

peace education, values education deals with interpersonal relationships as well as world issues such as pollution and resource depletion (Lasswell & Sakamoto, 1972).

In the early part of the twentieth century, John Dewey emphasized that the primary goal of education is moral development (Hassinger, 2016; Lovat, 2011; Melenciano, 2006). Dewey believed that humans go through three stages of moral development: concern for self, concern for self and others, and finally, concern for others. However, in post-World War II, with the emphasis on math and science and the space race, education began to be directed by those following a positivist viewpoint—that nothing is meaningful until it has been verified through logic, mathematics, or on empirical grounds. Education became more focused on logic, with less importance placed on moral or character development (Epstein & Carroll, 2005). Yet ideas from Dewey and progressive education remained.

Working from Dewey's theory, Lawrence Kohlberg posited that moral development was central to all human growth and that it developed through six stages (Lovat, 2011; McDonough, 2005; Melenciano, 2006). Each stage incorporated greater complexities, eventually including the ability to understand the arguments of others. Kohlberg created the Center for Moral Development at Harvard University in 1968 and began a twenty-year longitudinal study to test and affirm his stage theory. Kohlberg developed the Just Community schools, where all stakeholders, including administration, children, and teachers had input on school justice issues. The goal of the Just Community schools was to build a community that valued relationships and interaction, as Kohlberg believed that children's personalities develop and learning occurs through social interaction.

In 1961, Harry Hollins established the Fund for Education Concerning World Peace through World Law, which eventually became the World Law Fund. The Fund established programs for high schools and universities to teach world order studies. Their purpose was to look at ways to prevent more wars. In 1968, the Fund established the World Order Models Project (WOMP). Saul Mendlovitz, a law professor at Rutgers University directed the WOMP, the goal of which was to promote values “that could be accepted as goals for ‘models of a preferred world’, based on peace, social justice, economic well-being, ecological balance and political participation” (World Policy Institute, 2013).

Since the 1980s, a strong movement in schools for values education, or character education, has continued. This can possibly be seen as an outgrowth of the resurgence of the peace movement in the 1970s. In 1993, William Bennett, the Secretary of Education in the United States under President Ronald Reagan, promoted the teaching of values (responsibility, respect, honesty, caring, and fairness) as a means to stem the violence he saw rising in schools and communities.

Studies conducted in the 1990s and 2000s have shown an increase in student academic achievement in schools where relationships are built between students and teachers, and where students feel valued and accepted (Benninga, Berkowitz, Kuehn, & Smith, 2006; Berkowitz & Bier, 2004). In studies of the Values Education Good Practice Schools Project (VEGPSP) in Australia, researchers found that values education and best practice are linked. A challenge for teachers was to create classrooms where certain values were integrated not only into “expected” behavior, but into the way the classroom and the school functioned. Teachers and students became partners in learning, student

learning improved, staff and students were happier, there were fewer behavior issues, and learning engagement went up (Benninga et al., 2006; Lovat, Toomey, Daily, & Clement, 2009). Lovat (2011) connected Habermas' theory of knowing to character education in this way:

For one thing, Habermasian epistemology renders the notion of values neutrality in education non-viable and therefore challenges the authenticity of an education conceived of solely in instrumentalist terms. In contrast, it renders essential to any legitimate education a values-laden pedagogy that saturates the learning experience in both a values-filled environment as well as in explicit teaching that engages in discourse about values-related content, transacts practical and personalized values, and in turn inducts students into personal empowerment over their own stated and lived out values. Habermasian epistemology confirms the views of the scholars...that values education is best understood as holistic learning aimed at the full range of developmental measures. Rather than connoting a mere moral or, least of all religious option, values education connotes an effective and indispensable way in which learning should proceed in any school setting. (p. 149)

In short, the connection between values and any teaching-learning is so strong that they are inseparable. In the teaching of content areas (math, language, science, arts, etc.), decisions about the manner of teaching and the content considered worth learning are values-laden. Therefore, it is logical and productive to address values as a part of a holistic learning program, with thought given to what values will be taught and how they will be communicated, whether implicitly or explicitly. Application of values education can be a cultural minefield in an international school or when using an international framework such as the PYP. Some cultures have values that are similar to the professed Judeo-Christian ethic, but vary in the weighting and application of specific values. Other cultures have different values. If one applies the idea that values are always communicated in education, structuring a standard curriculum that will work across many borders is a challenging goal.

What is an international school?

Most authors of articles or studies on the topic of international education attempt to define what “international education” is. The definitions offered are fluid, changing with the perspective of the writer and the time and aspect of education being studied. Common themes among authors are the inadequacy of definitions and the difficulty of finding a definitive statement that will encompass all of the faces of international education.

Given that no accepted single organization monitors international schools, the nomenclature used varies with the definition. Examples of terms used to describe international schooling include education with a global perspective, education for international understanding, global studies, international studies, intercultural programs, transnational programs, and international education. Spaulding et al. (1982), wrote that “international education is not a clearly defined professional or disciplinary term,” rather that it is “a useful term to label a wide range of activities and research interests” (p. 206). Pearce (2013) explained the phrase “international education” as “a floating signifier, a phrase without a circumscribed meaning which is invoked by a variety of users who feel that it gives a valuable impression of their projects” (p. xii).

As early as 1931, Paul VanDyke offered four different possible definitions of international education. The first is the simplest: education in international institutions. International education can also be the “attempt to create the ‘international mind’ by destroying patriotism and substituting for it a love of humanity” (p. 15). He also claims international education may mean “trying to train sensible intellectual attitudes towards other nations and helping people to escape from foolish or wicked forms of national

pride,” and lastly, “special instruction given in international law, the history of diplomacy or other topics concerned directly with international relations” (Harley, 1931, p. 15).

Becker (1969, as cited in Sylvester, 2005) defined international education as “those social experiences and learning processes through which individuals acquire and change their orientations to international or world society and the conception of themselves as members of that society (p. 128).” That same year, Leestma (1969, as cited in Sylvester, 2005) suggested that the fundamental definition of international education is “any experience that reduces ethnocentrism” (p. 129).

All of these definitions reference the social experience of learning as a part of international education. Gellar (1993) states that it is “not so much curriculum, but what takes place in the minds of children as they work and play together with children of other cultures and backgrounds” (as cited in Hayden & Thompson, 2000, p. 49). In a letter to Ian Hill, a former Deputy Director General of the International Baccalaureate Organization, Desmond Cole-Baker states that “formal education is only a contributing factor, with an environment based on personal contact amongst students being more powerful in creating an environment in which suspicion and hatred disappear” (Hill, 2000, p. 29). This idea is supported in a study by Hayden and Thompson (1997), which found, among other things, that students in international schools attach a high level of importance to diversity of cultures and to interacting with students of other cultures both in and outside of the classroom . In 1972, Terwilliger produced a specific definition for international education:

There are four main requisites: enrolment [*sic*] of a significant number of non-citizens of the country (but not all from one other country), board of directors made up of ‘foreigners and nationals in roughly the same proportions as the student body being served’, a teaching body made up of teachers who have

themselves ‘experienced a period of cultural adaptation’, and a curriculum which is a ‘distillation of the best content and the most effective instructional practices of each of the national systems’, which will allow students to transfer to other international schools, to schools in their home educational systems, or to university either at home or in some other part of the world. (as cited in Hayden & Thompson, 1995, p. 333)

UNESCO defines international education as “education for international understanding” (De Goni, 2004, p. 5) and further states that “any educational process is based on four principles: human rights, peace, culture, and understanding the United Nations System” (p. 95). In his attempt to create a map of the history of international education, Sylvester (2005) referenced the work of Anderson and Becker (1976) and Hanvey (1982), both of whom include the idea of world citizenship and responsible judgement in their ideas of international education.

Leach’s 1969 model specifies that to be international, a school should have the following:

- Professional affiliation and funding
- Students, parents, faculty, board members from many nationalities
- Philosophy and goals reflect an international mission and emphasize a tolerance for difference.
- Curriculum, training of teachers, interaction of students should have a multicultural dimension. (in Grant, Kuhns, & Pickert, 1995)

Since Leach’s model was developed in 1969, there have been many changes in the world of international schooling. Adherence to his definition raises questions regarding the internationalism of schools with a majority of national students but a curriculum from outside the country, or a for-profit school that has students from a wide variety of countries but a board composed of one nationality, or no board at all. Likewise,

the laws and regulations of some countries have changed regarding the status of international schools. Indonesia, for example, no longer allows the use of the word “international” in the name of a school, unless that school serves a single nationality, and has very strict requirements for the three school boards it requires every school to have. These are the kinds of things that make defining international education difficult.

How do we teach these students?

Although no governing body for international schools exists, several organizations that have created structures within which their member schools operate. One of these is the International Baccalaureate Organization (IBO), which was founded in 1967 and in 2019 is a driving force in international education. The IBO is one of the preeminent accrediting organizations for both international and national schools. According to the IBO, in March of 2019, over 5000 schools in 153 countries offered at least one of the IBO programs. This section focuses on the development of the IBO, the mission and vision of the organization, as well as the schools that use the IBO framework. At every stage of its history, new initiatives were spurred by a specific need. Developments were driven by experienced educators and, according to the IBO, were research based.

As noted earlier, discussions among parents and educators, particularly those living in expatriate status, regarding the creation of a high school baccalaureate that would be accepted internationally occurred throughout the early to mid-twentieth century. The International School of Geneva (*Ecolint*) had a leading role in the development of international schools since its founding in 1924. In his position as Assistant Director of the newly founded school, Adolphe Ferrière sent a questionnaire to

educational leaders throughout Europe in 1925 seeking their comments regarding a *maturité internationale*, an international diploma. No responses are recorded (Hill, 2001, pp. 12-13). However, two movements shaped education in schools catering to international families after World War II. School stakeholders had concerns regarding how Social Studies would be taught and the need for an international baccalaureate (Bagnall, 2010; Hill, 2001; Sylvester, 2003).

The faculty at schools such as *Ecolint* and the United Nations Schools, which were founded with both “idealistic and utilitarian purposes” (Fox, 1985, p. 54) were looking for a way to teach social studies that would foster international understanding without undermining patriotism for the students’ home countries. At the same time, the overwhelming issue for students was the difficulty they faced in returning to their home country for university due to lack of an accepted secondary leaving certificate. Entrance requirements for university varied from country to country. In some cases, students were required to have completed secondary school in those countries in order to attend university there. Students who completed their secondary education in foreign schools faced restrictions to entering universities in their home countries, even though the students were citizens. All of this led to international schools being “frequently, an institution offering several national streams in a kind of educational department store. ... the coexistence of different communities, these being juxtaposed more than integrated” (Renaud, 1991, p. 6).

According to Bagnall (2010) *Ecolint* excelled at the primary and lower secondary levels, but at the upper level, “the cost of providing a great number of classes of the four separate examinations offered – the Swiss *Maturité*, the United States College Entrance

Board exams, the English GCE 'A' levels and the French *Baccalaureate*, was crippling the school” (p. 53). Perhaps even more importantly, the stated purpose of international education was being undermined by the division of students into national groups.

An international baccalaureate was discussed at the 1949 Conference of Principals of International Schools (UNESCO convened). The attendees agreed that an international university qualification recognized by all countries was necessary and that there were two essential pieces that must be in place: a foreign language requirement and a thesis on a subject important to the world. Attendees also felt that the greatest obstacles were the rigidity of “prescribed national curricula and university entrance requirements” (Hill, 2001, p. 19).

The International Schools Association (ISA) was formed in 1951 to support schools catering to multiple nationalities and was housed at *Ecolint*. The ISA was formed by a group of multi-national schools, bilateral schools, national schools with international sections, and schools with parallel national sections, and was financed by UNESCO (Bagnall, 2010). In 1951, the Conference of Internationally-minded Schools was founded and listed as one of its aims to “work towards recognition of the equivalence of university entrance diplomas in all countries for university acceptance everywhere” (Hill, 2001, pp. 19-20).

In 1963, the ISA received a UNESCO contract to study “practical ways of harmonizing curricula and methods of the development of international understanding,” and a large grant from the Twentieth Century Fund to develop an international exam (Bagnall, 2010, pp. 53-54). By 1965, a separate body had been formed by the ISA called the International Schools Examination Syndicate (ISES) (Renaud, 1991, p. 7). At an ISES

meeting in Geneva, a framework for the Diploma Programme (DP) was agreed upon. The goal of establishing the DP was to create a certificate that would be accepted in all countries for university entrance; a true international baccalaureate.

The DP was piloted at *Ecolint* in 1967, the same year ISES formally separated from ISA and became the International Baccalaureate Office (IBO). The exam format for the DP was endorsed at a conference in Sevres, France, with the languages of instruction designated as English and French (Bagnall, 2010, P. 56). At this time, the DP was still not accepted by all countries as sufficient for university entrance. France did not give the DP direct equivalence with their certificate, and France and Germany still only allowed native students of parents working abroad for a certain number of years to enter their universities.

By 1969, schools in Wales, the United States, Lebanon, Denmark, Iran, England, Uruguay, Brazil, France, and Germany were offering the DP, which continued to spread throughout international and some national schools. At a 1980 ISA meeting in Tanzania, the ISA governing board decided to develop a program for students aged 11 to 16, called the ISA Curriculum (ISAC) (Hill, 2003, p. 242).

In 1990, the idea of “creating a new structure of international education to reinforce national systems” (Giddings, 2013, p. 3) began to be discussed within the IBO. Up until then, the IB had focused solely on students attending international schools. (I suggest that even though the topic of national schools arose in 1990, based on the stated goals of the IB, the focus was still on international education, and the discussion was perhaps about how to put international school “values” into national systems.) A number of national schools across the world were using the ISAC as well as the IB DP. In 1992,

the ISAC was taken over by the IBO and became known as the Middle Years Program (MYP).

Part of this initiative included expanding the International Baccalaureate program to include students of younger ages. A group of educators interested in an international primary program gathered at a meeting of the European Council of International Schools (ECIS) in Vienna and formed the International Schools Curriculum Project (ISCP). The ISCP committee decided to start with a social studies curriculum because it was currently “considered to be dependent on national textbooks with little, if any, international perspective or openness to other interpretations” (Hill, 2003, p. 245) The target group would be three- to twelve-year-old students.

The ISCP became a joint project of ECIS and the IBO. A steering committee was formed in Frankfurt, Germany. The IB executive committee considered issues with articulation between the ISCP and the MYP, and between the MYP and the DP. The issues they discussed were “ensuring a truly international curriculum, the importance of individual subject areas, cross-curriculum integration, the teaching and learning of values and attitudes, action and service, and purposeful inquiry” (Giddings, 2013, p. 9).

The social studies curriculum framework of the ISCP published by the IB in 1994 did not include specific concepts. Instead, the curriculum framework included a model that consisted of three parts: the written curriculum, the taught curriculum, and the learned curriculum. It also included the following essential elements for constructing a site-specific curriculum: concepts, skills (now called approaches to learning), attitudes, and actions. Inquiry would be the dominant pedagogical approach, and a template to support planning was created (Bagnall, 2010; Giddings, 2013).

These ideas formed the foundation of the ISCP, and its evolution has not strayed far. The first schools authorized to implement the ISCP were Frankfurt International School and the International School of Amsterdam. The science framework was piloted in 1994; physical education, personal and social education (PSPE) including health education frameworks were piloted in 1995, math in 1996. Heads of the subject area committees met to look at crossover and transdisciplinary learning possibilities. In 1997, the IBO took over financial and administrative responsibilities. At that time, 106 schools in 55 countries were members of the ISCP and using the framework, which became the Primary Years Programme (PYP). In 1998, an arts committee was formed for the PYP.

One of the greatest challenges the IBO has faced since its inception is the idea that, while the apparent aim is to foster internationalism and engender understanding between people of different cultures, it is essentially a western-centric organization with western values (Drake, 2004; Van Oord, 2007a). This problem raises the question, “What is culture?” Dimmock and Walker (2000) define culture as “those enduring sets of values, beliefs and practices that distinguish one group of people from another (p. 304).” Another explanation of culture uses Balagangadhara’s Learning Configurations Theory:

a culture is a tradition that can be identified in terms of a specific configuration of learning and meta-learning. In each configuration, one particular kind of learning activity will be dominant: it will subordinate other kinds of learning activities to itself. Such configurations of learning processes can be seen as ‘culture-specific ways of learning.’” (Balagangadhara, 1994, as cited in Van Oord, 2005, pp. 181-182)

By way of example, Van Oord cites Balagangadhara’s description of the influence of religion on learning process: that the West is theory-driven (true beliefs), and Asian culture is performance-oriented (right practice) (2007b). He further suggests that this difference contributes to the tension between the two primary goals of the IBO, which are

firstly, recognition by universities internationally, and secondly, encouraging international understanding; the IBO must maintain a balance between the two goals. Bagnall addresses this tension when he refers to “the need to keep the curriculum as fluid as possible and to thereby reduce the dominance of one particular school of thought or body of knowledge” (Bagnall, 2010, p. 60)

Making the PYP Happen. In October of 2018, the IBO introduced an update to the PYP, called the enhanced PYP. The outline of the program was not changed. The IBO expects schools to take two years to make the necessary changes in their programs to accommodate the enhanced PYP. The information that follows refers to the enhanced PYP, unless noted.

Making the PYP Happen (IBO, 2012) is the educator’s practical guide to using the PYP curriculum framework. The framework is composed of the written curriculum, the taught curriculum and the assessed curriculum. The written curriculum aims to answer the question, “What do we want to learn?” and is composed of five essential elements: knowledge, concepts, approaches to learning, attitudes and action. The taught curriculum aims to answer the question, “How best will we learn?” and is guided by inquiry and the construction of meaning. The assessed curriculum responds to the question, “How will we know what we have learned?” and involves the gathering of information through reflection and feedback.

The PYP espouses concept-based learning, through the use of six broad, prescribed transdisciplinary themes: Who We Are, Where We Are in Place and Time, How We Express Ourselves, How We Organize Ourselves, How the World Works, and Sharing the Planet. The definition of ‘transdisciplinary’ adopted in the PYP framework

comes from deLeo, who states, “Focus on issues across learning areas, between them and beyond them, for the emergence of new and broader perspectives and for deeper understanding of the interrelatedness of complex issues” (Deleo, 2006, p. 12; IBO, 2010).

Transdisciplinary approaches that are a part of the PYP include:

- The need for coherence in curriculum design;
- Schools as learning communities;
- A collaborative discovery approach to issues-based learning;
- An active, participatory approach promoting critical thinking.(IBO, 2010, p. 3)

The implementation of the PYP is through units of inquiry (UOIs), with six UOIs each year in grades 1 through grade 5. Pre-kindergarten and kindergarten classes (ages 3 to 5) work through four UOIs in a year. Teachers work together to design a framework for each UOI guided by a transdisciplinary theme and through the use of a central idea, concepts, approaches to learning, learner profiles, and action. Language, mathematics, foreign language, music, art, and PE integrate with the various UOIs if a natural connection exists. Information and Communications Technology (ICT) is considered a tool and is not taught as a separate discipline, but rather integrated into all learning. The UOIs are entered into a matrix for articulation vertically as well as horizontally in the school. This matrix is called the Program of Inquiry (POI). The transdisciplinary nature of the units allows for a concept to be studied from various points of view.

What adds significance to student learning in the PYP is its commitment to a transdisciplinary model, whereby global themes frame the learning throughout the primary years, including in the early years. These themes promote an awareness of the human condition and an understanding that there is a commonality of human experience. The students explore this common ground collaboratively, from the multiple perspectives of their individual experiences and backgrounds. This sharing of experience increases the students’ awareness of, and sensitivity to, the experiences of others beyond the local or national community. It is central to

the programme and a critical element in developing an international perspective, which must begin with each student's ability to consider and reflect upon the point of view of someone else in the same class. (IBO, 2012b, pp. 5-6)

The UOIs are not defined in the PYP document. Each school designs their POI, and the UOIs within it, to be relevant to their students, keeping in mind their own school disciplinary curricula, mission and vision statements, and values. Students are encouraged to consider problems and solutions posed within each UOI from a local, national and global perspective. Although the PYP has Scope and Sequence documents, the IBO does not require a school to use the them. However, it does require that a school's curriculum be at least as rigorous as the PYP Scope and Sequence documents for each learning area.

To organize the various elements, the PYP has developed the planner. All teaching and learning that happens in a PYP school must be accounted for on this planner. Teaching that happens outside of the POI is put on a stand-alone planner (the same format as the UOI planner). All teachers involved in a UOI add to and work with the planner, which organizes the elements of the program into a format that is usable. It addresses the written, taught, and assessed curricula as well as reflections of teachers and students.

Students are encouraged to develop an action as an outgrowth of their work on each UOI. In *Making the PYP Happen*, the IB explains, "PYP schools can and should meet the challenge of offering all learners the opportunity and the power to choose to act; to decide on their actions; and to reflect on these actions in order to make a difference in and to the world" (2012). The enhanced PYP offers these suggestions as demonstrations of action:

- Participation – contributing as individual or group;
- Advocacy – action to support social/environmental/political change;
- Social justice – relation to rights, equality and equity, social well-being and justice;
- Social entrepreneurship – innovative, resourceful and sustainable social change;
- Lifestyle choices – e.g. consumption, impact of choices. (IBO, 2017, p. 4)

In their last year of the PYP, students will develop an exhibition from one of their six UOIs. Schools handle the exhibition differently, but students often have the option of working alone or in a group to delve deeply into real-life issues or problems. Each group finds a mentor, who could be a teacher, a parent, or a community member. The mentor's task is to support the student group in their project. The task of the group is to create their UOI including the central idea, lines of inquiry, transdisciplinary skills, key concepts, and action, and determine a way or ways to present their material. The goal is for them to draw on their PYP experience to showcase what they have learned in and through their UOIs. The exhibition is presented to parents, the community and other interested stakeholders and usually includes a variety of presentations including, but not limited to, video, music, dance, speaking, shadow-plays and/or information booths. Students use their creativity to determine how they will present their information, as the presentation itself is also a part of their learning.

In spite of the framework of the PYP, the program is implemented differently in every school. These differences are the result of design, logistics and culture, and the understanding and level of commitment of each school in following the guidelines. At the bottom line, schools have responsibilities to their stakeholders: students, parents,

teachers, and administration, as well as legal requirements they must follow, which vary from country to country. The PYP must be flexible in order to accommodate the needs of the various groups. Can the IB continue to grow and remain true to its mission statement? Is it becoming more of an industry? Will that change the value system of the IB framework? How are different cultural values going to be addressed? Will requirements vary between schools, based on culture and tradition? The continuing evolution of the IBO must integrate the answers to these questions as the organization moves forward.

Disciplinary in Education

A tongue-in-cheek mini-history: It is widely accepted that in school, students will study a prescribed regimen of subject areas. Traditionally these subject areas were the “three ‘r’s” – reading, ‘riting, and ‘rithmetic. Upon consideration, a group of men realized that a well-educated person should also have a smattering of music and art (“Every gentleman should play the flute, but no gentleman should play it well.” – Aristotle, sometime B.C.). Somewhere along the way, another group of men decided that students should also learn history and maybe another language. So there we are, Martin Luther. We have a structured, orderly, logical school day, from Kindergarten until high school, or until one acquires a Bachelor’s degree, proving that they are the Best and Brightest from their hometown.

Wait a minute, wait a minute...all that fine education and a World War still happened? People still hate those who are different? Even though we are teaching history? Maybe we need to teach people to understand each other. Let’s lump it in with history and call it social studies. Perfect! Now students will learn everything they need to know. Life is great in (insert name of municipality/state/country).

What's a Sputnik? They did what? We need more math! We need more science! Much better. We ARE the Best! Good thing we have social studies so we can understand that. Sure – the school day can be a bit longer.

Give us this day our daily schedule: Math – 1 hour, Reading – 1 hour, Writing – 1 hour, Science – 1 hour, Social Studies – 1 hour. Music, Art, Library, Foreign Language (something similar to English, please) – rotate them somewhere in the schedule. Also in there, the students MUST have a break, so put in 30 minutes for lunch and a 15-minute recess for the younger kids. After all, they are still children.

Uh-oh. Those children are not so healthy anymore. Stick physical education in there, at least twice a week. And health – at least once a year they must learn about health. Drug abuse education, anti-gang education...who will teach them? School must fix this! Add those things into the music/art/library/language rotation.

It is a Brave New World (capitalizations added for emphasis). There's ether-this, inter-that, and spider webs all over the world. Children must be able to keep up...with everybody and everything. Minutiae in daily life is paramount. We must show the world we are the Best. If we are not on social media, do we exist? IT skills are mandatory, they are paramount, all children must speak fluent IT and know how to keep themselves safe. That is the responsibility of the school. Put it in the music/art/library/language/PE/health/anti-everything rotation.

The above very broad, somewhat tongue-in-cheek mini-history ends up with single subject, separated discipline education at its finest. Every subject has its sacrosanct time and place in the curriculum, and in many cases, teachers who specialize in that area. "What's wrong with this?" you may ask.

What's Wrong with This Picture? Howard Gardner (in Wiggins, 2001) claims disciplines exist for a good reason and are our lenses on the world. However, Fogarty (1991, p. 61) calls this a “fragmented model” and likens it to education being viewed through a periscope. Single-subject classes tend to be content-based, requiring students to somehow internalize a large body of information: names, dates, sequences, facts, etc. Acquisition of knowledge in this model is easily assessed by teachers. However, while students are able to regurgitate memorized information, can they apply that information to new situations or to solve problems? What happens when real-life situations or other information seemingly contradict internalized information? Students may project contemporary knowledge and values onto events and actors of the past, causing misconceptions that affect overall understanding (Mansilla & Gardner, 2008, p. 16).

While some writers seem to use the terms “discipline” and “subject” interchangeably, Beane (1995) states:

A discipline of knowledge is a field of inquiry about some aspect of the world – the physical world, the flow of events over time, numeric structures, and so on. A discipline of knowledge offers a lens through which to view the world – a specialized set of techniques or processes by which to interpret or explain various phenomena. (p. 617)

He continues, clarifying that school-based subject areas are not truly disciplines but “institutionally based representations of disciplines, since they deal with a limited selection of what is already known within the field” (Beane, 1995, p. 617) And there is the problem: “a limited selection,” which begs the question, who decides what that selection will be? What is the selection based on? In fact, the larger question is not only about the content within the subject area, but who decides what disciplines and content are to be included in school.

Newell and Green (1982) believe that the continued existence of some content is “as much attributable to educational politics as to the needs of scholarly inquiry” (p. 619). Stakeholders in education, such as test and text publishers, academicians, and subject-area specialists, have built professional identities and careers on the status quo of education. In addition, parents and politicians often have difficulty accepting differences in education from what they themselves experienced as children and as young people. This has led to a politically conservative climate regarding change in education (Beane, 1995, p. 619).

The Question of Curriculum Integration. Curriculum integration is based on the understanding that genuine learning occurs when learning experiences are tied to questions and concerns people have about their own worlds (Beane, 1993; Mansilla & Gardner, 1997). Curriculum integration is a “way of thinking about what schools are for, about the sources of curriculum, and about the uses of knowledge” (Beane, 1995, p. 616).

An early twentieth century example of curriculum integration occurred when the Houston City school teachers, from 1924 to 1930, related subjects with a social studies emphasis according to themes, such as “primitive life,” “industrial revolution,” “expanding environments”. At Dewey’s Laboratory School at the University of Chicago, integration occurred as a result of teacher-designed activities to explore problems extrapolated from real-life situations. The Lincoln School, of Teachers College Columbia, in Manhattan designed units that utilized the city as a laboratory where students participated in active exploration (Ulbricht, 1998, p. 14).

Curriculum integration can happen in a variety of ways. Fogarty (1991) identified ten separate ways in which curriculum can be managed, from no integration, where

teachers sift out curricular priorities in their own content areas, to a networked model, where learners direct the integration process by reaching out within and across their areas of specialization. Each of these models, at some level, are dependent on the age and understanding of the student.

The multidisciplinary approach to curriculum integration considers the problem at hand in a serial fashion. The problem or topic is looked at through the separate disciplines without any attempt at synthesis (Newell & Green, 1982). Nicolescu (2014) explains multidisciplinary as “studying a topic in not just one discipline but in several at the same time. This approach overflows disciplinary boundaries, but its goal remains limited to the framework of disciplinary research” (p. 19). The identities of the separate subjects are retained in the selection of the content to be used; knowledge is fixed in predetermined sequences (Beane, 1996, p. 7). Multidisciplinary teams can be thought of as a collection of intradisciplinary teams that are working towards a common goal but do not actively engage in the process of knowledge building among each other (Gillis et al., 2017).

Interdisciplinary instruction, on the other hand, considers that separation of disciplines in schools is not realistic for inquiry and problem-solving. In considering a problem, a merging of information and methods (leading to interdisciplinary understanding) is often the path to a solution. This approach has been particularly applied in the fields of environmental management, sustainability, and health care (Clark & Button, 2011; Gillis et al., 2017; Klein, 2013).

Post (2009) reasoned that the humanities and science use different methodologies to solve problems due to their different goals and knowledge structures. He states,

“science seeks pragmatically to predict and control the world,” while the humanities seek to “gratify needs for human meaning, understanding, and cooperation that are perennially diffuse and unsettled” (pp. 755-756). An interdisciplinary study might use methods and/or content from one field to solve a problem in another field.

But what is interdisciplinary understanding? According to Mansilla (2005) “[It] is the capacity to integrate knowledge and modes of thinking drawn from two or more disciplines to produce a cognitive advancement” (p. 16). In other words, “knowledge builders (faculty, students, community experts) in one discipline identify that a solution to their problem requires the tools and methods of another domain to solve... which leads to synthesis of results across disciplines, utilizing methods beyond only one discipline” (Gillis et. al., 2017, pp. 205-206). Kavaloski identifies three standard objectives of interdisciplinary education: integration of knowledge (interconnectedness), freedom of inquiry (no artificial barriers), and innovation (original insights) (Kavaloski as cited in Newell & Green, 1982, p. 29).

In an essay theorizing about interdisciplinary learning, Nowacek (2005) identified four discourse-based resources that each individual uses to construct meaning. The first is content, which includes vocabulary and material; second, propositions or arguments made by participants; third, classroom genres, or “patterns of interactions that emerge over time...unarticulated but powerful conventions of interaction” (p. 191); last, ways of knowing, intellectual activities students participate in to support their propositions. Nowacek asserts, “A focus on connections suggests that learning objectives for courses need not focus solely on synthesis or integration, but rather, include the ability to recognize and ideally articulate points of overlap, agreement, and disagreement” (p. 191).

In an interdisciplinary learning context, higher level connections between disciplines may be based on concepts or processes rather than content or themes. An example of a concept would be conflict and resolution, which is particularly relevant in disciplines such as history, drama, social sciences and music, among others. Process connections would be demonstrated by how students engage with the subject matter, using methods such as classifying, visualizing, reflecting, interpreting, and symbolizing (Wiggins, 2001).

Perhaps the most difficult idea to articulate is that of transdisciplinarity. The IBO claims that the word “transdisciplinarity” was first recorded at a conference in Nice, France in 1970. Three different presenters used it in their speeches: Jean Piaget, Erich Jantsch, and André Lichnerowicz. Piaget’s observations of young students led to what he saw as a “new kind of knowledge” resulting from the “fluctuation of disciplinary boundaries” (IBO, 2010).

The Romanian quantum physicist, Basarab Nicolescu is a leading advocate of transdisciplinarity research. He defines transdisciplinarity as "that which deals with what is at the same time between the disciplines, across the different disciplines and beyond all disciplines" (Nicolescu, 2014, p. 19). He visualizes knowledge as a collection of spheres, each representing a specific discipline. Each sphere contains within it what is known at a given moment in time. As time passes, knowledge is gained, and the sphere enlarges. Paradoxically, the surface area (bordering the unknown) also increases. The transdisciplinary region is that space between and beyond the spheres. In this way, the boundaries of the disciplines are defined, but connections can be realized between them in a variety of ways through the transdisciplinary space (Nicolescu, 1994, p. 7).

Researchers have studied interdisciplinarity and transdisciplinarity at the university level (Fulcher, 1978; Henscheid, O'Rourke, & Williams, 2009; Mateescu, Moraru, & Mărunțelu, 2015; Wolman, 1977) and at the high school or middle school level (Beane, 1996; Kaplan, 1988). Focus on these levels of instruction may occur because university, high school, and middle school institutions are traditionally places where single-subject classes are convened and where students actually physically move through their day from one teacher specialist to another. An interdisciplinary or transdisciplinary program could require more variance in structure and schedule, among other things, perhaps making differences more visible. Older students could be perceived as having acquired a semblance of expertise and interest in a particular area, or just be easier to work with, making secondary sites more open to transdisciplinary practices. However, Nicolescu believes “the future of transdisciplinarity depends on the engendering of a transdisciplinary education which must begin very soon in the life of the human being, before the spirit of the child hardens in forms which are fixed forever” (Nicolescu, 1994, p. 9).

In 1993, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) formed a study group on transdisciplinarity in education. They articulated the engendering of a new type of education as its first priority (Nicolescu, 1994). About this same time, the International Schools Curriculum Project (ISCP) was absorbed into the International Baccalaureate Organization (IBO) as the Primary Years Program (PYP). The PYP was designed to be a transdisciplinary education framework for students from preschool to year five.

In the PYP framework, the central idea of a unit of inquiry (UOI) is directed by one of six broad transdisciplinary themes: How the World Works, Where We Are in Place and Time, How We Express Ourselves, Who We Are, Sharing the Planet, and How We Organize Ourselves. All six UOIs are taught every year, each with a different central idea directing the study within the UOI. In addition to the central idea, the UOI includes the following components: knowledge, approaches to learning, action, key concepts, lines of inquiry, and the learner profile. Through the UOIs, the learner uses elements of various subject areas to explore the central idea. The IB believes transdisciplinarity “provokes the learner into reflecting on and reconsidering what he or she believes about the world and about his or her place in it” (IBO, 2010).

Concerns about Interdisciplinary and Transdisciplinary Models. For many teachers and students, the change from a traditional single-subject school model to an interdisciplinary or transdisciplinary model causes trepidation and anxiety (Kauffman, 2005; Savage & Drake, 2016; Werner, 1980). Questions arise about the validity of the new program, the logistics of actually putting it in place, and the sustainability of it. Teachers and parents may fear that students will not learn what they are “supposed” to learn in their years in school. The age-old concern for time may arise. A sense that moving to transdisciplinary education is an addition to the curriculum must be negotiated. Specialist teachers have valid concerns that their subjects will be defined in terms of how they can support other subjects. Arts teachers in particular have concerns that the uniqueness of each art form will be marginalized (Werner, 1980).). Indeed, in the worst situations, students “come to believe all other subjects were created to teach reading and math” (Wiggins, 2001). Teachers and administrators may see transdisciplinarity as

additional work without seeing the value added. For this reason, thorough and ongoing professional development needs to be in place.

As mentioned previously, the content currently taught in schools reflects the “interest, concerns, and values, of adults, ...and if we introduce the questions and concerns of young people some currently taught content will surely not survive” (Beane, 1993). In the literature, a sense that an interdisciplinary or transdisciplinary model is superior to traditional disciplinary education exists. So, what happens to those who have a passion for a specific discipline? Fogarty (1991) considers her Immersed Model, which filters all content through the lens of interest and expertise, to be one of the higher levels of curriculum integration because integration takes place within learners – it’s passion-driven. Is it possible that there can be a place for everything? How can education be inter- or transdisciplinary without discipline-area experts?

Reconsider the statement from Howard Gardner, “disciplines exist for a reason and are our windows onto the world” (in Wiggins, 2001). Wiggins concurs that discipline distinctions are valid but those distinctions do not preclude using an integrated model. Even Nicolescu, a leader in the transdisciplinary movement, says “there are no experts on transdisciplinarity, but rather researchers animated by an attitude of transdisciplinarity and are simultaneously experts in their own field” (1994, p. 8). Beane (1995) describes an integrated curriculum as concerning the active construction of meanings rather than the passive assimilation of other’s meanings. However, he clarifies strongly that we must take the disciplines of knowledge seriously in order to make sense of the world and ourselves.

Is there a resolution to the tension between disciplinarity and transdisciplinarity? The IBO believes they have created a framework that provides for expertise, inquiry *and* transdisciplinary learning. Perhaps the path to understanding lies in the method of application. Perhaps no one answer prevails, but the understanding lies in the ongoing search. Perhaps another as yet undiscovered need in education will reveal itself in the next few years. In whatever ways we move forward, it is clear that an undeniable need for specialist expertise exists alongside the significant learning benefits of an integrated curriculum.

Who are the students that internationals schools serve?

Meet Maarten. Sometimes comfort is in a name. Sometimes a name validates a feeling, or a fear, or even a sense of wrongness. A name can have power because it identifies and sometimes classifies. A name tells others something about someone. A surname usually identifies a person as a part of a family. The name of a school can offer information about its students. The country name on the front of a passport identifies the holder as being one of its citizens. But what if the name given by others contradicts a person's self-identity?

I once had a student who was of Dutch descent. He was a seven-year-old towhead with bright blue eyes and a great big smile. Maarten spoke English with a bit of an accent, and I could hear his dad's Dutch voice come through now and again. His family had Canadian citizenship and carried Canadian passports. When Maarten was asked where he was from, however, his answer was always, "Ghana." To him, there was nothing out of order in this answer. Ghana was the country he identified with because from age 2 to 5 that was where he lived. His father, a missionary aviator, flew supplies

and missionaries into remote areas, and Maarten's family always lived in the town near the airport. To put yet another twist on the story, at the time I asked Maarten where he was from, we were all living in West Papua, Indonesia. To sum it up, Maarten was a Canadian child of Dutch descent living in Indonesia who self-identified as Ghanaian.

Maarten is not unique. However, as he ages, chances are that he will feel unique. It is likely that he will feel like he does not belong anywhere, and he probably will not quite understand why. Maarten is an MK (Missionary Kid), a TCK (Third-Culture Kid), a global nomad. Some would say he is also a CCK (Cross-Culture Kid). In many cases, labels wear heavily. Interestingly enough, however, kids or kids-turned-adult who have lived like Maarten often feel a weight lifted when they discover these names, because the name allows them to identify as a part of a group.

Stepping Back a Bit. “Men in the Middle of the Third Culture” was written by John Useem and Ruth Hill Useem in 1962 about expatriates (expats) living in India. They describe the first culture as the home or passport country culture, the second culture as the host country culture or the country in which an expat lives, and the third culture being the “in-between” space that allowed an expat to function in and between both cultures. This third culture was a culture all itself, comprised of expats and a few national citizens (citizens of the host country) who functioned in their own first culture as well as in the “in-between” space. The focus of the Useems’ article was on those who were working in a foreign country, which in 1962 was usually men.

Following that publication, Ruth Hill Useem began studying the children of these expat families, calling them third-culture kids, or TCKs (Cottrell & Downie, 2012). Useem defined third-culture kids as “children who accompany their parents into another

society” (Sellers, 2011). In 1999, David Pollack and Ruth Van Reken wrote the book *Third-Culture Kids: Growing Up Among Worlds*. Pollack had previously defined TCKs in this way:

People who have spent a significant part of his or her developmental years outside the parents’ culture. The TCK frequently builds relationships to all the cultures, while not having full ownership in any. Although elements from each culture may be assimilated into the TCKs life experience, the sense of belonging is in relationship to others of similar background. (Pollock & Van Reken, 1999, p. 13)

This definition is commonly referred to in books and research studies (Sellers, 2011; Useem & Downie, 1976; Van Reken, 2011; Van Reken & Bethel, 2005).

Subsets in the third country culture can be defined by the reason for the family being in a foreign country; or by the cultural makeup of the family. In the past, most expatriate families were government employees, military or diplomatic, or missionaries. Now, it is common for family members to be employed by multinational corporations or organizations such as the United Nations, US Aid, or the World Health Organization (Bunnell, 2014; Cottrell & Downie, 2012; Pollock & Van Reken, 1999; Van Reken, 2011). The organization their parents are a part of contributes heavily to the TCKs’ identity, as many responsibilities and benefits in their lives are a result of being a part of that organization.

According to Pollock and Van Reken (1999), the common characteristics of third culture people are:

- There are distinct differences from those around them.
- They expect to repatriate at some time in their lives (differentiating them from refugees and those who emigrate).
- They often live a privileged lifestyle due to their position.

- They are a part of a system; they have a system identity, such as the military, diplomatic corps, missionary organization, or corporate identity. (pp. 17-18)

A number of issues are specific to children who had to balance cultures before consolidating their own identity: among others, uneven maturity, which is manifested in a child's ability to comfortably move around the world, interact with adults, and speak multiple languages on one side, contrasted with delayed adolescence, which can come from the need to follow multiple sets of cultural rules, extended compliance in many situations for safekeeping, and a lack of choice in activities (Pollock & Van Reken, 1999, pp. 143 - 152).

Another term commonly used to refer to third country individuals is global nomad. The term global nomad was coined by Norma McCaig in 1984 to refer to “a person of any age or nationality who has lived a significant part of his or her developmental years in one or more countries outside his or her passport country because of a parent's occupation” (Schaetti, 1996a, p. 1). “Global nomad” and “TCK” will be used interchangeably in this dissertation.

Schaetti and Ramsey (1999) identify four themes common to global nomads: change, relationships, world view, and cultural identity. Change is so common for the global nomad that a kind of comfort level is found in it, even after settling in one place, global nomads tend to generate change in their lives (Fail et al., 2004; Schaetti, 2000; Van Reken, 2011). People come and go in the lives of global nomads, whether because they themselves are leaving or because friends are leaving. Grief is a large part of the expat experience, and children not only learn to make friends quickly, but also how to keep enough of a distance to protect their emotions (Fail et al., 2004; Pollock & Van

Reken, 1999; Ramsay, 1999). This place of being that is on a threshold, “not part of the past and not yet part of the new beginning,” of living between cultures, is called “living in liminality” by Schaetti and Ramsey (1999), who assert that global nomads exist primarily in this space, as they constantly work through transitions (p. 1).

Individuals raised internationally often have a broad view of the world. They have an understanding of differences that is often missing in those raised in a single location. Even if they are not multi-lingual themselves, they usually have experience with multiple languages, and have studied at least one language other than their mother-tongue. They feel they are sometimes seen as snobbish, arrogant, or even unpatriotic by others when talking about their life experiences (Cottrell, 2007; Fail et al., 2004; Morales, 2015; Schaetti, 2000).

As in Maarten’s case, the cultural identity of a global nomad is not always readily apparent. The influences of parents’ cultural identity, caregiver’s culture, passport country, countr(ies) of residence, school culture, and sponsor culture combine in the individual, who must negotiate each on a regular basis. George Walker (2000) quoted Robert Belle-Isle (1986) when he said , “a young person’s self-awareness starts from an understanding of her or his own cultural values” (p. 12). But what happens when those values vary from those of others around them?

The Paradox. Adult TCKs (ATCKs) often talk about feeling at home everywhere and nowhere at the same time (Bolon, 2002; McCaig, 2002; Moore & Barker, 2012). They are able to successfully navigate a variety of situations, but often still hold themselves apart from their surroundings. Van Reken and Pollack (Van Reken, 2011) developed the box in Table 2 to illustrate a TCKs relationship to the dominant culture:

FOREIGNER Look different Think different	HIDDEN IMMIGRANT Look alike
ADOPTED Look different Think alike	MIRROR Look alike Think alike

Table 2: TCK's relationship to dominant culture

This box identifies the various ways TCKs interact with and relate to the dominant culture around them, whether they are in their passport culture or in another culture. In 75% of the situations, the TCK is somehow different from the culture around him or her. Van Reken and Pollack (1999) also discuss the three common reactions they find in TCKs when they are in the hidden immigrant or adopted boxes:

- Chameleons – those who try to find a “same as” identity. They hide their time lived in other places and try to conform externally through clothes, language, or attitudes to whatever environment they are in.
- Screamers – those who try to find a “different from” identity. They will let other people around them know that they are not like them and don’t plan to be.
- Wallflowers – those who try to find a “nonidentity.” Rather than risk being exposed as someone who doesn’t know the local cultural rules, they prefer to sit on the sidelines and watch, at least for an extended period, rather than to engage in the activities at hand. (p. 57)

TCKs who return to their passport country to live could identify as hidden immigrants. They often have never had the experience of their “home” culture, even if it is the culture of their parents or place of their birth. TCKs look like they belong, but they

don't have the understanding that others of their age have. Their frame of reference is different. They often do not have the social or cultural knowledge that is assumed by others, and usually no others outside of their family have the same understandings they do. This is one reason that many TCKs report having close relationships with parents and siblings (Reyal, 2015; Sellers, 2011).

TCKs are often referred to as being culturally marginalized (Downie, 1976; Fail et al, 2004; Reyal, 2015). Downie (1976) found that "social marginality results, in part, from lack of a clearly identifiable group with which to relate (para. 10). Bennett (as referenced in Schaetti, 1996b) describes cultural marginality as being either encapsulated or constructed. Those experiencing encapsulated marginality feel trapped, powerless. Bennett uses the phrase "terminally unique" to describe the feeling that no one else feels the same way, that one will always be isolated, that one's experience is unique. Schaetti (1996b) applies feeling to TCK issues when she says, "they surrender their own opinions, their own concerns to follow somewhat aimlessly the action of those around them" (para. 8) McCaig (2002) describes the experience as "unable to find grounding and resisting identification with the marginal cultural reference group" (p. 52).

The other side of cultural marginalization, according to Bennett, is constructive marginalization. Some TCKs immediately take this path, while others work through encapsulated marginality to arrive at it. As the name implies, TCKs who have a strong sense of who they are and have arrived at an understanding of their cultural marginality often put their multi-cultural experiences to positive use. They acknowledge their home culture to be more emotional than geographical; their feeling of "being home" occurs when they are with other TCKs rather than in a specific place (Schaetti, 1996b, p. 2).

Several organizations exist that work with families in transition, TCKs, ATCKs, and the organizations that are responsible for families living abroad. These include Schaetti's Transition Dynamics, Global Nomads Group, and Families in Global Transition. In addition, a number of websites provide resources and gathering places for global nomads. Some of these sites are:

- www.tckworld.com
- www.internations.org
- www.denizenmag.com
- www.tckidnow.com
- www.third-culture-kid.com
- www.militarybrat.com
- www.alifeoverseas.com

The global nomad balances social situations differently from most people almost immediately upon meeting someone. The question dreaded by most TCKs is "Where are you from?" No answer is simple, and the person asking the question often is not receptive to the long answer. Ann Cottrell (2007), who was mentored in graduate school by Ruth Hill Useem and John Useem, and who has spent her career studying people whose lives are multinational, received the following comment from a reader that sums up the feeling of the culturally marginalized global nomad:

I actually cried when I read your articles last year because I finally felt validated. There's a NAME for what I am, ... I can't begin to tell you how much it's helped me and on how many levels." (p. 67)

Chapter 3: Methodology

The purpose of this study is to investigate how an established curriculum framework, the International Baccalaureate Primary Years Programme (IB-PYP or PYP), is implemented in two different remote schools in Indonesia. One school is an expatriate school, Mt. Zaagkam School (MZS), and the other is an Indonesian national school, Yayasan Pendidikan Jayawijaya (YPJ). More specifically, I aim to examine the lived experiences of educators in these remote schools in order to interrogate how the IB philosophy of transdisciplinary education is understood and implemented in the schools and also to determine what aspects of the PYP educators identify and value.

The word “understanding” stands out in the literature on aims of qualitative research (Merriam & Tisdell, 2016; Stake, 2010; Yin, 2016), understanding what the environment is, understanding what the question is, understanding the people, the time, the culture, the nature of the phenomenon of study. My goal is to understand how a curriculum based on a philosophy of transdisciplinary education is implemented in two different schools that use the PYP curriculum framework. With that in mind, I have chosen to do a qualitative study because, in order to understand (while realizing that understanding is never complete), I need to look deeply at the perspectives and experiences of teachers and administrators who are working at the schools, using the PYP on a daily basis, and thinking (or not) about transdisciplinary education.

Stake (2010) notes that qualitative research is interpretive - it looks at different views; it is experiential - it emphasizes human action and interaction; it is situational - it is oriented to context; and it is personalistic - it seeks out frames of reference and interpretation. A characteristic of qualitative research is the imperative to interrogate

research puzzles. I believe the best way to gain understanding about the puzzle of how the PYP and transdisciplinary education is implemented by teachers in remote schools in Indonesia is through a multiple case study. Elliot and Lukeš (2008) view educational case study as a “form of inquiry into a particular instance of a general class of things that can be given sufficiently detailed attention to illuminate its educationally significant features” (p. 88). In this study, “educationally significant features” are the experiences of the teachers and administrators, the PYP as implemented in two remote schools, and transdisciplinary education. I am not looking for THE answer to my research puzzle, but rather a range of possibilities, and therefore studying two different schools that are closely located seems apt. Further, teaching is not an exact science, and it is within the nature of the PYP for teachers to interpret both the “how” of the PYP program and the flow of the classroom within the PYP framework. These qualities of context are congruent with qualitative study.

One of the key elements of case study is that the case is a bounded unit located within its natural context (Hamilton & Corbett-Whittier, 2013; Hancock, 2017; Merriam & Tisdell, 2016). At the same time, interactions, communications, relationships and practices between the case and the wider world may exist. The focus in a case study is on generating rich data that captures the complexity of the case through a variety of means. It is also a requisite that the researcher spend time within the world of the researched. In the next sections, I describe the context (bounded units) of this multiple case study, my relationship to the settings, and the means of generating data.

My research questions are specific to educators at the two schools. Therefore, my primary focus will be the school staff: teachers and administrators. Previous studies have

been done which examined the experiences of students in PYP and other international schools (Fail et al., 2004; Hayden & Thompson, 1997; Oates, 2016; Walker et al., 2014) and it is not within the parameters of this study to explore further in that direction.

Uniquely Situated

The schools in this study are in a remote location on the world's second-largest island, New Guinea. New Guinea is politically divided with Papua New Guinea (PNG), an independent country, on the eastern side, and the Indonesian provinces of Papua and West Papua on the western side. The people of New Guinea are historically tribal, and geography precludes travel around much of the island. The result of this is that many of the tribes were isolated from each other and from outsiders until relatively recently. Over one thousand distinct languages are spoken, and one-sixth of the ethnicities in the world are on the island (Duane, 2002).

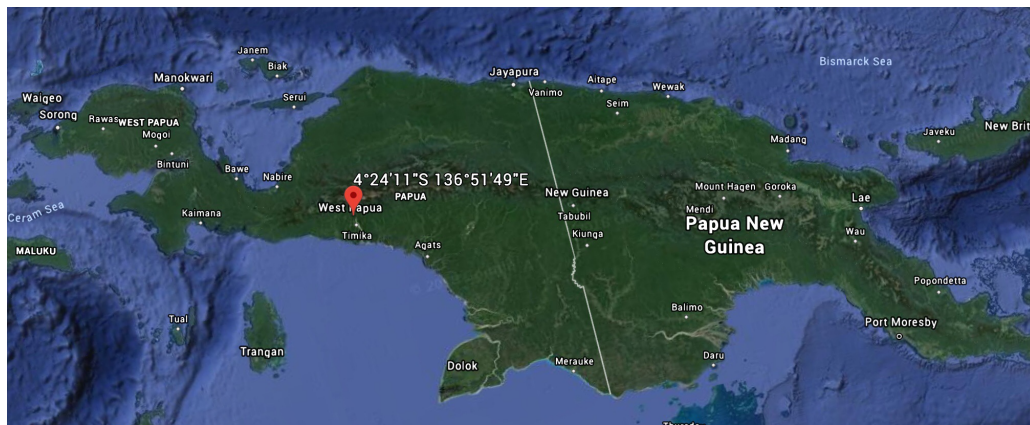


Figure 1: The island of New Guinea. The pointer marks Kuala Kencana³.

The two schools, which are located in the Indonesian province of Papua, have much in common. Both are supported by PT Freeport Indonesia (PTFI), a subsidiary of

³ Source: Google Earth

the multinational American mining company Freeport-McMoRan (Freeport). The Grasberg mine is jointly owned by PTFI and the Indonesian government and produces gold and copper. All students at both schools have parents who work for Freeport. The schools are located less than a kilometer apart in the very small town of Kuala Kencana, often referred to as “the lowlands” or KK, on the concession area run by the mine. Kuala Kencana is a purpose-built town, specifically carved out of the jungle for employees of PTFI.

Both the expatriate school, Mt. Zaagkam School (MZS), and the Indonesian national school, Yayasan Pendidikan Jayawijaya (YPJ), also have a second campus located in the town of Tembagapura (also known as “the highlands” or TPRA), which is higher up the mountain and closer to the mine. Tembagapura is also a purpose-built town, built in the early 1970s for the workers who developed the Ertsberg, the first Freeport mine. The town sits at milepost 68, at approximately 7000 feet above sea level. About 20,000 workers and families live in TPRA. Most of these workers have direct contact with the current mine, the Grasberg, or the mill, both of which are another ten miles and 5500 feet in altitude farther up the road.

The TPRA campus of MZS is larger than the one in KK, currently catering to about seventy-five students on the mountain and sixteen in the lowlands. The TPRA campus of YPJ is smaller than in KK, with 358 students on the mountain versus 897 students at YPJ-KK. The highland campuses are not a part of this study, except as an understanding that they exist and that school policies are designed to accommodate both sites. For example, the PYP coordinators for each school (national and expatriate) are

responsible for both campuses. Likewise, the Activities Coordinator and the Creative Arts Coordinator are also responsible for both sites.

While both Mt. Zaagkam School (MZS) and *Yayasan Pendidikan Jayawijaya* (YPJ) share location and management, significant differences exist between the schools. MZS serves students in grades Preschool 3 to Grade 8, while YPJ students range from a 2-year-olds playgroup to Grade 9. The PYP is relevant to grades Preschool 3 to Grade 5, so the teachers of those classes are the primary participants for this study.

MZS is comprised of students who are present on the island solely because a parent works for the company, so these students have less natural connection with other communities of the island. The students at YPJ may or may not be from the island on which the school is located. All of the students at MZS live in the town, within walking distance of school. Some of the YPJ students live in the same community, some live as far as twenty miles away, in Timika, and must travel to and from school by bus. Others who are indigenous to the island may live in tribal communities outside of the town or the city. A bus is also available for them.

Indonesian government policies are prominent in the lives of the community members and of the schools. MZS was called an international school until 2014 when the government changed the definition of “international school” to refer only to schools that serve the diplomatic children of one country; the same policy made it illegal for other schools to use the term “international” in their name. At that time, and because of other legislation, some international schools closed, and the remaining ones changed their names.

The term “*Yayasan*” in YPJ’s name means “foundation,” as in an organization, and *Pendidikan* translates to “education”. MZS is also a part of a foundation, *Yayasan Pendidikan Tembagapura* (YPT). This designation defines both schools as being private institutions, as they are supported by PTFI, the mining company, rather than the government.

Children who only hold Indonesian citizenship are not allowed to attend MZS, due to requirements for Indonesian schools that are not met at MZS, namely national exams and religion classes. MZS has some students who are dual nationality because one parent, usually the mother, is Indonesian. These students will likely attend high school and university in another country, whereas students from YPJ may attend high school and university in Indonesia or elsewhere. Other students at MZS have no Indonesian familial connection.

All expatriates are very aware of government processes, as they affect our lives so much. The youngest child at MZS understands what it means to have to leave the country to have a visa renewed, or to go to immigration to get biometrics⁴ done. Everyone understands that when immigration calls, we respond immediately.

The mining company contributes a substantial amount of money each month to a Papuan education foundation, which goes to schools serving local children who are not connected to the company. In addition, students who attend YPJ do not pay school fees. They also become eligible for scholarships to boarding high schools after their ninth-grade year. Scholarships for universities in Indonesia and other countries are available to Papuan children.

⁴ Biometrics – fingerprinting and photographs that are done by Indonesian immigration officials.

YPJ-KK has 897 students with 67 teachers and 22 administrators, 4 of whom are senior level. Two music teachers and two art teachers serve the students. All teachers are Indonesian or Papuan and the language of instruction is *bahasa* Indonesia. It is a point of pride that the KK campus of YPJ was the first school to be granted PYP accreditation where the language of delivery is *bahasa* Indonesia. Other schools in Indonesia offer the PYP programme, but in English. The school goes to grade nine, with that final year focused on preparing students to take the national exams to determine if they qualify for high school, and for what type of high school they will qualify.

Until recently, there were two PYP coordinators, one Australian and one Indonesian. The Australian coordinator left at the end of 2018, and the new one had not yet arrived at the time of this study. The expatriates who work at YPJ are called technical experts (TEs), which is actually the official term for all expatriates on site. The purpose of the technical expert is to share knowledge with their Indonesian counterparts and three TEs work at YPJ other than the Director: a student services coordinator, a literacy specialist and an early childhood specialist.

MZS has 15 students in three homeroom classes. The staff is comprised of eight teachers, two of whom also fill administrative positions, and a Director. Of the nine teachers, five are American, one is from New Zealand, one is English, and one is Indonesian. Three of the teachers have more than five years at the school, three have between three and five years, and two are new to the school this year. The Director has had children in the school for over six years, as he was previously the superintendent of YPJ. He is currently Director of both schools. Three of the teachers had PYP experience prior to coming to this school.

The Early Years program is comprised of Pre-K (ages 3-4) and Kindergarten (age 5). Grades 1 through 4 are in a single classroom, although during the year of this study there were no grade 3 students. Middle school students are in grades 6 through 8, and they have two teachers, one for math and science, and one for language arts and humanities. There is one music teacher, who is also the Creative Arts Director and Vice-Principal (myself), one art/ICT teacher who also runs MakerSpace, one Indonesian teacher, and one physical education teacher who is also the Activities Director and Vice-Principal. There is no principal and the daily matters of the school are the responsibility of the two Vice-Principals. All staff members are fluent in English, as it is the language of instruction.

I describe the PYP programme in depth in chapter two and also in chapters 4 and 5, but it should be clarified here that the PYP is a framework for curriculum for years Pre-K 3 to Grade 5, which covers the first 8 years of school for students. Both schools offer classes beyond the scope of the PYP. The curriculum framework for middle school on both campuses is different from the elementary framework, although some elements overlap, such as Student Learning Outcomes (SLOs), and the method of instruction is inquiry-based. My investigation examines only the implementation of the elementary PYP programme.

This is also a personal journey for me, as I am one of the teachers at MZS. Yin (2016) observes that researchers “also can bring their own belief system or worldview as the motivating force for defining and conducting research in the first place” p. 3. Stake (2010) noted “For the vitality of the international community of researchers, it is

important to have researchers selecting their own things to study and studying them in their own way” p. 81.

I have worked at MZS for over seven years. In that time, I have noted an inconsistency of understanding between teachers about what transdisciplinary education is, and how best to put it into practice. This is not unique to my school, as I have noticed the same thing in conversations with classroom and specialist teachers from other schools, as well as in social media groups. Authors have often described confusion between multidisciplinary, interdisciplinarity, and transdisciplinarity (Fogarty, 1991; Gilles et al., 2017; Nicolescu, 2014). By its very nature, transdisciplinary education requires alliance and understanding between teachers in order to be done well.

I chose to study these two schools because they offer a contrast in population served (expatriate and national) and because they are located in the same remote area and have the same financial resources support through Freeport. The company fully supports both schools and offers generous budgets to both, relative to the number of students in each school. Administrators and teachers determine the needs of each school. In choosing schools to study, initially I tried not to include my own school, but as I considered other schools, I realized not only that these schools made sense logistically, but also that because they are unique locationally. I am not aware of any other pair of schools as remote as these are that have similar resources and that both use the PYP.

Both schools have students who will likely not remain in this location, for various reasons. Expatriate students come to MZS from different parts of the world, with the expectation that they will return to their home countries or move somewhere else. Of the national students at YPJ, many of the Indonesian students from other islands expect to

leave Papua at some point, even if just for high school. At YPJ, while many of the Papuan children will stay in this location, the school experience for them is so different from that of their parents and grandparents that it can easily be interpreted as being a different culture.

The PYP was originally created for use in international schools, however, in the last ten years, it has been adopted by a significant number of national schools around the world. The students catered to by the two schools in this study have some characteristics similar to many international school students, yet not all of them are international. The specific difference between the schools is curriculum – national (YPJ) and international (MZS), each delivered within the PYP framework. National schools in Indonesia, as in many countries, are subject to different government requirements regarding curriculum and instruction than expatriate schools. The education of teachers and the requirements to be a teacher are also different between national and expatriate schools. These disparate requirements may have an impact on the delivery of the PYP transdisciplinary program.

Gathering the Information

I have chosen four means of data generation for this study. Multiple methods and multiple data sources serve to support the strength of interpretations and conclusions (Flick, 2007; Mertens, 2015; Patton, 1999; Stake, 2010). First, I asked administrators and teachers to complete a survey. Then I interviewed those teachers who participated in the survey. Through the elementary principal at YPJ, I also invited any teachers who did not complete the survey to be interviewed. Two more teachers volunteered to participate. At the same time, I reviewed school documents, such as curriculum documents, workshop

and meeting notes, and policy documents. Additionally, I observed unit planning meetings with the PYP coordinator, classroom teachers, and specialists at each school.

Learning the Basics

I offered a survey to teachers and administrators at both schools (Appendix A). As not all of YPJ teachers speak English, this survey was in English and bahasa Indonesia, the common language of Indonesia. I understand most conversations in bahasa Indonesia but used a translator to be sure I communicated efficiently and had as full an understanding of what is said or written as was possible.

The purpose of the survey was to gain a general understanding of how educators in the two schools view transdisciplinary education as a part of the PYP and how transdisciplinary education/the PYP is implemented in their schools. Question types on the survey included multiple choice, short answer, linear statements and checklists. I hoped that responses to the survey would help me to ascertain the educators' overall confidence in transdisciplinary education and how well they felt it serves their students. I looked for trends in understanding, e.g. does experience, age, nationality or level of education impact their attitudes? Do they feel confident in their understanding of the PYP and their ability to implement it? Why? Do they see the relevance of it for their students? Are they interested in improving their skills?

While constructing the survey, I offered multiple choice responses for questions that are statements of fact, such as "How long have you been a teacher?" Respondents also shared their opinions using linear scales for some items. Scales with seven points were used on attitude questions as they allowed respondents more choice to move either way from neutral and express their stands more precisely (Krosnick, 1997). For other

questions, I asked respondents to share a short answer. Similar information was solicited in differing ways, as “no single question can tap such a construct (attitude) perfectly, because answers to any question will be a function of a variety of extraneous factors other than the attitude itself” (Krosnick, 1997).

From YPJ, I received responses from specialist teachers, elementary administrators, the PYP coordinator and three classroom teachers, Pre-Kindergarten through Year 5. This represented eight teachers. I received responses from all six of the teachers at MZS, as it is a much smaller group and very supportive of my research, although I had not discussed the specifics of it with them prior to the interviews that followed the survey.

I designed four variants of the surveys, one for one of the four job descriptions represented by the people included as participants in this study: classroom teachers, specialist teachers, administrators, and PYP/curriculum coordinators (See Appendix A). For ease of delivery and tabulation, I used Google Forms for the surveys. Prior to sending out the link and request for participation, I conducted a pilot survey with educators holding those jobs in other schools and requested feedback on the questions to ensure the survey would be understood the way I intended it to be understood, and that the mechanics of it worked. Based on that feedback, I made minor alterations on the mechanics of the survey (changing the status of two questions to “not mandatory”) and restating one question on the curriculum coordinator survey to be more appropriate to that job.

Accessing the Written Record

The importance of documents in this study relates not only to the content of the documents, but the way in which they are used, particularly in the case of curriculum and PYP documents. Most of the documents are extant to the study; they were created and adopted well ahead of the genesis of this research. Prior (2016) offers the following ideas about documents that are relative to this research:

- Meaning is not gathered solely from the content of the text, but rather from the active engagement of the reader with the words.
- Documents are components and should be looked at in the context of how they link to a broader network of action.
- Attention should be given to how the document was produced, who produced it, and the social organization of the process of its production.
- Documents can exist as actors in the sense that they can instigate and direct action.

The review of documents is especially relevant in this study because I am looking at the actual implementation of the PYP compared to the prescribed implementation as documented by the International Baccalaureate Organization (IBO). The interpretations of the educators who read the IBO documentation affect how they implement the PYP. It also affects their local (schoolwide) documentation such as planners, reflections and meeting notes. How teachers and administrators create these local documents affects not only current implementation of the PYP, but also future implementation, as those local documents will be used repeatedly. In addition, teachers often create personal documents for their own use. The lesson content was mostly kept on the PYP planner. I looked for

indications of uniformity and accountability in the creation and implementation of the local documents, as well as consistency with the IBO documents (Jacobsson, 2016).

Expanding on the Basics

Lummis (1988) noted, “one precise advantage of oral evidence is that it is interactive and one is not left alone, as with documentary evidence, to divine its significance; the ‘source’ can reflect upon the content and offer interpretation as well as facts” (p. 43). In this study I generated oral evidence through interviews with teachers and administrators at the two schools. I used a semi-structured interview format so that narrators had the opportunity to share information freely and to take ideas in a direction I may not have foreseen. As the survey was to be my introduction to the thinking and attitude of the participants, I reviewed the survey answers prior to conducting any interviews. Many interview questions were developed from survey responses. The interview questions (Appendix B) were open-ended to allow participants to elaborate and explain their experiences and thoughts and to attribute meanings to their experiences (Yow, 2005). Travers (2009) notes that interviews may offer conflicting information that will add to the richness of the study. Although the logistics of interviewing limited the number of participants, The potential for gaining deeper insights and understanding was significant enough to make interviewing a more valuable tool than an in-depth survey (Rowley, 2012).

Stake (2010) writes that “there is no true meaning of an event; there is only the event as experienced or interpreted by people” (p. 66). My purpose in interviews was to gain information about how individual educators have internalized transdisciplinary education as described in the PYP, how they implement transdisciplinary education, and

what they value (or don't value) about it. I also wanted to know their opinions about the PYP alignment with the schools' mission and vision statements. One concern was ensuring that participants were not giving me the answers they thought I wanted to hear, whether positive or negative. I believe the fact that I am known to many of the participants at both schools in that I am also a PYP teacher in KK and that I have a connection with them, encouraged them to participate fully in the interview discussion, colleague to colleague. Using the original survey as a guideline also allowed me to design conversation-starting questions that the interviewees who participated in the survey would have had a chance to think about prior to the in-person interview.

At MZS, I spoke with all teachers except the Early Years teacher and the middle school math/science teacher, as middle school is not a part of the PYP. The middle school language arts and humanities teacher is also the curriculum specialist and she has extensive experience teaching classroom PYP, so she was included in my interviews. The total number of people I interviewed at MZS was five. At YPJ, I interviewed the specialist teachers, the Indonesian PYP coordinator, and teacher representatives from two grade levels. I also spoke with the elementary principal and the director who is responsible for both schools. The total number of people I interviewed at YPJ was eight.

I audio-recorded the interviews in order to remind myself later what was said, as I cannot write quickly enough or efficiently enough to follow the conversation and scribe at the same time. I did not identify the narrator on the recording. Some of the interviews were conducted in *bahasa* Indonesia or in a mix of Indonesian and English. I hired a third-party translator in Jakarta to transcribe the interviews to ensure I gained a solid

understanding of what was said. The translator had no connection with either MZS or YPJ.

I conducted a minimum of one in-person interview with each participant, and each interview was about one hour long. Interviewing is an engagement where I needed to proceed cautiously. The culture on jobsite is one of long work days, not necessarily defined by the clock. My permission to pursue this study specifically states that I not interrupt the “continuity of educational provision in both *Yayasans*.”⁵ For most interviewees, follow up questions took the form of 15 to 20 minute meetings, or in the case of several YPJ teachers, email exchanges.

To transcribe, I used an online automated service for the first run through, then went through each interview myself with the transcript and the recording to correct errors and code them.

Observing for Information

I observed meetings between the PYP coordinator and teachers at both schools. These observations were important because observational data offers primary information about the interactions between people and between people and documents, rather than secondhand data about those interactions which is provided in an interview (Merriam & Tisdell, 2016).

The position of PYP coordinator is integral to the PYP as the coordinator is responsible for communications between the school and the IBO, for encouraging inquiry-based learning, for organizing IB professional development opportunities, for continuing education for teachers and parents, for coordinating integrations and student

⁵ See Director’s Response in Appendix D.

presentations, and for working with teachers to develop their planners. The coordinator position varied somewhat between schools, so part of the study was to determine the responsibilities for the PYP coordinator at each school.

Meetings between the PYP coordinator and teachers are usually for the purpose of developing and updating the PYP planners. Initially the school staff develops a Programme of Inquiry (POI), which is usually used for several years. Within the POI are the units of inquiry (UOIs); the early years (age 3 to K) have four in a year and elementary grades (1-5) have six. Each unit is based on a specific transdisciplinary theme: Who We Are, Where We Are in Place and Time, How We Express Ourselves, How We Organize Ourselves, How the World Works, and Sharing the Planet. Each unit is supported by a central idea, lines of inquiry, specific concepts, and related concepts, all of which are identified and developed on the PYP planner (Appendix C). A planner is created for each UOI, and stand-alone planners are created for all outcomes not covered in the POI. The PYP coordinator and teachers create the planners and update them on a regular basis with reflections and any further information. The PYP coordinator is responsible for ensuring that all outcomes within a school's curriculum, as indicated on the planners, are covered. In addition, the coordinator must ensure that the POI addresses all elements of the PYP framework: knowledge, approaches to learning, agency, action, key concepts, lines of inquiry, learner profile, international-mindedness, and transdisciplinary learning.

Observing these planning meetings provided information about the interaction of the participants with the documents and how they were created, updated, and referred to. Observation of facial expression, body language, and vocal tone offered clues as to the

participants' feelings about what was being said (Travers, 2009). At MZS, the PYP coordinator is located in Tembapapura, so meetings with her are conducted by telephone conference. Visually, I was able to observe the teachers in KK and the documents as they are maintained on Google Docs. Observation also served to substantiate or elaborate findings from document review and interviews (Merriam & Tisdell, 2016). An important part of this research was to observe the amount of transdisciplinarity actually in practice at each school, so it was also valuable to see who is involved in the planning meetings, whether it is classroom teachers, specialists, and PYP coordinator or a different combination. At YPJ, I observed two of the weekly meetings with specialists, one with the music teacher and PYP coordinator and one with the art teacher and PYP coordinator. At MZS I was a part of the creative arts team meetings (art and music), which occasionally included the PYP coordinator. I also participated in several UOI planning meeting that involved the elementary teacher, the *bahasa* Indonesia teacher, the art teacher, and myself. Although my *bahasa* Indonesia (Indonesian language) understanding is good, I audio-recorded the meetings, with permission, in order to review them and seek any help necessary for comprehension.

Taking It Apart and Putting It Back Together

Data analysis is the process of making meaning out of the information that has been collected. It is the process of consolidating, connecting, and interpreting what has been seen, heard, and read with the practical goal of finding answers to research questions (Merriam & Tisdell, 2016). In a qualitative study, data collection and data analysis may occur simultaneously much like a double helix, constantly crossing back and forth to integrate new information while turning back on itself to connect to what has

already been constructed. Coffey and Atkinson (1996) describe analysis as “a reflexive activity that should inform data collection, writing, further data collection, and so forth...the research activity, of which analysis is one aspect, is a cyclical one” (p. 6).

In this analysis, I looked for similar themes, structures, and patterns that integrated and separated to expose underlying understandings or misunderstandings, as well as meanings related to transdisciplinary education and the PYP. To identify and track these themes, structures, and patterns, I coded information acquired through the survey, observations, and interview transcriptions using Hyperresearch so that I could manipulate and search through the data. I compared this data to itself as well as to information gleaned from documents, looking for similarities, differences, confirmations, evidence, and other connections between them.

Considering that codes are representations of categories of data that have a thematic relationship, I consistently reflected on the circumstances of the data, so as not to disassociate the information from the context. Gibson and Brown (2009) note that effective and efficient analysis occurs when the researcher stays focused on the bigger picture of the research and understands that the details of coding are only relevant and useful as far as they help deal with research issues.

In considering various ways of keeping notes during the research process, I chose to maintain a journal. Although Saldaña (2011) differentiates between a journal and an analytic memo and recommends using one or the other, I wrote individual analytic memos as well as reflexive journal entries, which I kept in an online notebook as well as on my local computer. These private notes reflected my personal feelings and observations on the different aspects and phases of data collection and analysis, as well as

questions that occurred to me about the data, the process, and the meaning of it all. The purpose of these notes was to articulate my impressions and to allow me to review my impressions and feelings for indication of bias as well as for inspiration.

Trustworthiness

The use of multiple data sources, i.e., survey, observation, interview, and document review, served as a means of triangulating data, allowing me opportunities to check and cross-check information. Through the survey, I gathered general information. The survey allowed anonymity for the responder, which can encourage truthfulness, but did not allow for expanded ideas and follow up questions. The interviews allowed participants the opportunity to present their stories and also allowed me to question them further in a more natural format, but my presence as the researcher may have influenced the direction the interviews took, which may also have been an issue in observations. Document review is only as good as the documents. Each method of data collection has strengths and weaknesses; however, the collective use of these methods allowed their individual strengths to minimize the weakness inherent in each (Coffey & Atkinson, 1996; Stake, 2010; Yin, 2016).

To review my research questions:

1. How do educators in two remotely located schools understand the concept of transdisciplinarity?
2. How are the elements and aspects of the PYP framework (knowledge, approaches to learning, agency, action, key concepts, lines of inquiry, learner profile, international-mindedness, transdisciplinarity) implemented in each school? Are

these elements and aspects affected by or related to the curriculum in each school? If so, how?

3. What outcomes of the PYP do teachers identify with and value (or not value)?
4. Do the elements of the PYP align with the schools' mission and vision statements? Why or why not?

These questions were designed to explore the opinions and perspectives of those who exist in the world of the study—teachers and administrators at two remote schools that are using the PYP framework. The traditional [quantitative] idea of triangulation, that various points of view will lead to a single understanding, was not enough in this study. I was intrigued by Ellingson's image of qualitative inquiry as that of a crystal (Ellingson, 2014). The crystal displays multiple, refracted realities simultaneously (Denzin & Lincoln, 2011). The characteristics of crystallization that will be reflected in this study are:

- It produces knowledge about a particular phenomenon through generating a deepened, complex interpretation, including compilation of many details and thick description.
- It features a significant degree of reflexive consideration of the researcher's self in the process of research design, data collection, and representation.
- It eschews positivist claims to objectivity and a singular, discoverable truth and embraces, reveals, and celebrates knowledge as inevitably situated, partial, constructed, multiple, and embodied (Ellingson, 2014).

If we know a thing only by its representations (Denzin & Lincoln, 2011), then it is the responsibility of the researcher to consider all representations available and to

understand that the truth is contingent on context and multiple perspectives (Saldaña, 2011) and is therefore neither simple nor singular.

In this study, I considered the research questions through the perspectives of a representation of educators involved in the practice of the PYP at two schools. These educators have differing responsibilities in the schools. They are classroom teachers, specialist teachers, administrators, and PYP/curriculum coordinators. Because of these differing responsibilities, they each have different ways of looking at PYP transdisciplinary practice and different realities about how the PYP functions in the school. I also interviewed each person once, then returned to each with brief follow-up questions in order to “look again and again, look several times” (Stake, 2010). Interviewees were given transcripts of their interviews for their review and correction. All participants were happy with the transcriptions.

Yow (2005) sums up the need for trustworthiness with the following statement “All research is biased in its subjectivity, simply because the research begins, progresses, and ends with the researcher, who, no matter how many controls she may put on it, will nonetheless be creating a document reflecting her own assumptions” (p. 7). Prior and formed impressions, reactions, and feelings of the researcher can influence data collection as well as data analysis and synthesis. Merriam and Tisdale (2016) note that “the trustworthiness of a qualitative study also depends on the credibility of the researcher...the burden of producing a study that has been conducted and disseminated in an ethical manner lies with the individual investigator” (p. 251).

To synthesize something means to evaluate the thesis and the antithesis of it. Rival organizing schemes, opposing viewpoints, alternative explanations, negative

instances... all of these are probable occurrences in qualitative research. Close examination of these occurrences can minimize biases, known and unknown (Patton, 1999; Stake, 2010; Yin, 2016). As a member of the community in which I am conducting the study, I attempted to ensure I did not project my understandings and biases on to the data I collected and used. For example, when there was stress or dissension at work, I noticed that my thoughts while writing tended to be pessimistic, even contrary to the tone of the interviews I was drawing data from. I found that I needed to continuously reflect on the conversations, and to review my writing repeatedly over time to ensure any personal situational bias did not intrude into the research.

In many ways, this is a cross-cultural study. Individual schools always have their own cultures, even those in similar demographic areas. While MZS and YPJ are located within a mere half kilometer of each other and have equal opportunity for resources, life on the campuses is radically different. Language of instruction, cultural backgrounds of students, population size, and teacher-student ratio are all different. For that reason, rich description is important in the writing of this study. The use of rich description and thorough explanation is designed to provide confidence in the process of collecting the data, analysis, and interpretation rather than to debate the inherent “truthfulness” of the data collected (Gibson & Brown, 2009). Political considerations were also important in this study because both schools are run as departments of a large corporation rather than in a traditional school structure. The position of parents in the corporation often influences events in the schools. Patton (1999) advises qualitative inquirers to “be attentive to and conscious of the cultural, political, social, linguistic, and ideological

origins of one's own perspective and voice as well as the perspective and voices of those one interviews and those to whom one reports" (p. 65).

This research is highlighted with individual stories and rich description so that the reader will be able to gain a strong impression of the phenomena, the activities, the setting and the issues (Stake, 2010). Rather than speaking for the participants in the study, I wrote with the intention of using enough anecdotal material from them so that their voices come through (Denzin & Lincoln, 2018).

Researcher Role

My role on jobsite as an expatriate teacher in one of the schools in this study is the culmination of a background of teaching and traveling. I was raised as a military "brat," a moniker used with pride, and attended seven elementary schools in three countries. In addition to teaching in the U.S., as an adult I lived and taught in Taiwan for a year, where my children attended school. Extensive holiday traveling was a part of my life. A time came when I had a logical opportunity to make a change, and I chose to teach overseas once again.

I was hired to teach music at both expatriate schools (the MZS lowland and highland sites), which necessitated weekly travel by helicopter. At the time, teachers were not permitted to travel by motor vehicle up the mountain road, due to shooting incidents suspected to be carried out by local Free Papua insurgents. If the weather was bad, the helicopters could not fly, and I could not travel. After a few weeks of my not being able to travel, the company management decided they needed to hire another music teacher, who started six months into the school year. I stayed in the lowlands (MZS-KK),

and the new teacher, who had also been a colleague in Arizona, took over the highlands job.

I had begun writing the music curriculum for the school, and when the new teacher came, the two of us revised and completed the document. It was based on the PYP Scope and Sequence as well as the music curriculums of Arizona, Western Australia, and Ontario, Canada. By writing this new curriculum, I began learning about the framework of the PYP.

In my third year, the principal of the lowlands school, who was hired at the same time I was, left. The school superintendent, who was in his second year, moved down and covered that job until the new principal could come. The superintendent did not return in August and the new principal, who would become the superintendent, was unable to come because her visa was not yet approved. Therefore, I served as interim principal for the first four months of the school year. During that time, we had a PYP accreditation visit, and part of my job was to act as a liaison with the PYP as we did not have an actual PYP coordinator at the time.

That experience caused me to look at the PYP documentation and requirements much more deeply than I had as a music teacher. While I had previously integrated units with classroom teachers and other specialists, I did not realize how shallow the integrations had been, and the potential learning that can occur with deep integrations. It seemed like other teachers and administrators I spoke with different visions of how integrations should occur. A brief look at research on the subject showed a variety of ways that the Primary Years Programme is implemented (Kauffman, 2005; Savage & Drake, 2016). This made me curious about the intention of the PYP and what specific

differences might exist between national schools and international schools. YPJ-KK, where I am not a teacher, was the first Indonesian school accredited by the PYP whose language of instruction is *bahasa* Indonesia, and it was accredited in November of 2015, seven years after MZS. As there is no difference in the requirements of the PYP for national and international schools, differences in instruction could logically be attributed to differences in school culture and understanding.

In the years I have been in Papua, I have consistently worked on music integrations between the schools. Some years I went to YPJ and modeled teaching music for classroom teachers in preschool through grade one. It has been common for YPJ students to join MZS students for after-school music classes such as choir. The PE teacher at MZS sponsors joint athletic programs for students from both schools. The result of these programs that is relevant here is that I have developed a good professional relationship with teachers from YPJ, although I do not teach at the school.

I struggled with the idea of power in this study. Although I want to deny that in the community at large there is a perceived difference between the quality of the teaching of the two faculties, I believe it exists, -almost unspoken. Some people are forward about the perceived superiority of one school over the other. Others deny it, hesitantly. Some expatriates feel MZS is a superior school. Some locals feel their school, YPJ, is slighted. Contributing to this belief is the reality that expatriate teachers are hired from a pool of applicants with experience, who have proven themselves as teachers, and who are well-paid to live and work in a remote environment. This hiring practice is not always the case at the national school, as Freeport has a mandate to employ local people. I believe a number of excellent teachers are on both campuses, along with teachers who need

support. I feel I have always dealt with all educators as peers, and I believe I have a good relationship with the Indonesian and Papuan teachers, but I cannot speak with certainty about their feelings.

Part of my job was administrative at the time of this study. Recognizing that in some cases this perceived evaluative power over teachers could create reluctance towards honesty on the part of the teachers being interviewed, I will clarify here my role as Vice-Principal. As MZS is a small school, most teachers have several responsibilities. Our actual leadership is through the Director and our Learning Cabinet, of which all teachers are a part. While I do have input into school policy, teacher review is not a part of my job description. In addition, we were, as a staff, re-developing our curriculum documents in many areas and re-thinking our processes in preparation for a joint PYP and WASC accreditation review visit, so many of my interview questions were already on the table, so to speak, which may have reduced risk or threat for participants. Yin (2016) noted the “authentic self...is the preferred identity because it represents most faithfully the original motive for your being in the field in the first place, and you will be able to maintain a consistent posture and demeanor in interacting with others” (p. 116). In this case, my “authentic self” was represented by the fact that I was known to participants, that my study was relevant to discussions already taking place at MZS, and that my position as researcher aligned with my current responsibilities in the school, both as a specialist teacher and in my administration role.

In this study, my roles were as researcher and music teacher. As a qualitative researcher, I am aware that my biases, thoughts, and actions can influence both the data collection and analysis. My role as participant-researcher could influence collection and

analysis even farther. However, Merriam (2016) notes that the “participant observer sees things firsthand and uses his or her own knowledge and expertise in interpreting what is observed rather than relying on once-removed accounts” (p.135). This can be a strength in observation as I was not reliant on explanations for technical discussions about the PYP.

As a participant researcher, I followed Gilgun’s advice and was reflexive about my own thoughts, including the topic I am interested in, my perceptions regarding other’s thoughts and contributions, and the audience for whom I was writing (Gilgun, 2010). My inclination towards this study and those I wished to inform likely had an impact on the way the study was directed and reported.

I am also aware that my presence probably influenced the actions of others as well as my interpretations. Review of my journal assisted me in differentiating my feelings from those of others. The use of rich description in this narrative helped to set the stage and focus attention on the words and attitudes of other participants. The variety of methods of data collection allowed the data to be triangulated, which helped to minimize my influence.

Ethics, Confidentiality, and Disclosure of data

I requested permission from the Superintendent of the Freeport schools and the International Human Resource Manager for Freeport McMoRan. Both individuals granted permission for me to conduct this study. I submitted this study to the Arizona State University Institutional Review Board and requested exempt status, which was granted, as I did not have any contact with minors in the context of this study. Nonetheless, all participants received a letter explaining the purpose of the study and an

explanation as to how the study will be used, which I requested that they sign to confirm their consent to participate. Each of us received a copy of that letter. After transcribing interviews, I gave participants the opportunity to review and edit the transcripts and also ensured that no information that identifies participants was transmitted to other participants or readers without specific permission. I am using pseudonyms in the final report.

Chapter 4: Where We Are in Place and Time

Imagine a small village tucked into the mountains, surrounded on three sides by vertical peaks that tower above it. The village is so high that sometimes it is above the clouds. The fourth side, the one with no peaks, looks down into a valley covered with jungle vegetation so dense that only the tops of the trees are visible. Waterfalls cascade down the mountains all around the village, and rivers run through it on their way down the mountains. In the early mornings, when it isn't raining, the village looks like the setting of a fairy tale. People wake up early and lights from the homes and streets winking on and off cause the town to sparkle in the dark sky. The white steeples of two Christian churches a little higher up from the town reflect the winking lights. Between 4:00 am and 4:30 am, the voice of the muezzin rings out from the local mosque, calling the faithful to prayer.

This little town in the Jayawijaya mountain range on the island of New Guinea is named Tembagapura. Tembagapura is *bahasa* Indonesia for “city of copper” and it is a purpose-built town.

The two schools in this study are in a remote location on the west side of the world's second-largest island, New Guinea, in the country of Indonesia. To fully understand some of the cultural and logistical issues of the schools and their students, it is necessary to understand the history and context of the area.

The island of New Guinea is divided politically, with Papua New Guinea (PNG), an independent country, on the eastern side, and the Indonesian provinces of Papua and West Papua on the western side. While the island of New Guinea is divided politically in the modern world, the indigenous people of the island have existed for thousands of

years, with real or imagined boundaries of their own tribal lands usually dictated by a geographical feature such as a valley or a river. Some villages on the northwest coast of New Guinea have been involved in trade with Europeans since the Portuguese “discovered” the island in 1512. The Spaniards soon followed, looking for gold. There was none to be found on the coast. The Dutch traders came to New Guinea in 1606, following the spice trade that had been established by the Portuguese, English and Spaniards (Muller, 1997). In 1623, Jan Carstensz sailed near the south coast of New Guinea and saw mountains with snow on them. The highest mountain, now commonly called Puncak Jaya, was called Mt. Carstensz for many years (Wilson, 1981). Puncak Jaya is the highest mountain between the Andes and the Himalayas, and still has equatorial glaciers, although they are diminishing.

The western side of the island was a part of the Dutch East Indies, known as Dutch New Guinea, or Netherlands New Guinea, from the early nineteenth century. The first permanent European settlement was founded in 1855 by missionaries sent from a Dutch Protestant organization. Their town was on an island in the north, in Manokwari Bay. The first Roman Catholic settlement was founded in the south, at Merauke, in 1905 (Muller, 2011b). The east side of the island holds its largest city, Port Moresby, founded by Australian colonials. Dutch and Australian missionaries made their way to much of the coast during the nineteenth century but rarely ventured inland. After more than a hundred years of Dutch colonial rule, little was known about the interior of the island of New Guinea (Muller, 2011b).

Common thought was that the interior of New Guinea was uninhabited. The landscape of the island in the lowlands is that of dense swamps and jungles, difficult to travel through, discouraging to all but the most determined traveler. Malaria and dengue fever were present, and even today, mosquito-borne illnesses sicken thousands of people in the lowlands each month (Bangs, 2011). The mountain ranges of Papua run from the east to the west. When the island was formed, a mountain range rose from the south, then another formed on the north. Between one hundred and two hundred kilometers separate the two ranges. The area between is called the Central Highlands and it runs about 1300 kilometers through the center of the island (Muller, 2011a).

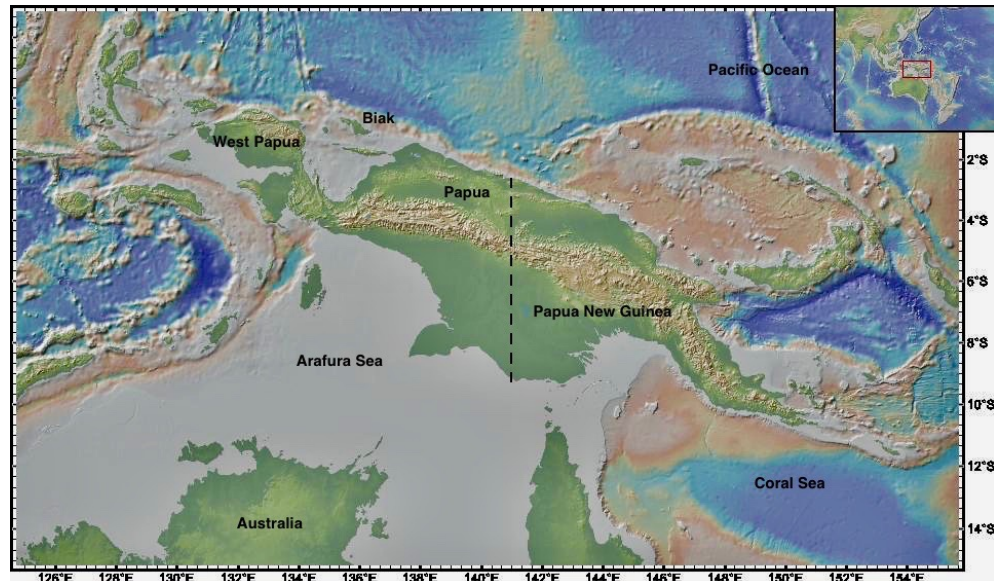


Figure 2: Topographical Map of New Guinea

Forbes Wilson, an American geologist, wrote:

Climbing the Himalayas is no Sunday afternoon stroll, but it is at least possible for climbers and their bearers to carry all of their supplies with them. The dense swamps and jungles of Southern New Guinea are so maddeningly resistant to passage that it is nearly impossible to traverse them even without supplies. An expedition simply cannot carry enough food and other provision to sustain itself. (Wilson, 1980, p. 11)

Prior to World War II, missionaries to the island stayed predominantly near the coastline (Cutts, 1990). Through the 1930s, both Catholic and Protestant missionaries began pushing into the highlands from the west. The first inland government post was in Entaroli, at the west end of the highlands. In 1941, the Dutch authorities ordered the evacuation of Europeans from Dutch New Guinea due to the close presence of the Japanese. One such plane had survivors who lived for a short time with a tribe in the Baliem valley. Their story is told in the book *Lost in Shangri-La*.



Figure 3: Kamoro man in the jungle near KK

Even today, the island of New Guinea is largely dependent upon helicopters and small aircraft. Roads are still few and poorly maintained, although the Indonesian government has recently begun road projects into the highlands. Many areas of Papua New Guinea are only accessible by air, and an accurate count of the indigenous population is unknown. Most information about the native people still comes from missionaries and anthropologists. John Cutts, a missionary who has lived the majority of his life in Papua, having been brought to the island at the age of 2, often speaks of walking for days through the jungle to get to a village, or of the challenges of scheduling

and paying for the small planes upon which missionaries are dependent for supplies (John Cutts, 2019)



Figure 4: Mission Aviation Fellowship plane in Nabire, 2013

Following the end of World War II in 1945, Indonesia declared its independence from the Netherlands. Political pulling and tugging on the west side of the island ensued, with the Netherlands and Australia supporting the case for Papuan independence, and Indonesia and the United States arguing that it should be a part of Indonesia. In 1962, circumstances occurred (or were arranged) in the United Nations that led to the western side of the island becoming a part of Indonesia, confirmed in 1969 by a vote from selected tribal chiefs in the region (Muller, 1997). The eastern side remained a colony of Australia. This 1962 vote was, and still is, highly contested by many ethnic Papuans, and since then, a constant simmering resistance to Indonesian rule in the form of the *Organisasi Papua Merdeka* (OPM) or “Free Papua Movement” has been present. The level of resistance has waxed and waned through the years, with deadly clashes between the OPM and the Indonesian military occurring throughout the Papuan provinces (Cutts, 2019).

This resistance and the presence of highly profitable mines throughout the island has resulted in the presence of a large contingent of Indonesian police and military. Periodically, violent flare-ups result in deaths and accusations of Indonesian military and police brutality against Papuans. As of this writing (June 2019), the last few months have been a time of heightened alert for Papuans, with a strong awareness of the activities of the OPM. Some locals say the OPM are more active now than ever before. Many Papuans fear the OPM, not out of fear for themselves, but out of concern for the retaliation the OPM activities can bring from the Indonesian military (Interview with John Cutts, 2019).

While Papua is politically a province of Indonesia, Papuan people are proud of their own heritage and generally self-identify as being Papuan as opposed to Indonesian. The cultures, beliefs, and traditions of Papua and other Indonesian islands are different, although each generation brings them closer together. Many Papuans still speak the language of their tribe as their daily language, and when meeting a Papuan, he or she will often identify their tribe. Many of those who live near the coast or in the cities also speak *bahasa* Indonesia. For that reason, in this paper I will refer to Indonesians and Papuans separately, even though they are politically of the same nation.

The provinces of western Papua were previously known by the Indonesian names of *Irian Jaya*, *Irian Tengah*, and *Irian Barat*, but those names, which were imposed by the Indonesian government upon annexation, were rejected by native Papuans, and in 2002, the provinces became officially known as Papua and West Papua.

Native Papuans in remote regions still exist in Stone Age conditions, carrying spears and wearing *kotekas* (penis gourds). Sweet potatoes, fish, and sago (a palm) are

traditional food staples, and cooking is often done directly on a fire. Until the last twenty years, many tribes did not use pots or bowls for cooking or eating (Muller, 1996, 2011). They often cooked on top of stones or by putting sweet potatoes directly into the fire. Much of the population on both sides of the island still live as their ancestors did, in tribes in the jungle, and warfare between them is not unusual; in some circumstances it is a necessity of their daily life and religion.

It is difficult to discuss the island of Papua New Guinea without addressing the subject of cannibalism. Cannibalism and head-hunting are known to have been part of the structure of the indigenous peoples' religions and lifestyle. This subject is the elephant in the room for the Papuan people, as many have embraced Christianity. Most deny that cannibalism still occurs, but occasional whispers are heard. For example, in the Asmat and Marind cultures, a head must be taken in order to name a child. Atonement for inequities such as theft, adultery, or murder must occur, and tribesmen are known to wait, even through a generation or two, for an opportunity to balance the scales (Muller, 2011a). Documented discussion periodically surfaces that this was the fate of Michael Rockefeller, who came to Papua in 1961 to collect art objects for the new (at the time) Museum of Primitive Art in New York City, now a part of the Metropolitan Museum. While what actually happened to him remains unproven, this story made the Asmat tribe and the town of Agats known in the world of art.

Introducing Freeport

The beautiful mountains of the Jayawijaya range that create the stunning backdrop for Tembagapura in the Central Highlands have treasure in them. It's treasure that men have sought for centuries – gold and copper, and these mountains hold the

world's single largest gold mine in terms of contained gold, the Grasberg mine. In spite of the amount of gold produced, Grasberg is primarily a copper mine and also produces silver. These minerals are the reason Tembagapura exists.

In 1936, a Dutch geologist, Jean-Jacques Dozy, put together an expedition to scale Mt. Carstensz, the highest mountain in what was then Dutch New Guinea. To overcome the challenge of supplies, he organized periodic air drops of supplies from a Sikorsky helicopter. He became fascinated with a certain rock he discovered during his climb. The rock was black, with a greenish coloring, and Dozy was convinced that there were large deposits of copper and its by-product, gold, in the mountain. He called the area "*Ertsberg*," Dutch for "ore mountain," and wrote a paper on his findings in 1939, but his paper was largely ignored due to the advent of World War II.

In 1960, an American geologist, Forbes Wilson, working for the American Freeport Sulphur Company, read Dozy's report. He was immediately intrigued and organized an expedition to the location of the Ertsberg, where his expeditionary group found large copper deposits. In 1967, Freeport and the government of Indonesia formed a joint company known as PT Freeport Indonesia, with Freeport owning just over 90% of the company and the government of Indonesia owning the rest (Leith, 2002; Wilson, 1981). The PT designation in Indonesia is a legal description regarding the rights and responsibilities of the company, similar to "Inc." in the United States.

Freeport brought in workers from around the world to build the mine, and the first ore shipments were sent to smelters in December of 1972. The town of Tembagapura was built to house the miners, and along with this, an entire infrastructure to support the town and the mining operation had to be created. A power plant, water treatment plant,

waste facilities, tramways, and roads were built through and in the jungle. In the summer of 1972, families were brought in and schools and a state-of-the-art hospital were constructed.

Seven tribes have traditional lands that are in the area of the mining concession. They are known as the *tujuh suku* (seven tribes). Some of the members were relocated to towns such as Timika and Kwamki Lama in the lowlands and Banti in the highlands, where they now live in close proximity to each other. This close proximity contributes to periodic flare-ups of intertribal violence.

The increasing presence of newcomers to the island, with their modern conveniences, resulted in the creation of “cargo cults”- indigenous people who believed that through some sort of religious experience or mysticism, the native people would magically acquire the goods and conveniences that the foreigners had. The airdrops of supplies and trading goods used by the expeditions into the mountains fed this belief (Wilson, 1980; Muller, 2011). Many native Papuans migrated to the mining area expecting to find a magic cave in the mountains where they could acquire goods. Cutts describes the following:

I mean there were people . . . it was like this magical country that you could go to and your life instantly changed. And there was, you know, you could suddenly morph into something different if you came over here and became a part of the Freeport life. I'll never forget the first time one of the people from Homeyo walked over to Tembapapura and then back again and in church, he gave his speech. He was like, “You guys, I just saw the most amazing thing!” and everybody's on the edge of the pew. What's he going to say? He says, “You know,” he said, “every day this big huge...” He was trying to describe a truck, “You know this thing...it makes a lot of sound and it rolled along and it would come to each house and it would collect the garbage.” They don't really have garbage in the village. I mean, there's very little that you would throw away. It [the truck] would collect it and then would go to the next house and it would collect ... it will go everywhere to collect this garbage and they were just so

amazed that this thing would go around and collect everybody's garbage. (Cutts - conversation, Feb, 2019).

A road connecting Tembagapura to Portsite, a Freeport work area near the coastal town of Amampare, was constructed in 1970-1971. This road became known as the Main Supply Route (MSR) and is the primary route for transporting most people and goods.



Figure 5: Inside Tembagapura

between Tembagapura, the mine, and the coast. A small international airport was built down the mountain from Tembagapura, and the town of Timika grew up near the airport. The MSR now connects the port (Amamapare, or Portsite) to Timika and continues past KK, past Tembagapura, and up the mountain to the mining area, located at about 14,000 feet altitude. Destinations on the road are referred to by their milepost number. For instance, Tembagapura sits at milepost 68 (MP 68), the airport is at MP 22, and the environmental center is at MP 24. Traveling up or down the mountain, the road often sits on a narrow ridge. The road is not paved, as the elements would destroy it very quickly. Alternative travel between the lowlands and the highlands is by helicopter or by armored bus in a convoy. For security reasons, in 2019 few vehicles are permitted to drive the

road without being part of the daily scheduled convoys. Figure 6 shows the PTFI project area and the road that goes from Portsite to the mine.

A means of delivering the copper to the port also had to be developed because it was impractical to haul loads of ore down the mountain by truck. In 1971, a mill was built near the mine so that the ore could be separated from the rock and ground to a powder. This powder is mixed with water into a slurry and sent through a pipeline down the mountain to the port at Amamapare, then dried and loaded on ships to be taken to

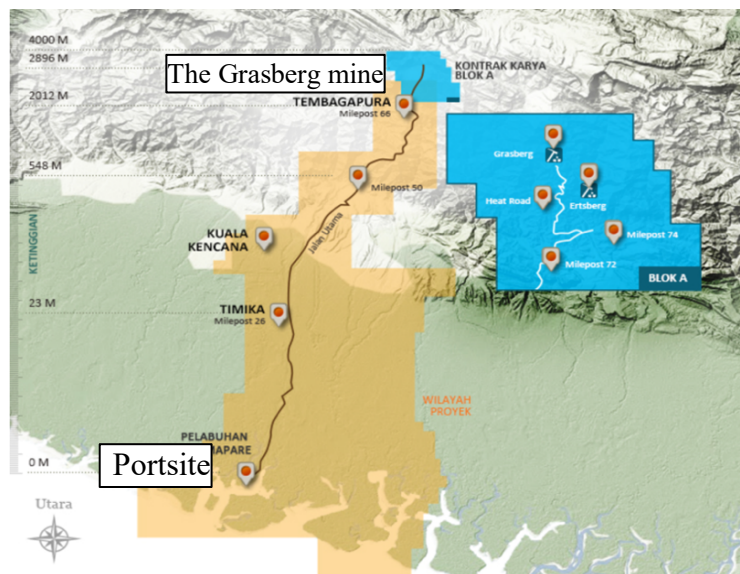


Figure 6: The PTFI concession area and MSR

smelters in other parts of Asia.

Meanwhile, the company was evolving. In 1981, Freeport Sulphur merged with McMoRan Oil & Gas to form Freeport-McMoRan Copper & Gold. McMoRan Oil & Gas had a large presence in Louisiana. The company had been formed in 1967 and its name was derived from the names of the three founders, William Kennon McWilliams, Jr. (“Mc”), James R. Moffett (“Mo”), and B.M. Ranking, Jr. (“Ran”). The new Freeport-McMoRan Copper & Gold company continued its partnership with the government of Indonesia, and until 2019, continued to operate as PT Freeport Indonesia (PTFI), a

division of Freeport-McMoRan Copper and Gold (Bryce, 2005). In January of 2019, after several years of discussions and deals, PTFI, the Indonesian branch of Freeport-McMoRan Copper and Gold, became 51% owned by an Indonesian government entity called Inalum. Part of the deal was that Freeport would continue to manage the mine. As of this writing (June 2019), conditions on the minesite and in the schools remain per usual; however, most of the school staff are aware that change could happen at any time.

The mine site is located at approximately 13,400 feet above sea level, and Tembagapura was built at about 7000 feet. By the 1980s, Freeport geologists estimated that the ore in the *Ertzberg* was nearing an end. But the chairman and geologists at Freeport were convinced there was a larger lode of ore in the mountain. Another lode was discovered, and it showed tremendous promise. The new location would be called “Grasberg,” Dutch for “grass mountain” (PT Freeport Employee Manual 2008).



Figure 7: Grasberg Mine 2016

The new Grasberg mine, located adjacent to the Ertzberg, began producing in 1991. The mining industry considers Grasberg the largest source of gold and the second largest source of copper in the world (Mining-technology.com, 2011). A new road, known as the HEAT road (Heavy Equipment Access Trail), from Tembagapura had to be constructed to service the new mine, and the HEAT road can be very precarious. Travel

is subject to weather conditions and sometimes parts of the road slide down the mountain, causing a need to rebuild. An alternative route to the mine is to take the HEAT road to



Figure 8: Aerial view of the HEAT road

MP 74 and continue up by cable car.

The Grasberg was initially an open-pit mine, but further exploration showed huge quantities of ore well below the surface. In 2007, mining operations went underground. From 2007 until 2018, Freeport operated both above and underground mining operations. At the end of December, 2018, the above ground operation closed and all mining went underground.

Housing is a problem in Tembagapura because not much space exists on which buildings can safely sit. Tembagapura is built

on the side of the mountain, and all of the streets have a substantial rise to them. Two sections called Hidden Valley and Rainbow Ridge are housing and business areas above Tembagapura proper. The heliport is located at Rainbow Ridge. Banti, a small Papuan town several miles away, was built for some of the dislocated natives.

Several types of housing exist in Tembagapura, and housing assignments are based on rank within the company, family status, and nationality. Singles Quarters (SQs) consist of a single room with a bathroom, sometimes shared by two people. Some of the SQs are actually metal portable buildings purchased from the Sydney Olympics when

they were no longer being used there. Bachelor's Quarters (BQs) have a large room with a living area, dining table space, and kitchen, with a separate bedroom and bath. These are reserved primarily for expatriate workers on single status, which may mean the workers are single or that they have not brought their family with them to Tembagapura. Some BQs are occupied by higher-level Indonesian Nationals. Two- and three-bedroom apartments are available to families, and a few stand-alone houses are available for use by the families of upper level employees. BQs and higher all have patios, and many people use them to grow flowers and vegetables. Many Indonesian and Papuan miners live in Timika or on tribal lands in the lowlands and ride the bus up for their work week, then back down. Barracks-style housing for these men is located near the mine.

No hotels are present in Tembagapura because no casual visitors come to Tembagapura. Guest houses are available for visitors of a certain status, and other visitors are housed in the barracks. Access to the town is by bus or helicopter, and permission must be obtained from Freeport and the Indonesian government to visit the area. This is done by means of a special visa. Occasionally backpackers attempt to come into the area from the back side of the mountain, usually to get to the glacier on Puncak Jaya, the highest peak of Mt. Carstensz. They frequently run into trouble, requiring rescue by Freeport.

Mess halls are available to employees on single status, and because the mine operates 24 hours a day, the mess halls are open almost around the clock. They provide a choice of Indonesian and Western food as well as box lunches for employees to take to work.

The norm on most remote mining sites is for workers to rotate between their homes elsewhere and their work, often eight weeks working, three weeks off. Because of the extreme remoteness of the Papua site, Freeport built family housing and opened the school in Tembagapura in 1973, making it possible for families to live on jobsite. Teachers for the school were employed by International School Services (ISS), an American organization that provides support to foreign American schools. Initially, the majority of families were American, so using an American curriculum made sense.

Through the years, as changes occurred in production, the population of Tembagapura fluctuated. Social and safety issues also affected the population size. At the time of this study, 2018-19, about 20,000 people live full-time in Tembagapura. Everyone who lives in Tembagapura works at the mine, in support services, or is in the immediate family of someone who does. Some people are employees of a number of contractors working for Freeport, including Redpath, Pangansari, Cummings, Trakindo, Sandvik and others. Employees of contractors and their families also have access to Freeport facilities. The majority of expatriates in Tembagapura are from Australia, New Zealand, and North America, but citizens from countries of Africa, Asia, Europe, and South America are also well represented. In 2019, the town of Tembagapura includes a National school (*Yayasan Pendidikan Jayawijaya*) for native Indonesians, an Expatriate school (Mt. Zaagkam School), a grocery store, a small department store, a large sports complex, a swimming pool, a gym, and a club that has an excellent restaurant and a smaller pub, as well as other rooms that are used for various purposes by the community.



Figure 9: Aerial view of Tembagapura

Because of space limitations in Tembagapura, a second town was built on the Freeport concession area in the lowlands about three miles off of the MSR at MP 34, halfway between Portsite and Tembagapura. This town, Kuala Kencana, was completed in 1996. Warehouses, maintenance facilities, and some offices are located in KK. Originally it was thought that families from Tembagapura would be relocated to live in KK and the workers would commute. The expatriate school in KK was built with large classrooms to accommodate all the students. It soon became apparent that many families did not want to relocate out of Tembagapura, so Freeport kept both schools open. Prior to the opening of school in KK, as many as 190 students attended the school in Tembagapura. Both schools operated using American curriculum.

The first choice of transportation to Tembagapura from the lowlands is the helicopter. The helicopter is available for use by any Freeport employee or contractor but is limited to 26 people each flight, which takes about two. Some smaller choppers also fly, but they are usually used for other purposes, such as transporting supplies to the outlying mining camps, where many miners stay between shifts. In addition, flying is subject to the weather. It rains every afternoon in Tembagapura, and many afternoons in Timika, so on a very good day, there may be four flights going up and down. Like

everything else, a priority system is in effect for a seat on the choppers, not always by rank, but by reason for flying.



Alternative transportation is by bus. Bus transportation between the airport and Tembagapura currently takes about three and a half hours. Through the years, there have been incidents along the road resulting in deaths. The Indonesian government attributes the acts to the Free Papua movement, a group fighting for separation from Indonesia. Because of this, since 2010, the armored buses are sent in each direction in convoys, guarded by Freeport security, Indonesian army personnel, and Freeport-hired security contractors. The buses run back and forth during daylight hours. Approximately 3000 people are moved up and down the mountain every day. Over the course of a year, fifty thousand people are flown by helicopter and over one million travel by armored bus (Rising, 2018).

It's now 6:45 on a Tuesday morning. I'm sitting in the small airport and have been since 5:15. In order to get here, I left home at 4:45.

When I woke this morning, the first thing I did was listen for rain, because that's what we all do when we know we are traveling up the mountain to Tembagapura. If it's not raining, there is a chance of catching a chopper for the less-than-20-minute flight. If it's raining, or even cloudy, the orange limousine is the mode of transport. The orange limousines are basically armored boxcars with bench seats on a semi-trailer and are officially known as buses. The windows have been covered with armor plating, leaving only about 3 inches of light showing at the top. These buses drive up and down the mountain several times a day, bringing workers and families back and forth. On a good trip, the ride in a bus is about two and one-half hours. The unpaved road is so bumpy that anyone wearing an exercise tracker will show an extra 20,000-30,000 steps for the day.

When I got to the airport, I had good news. I lucked out and got M-1, which means I have a seat on the first chopper of the day. There are only 24 seats, and I'm not a high-priority employee, so this was a win. In spite of raining most of the night, it's a dry morning, with just a few clouds. It is looking good.

The public address system comes to life. "*Perhatian, perhatian,*" (Attention, attention). I know what's coming. My colleague in Tembagapura, who I am due to meet with at 8:00, just texted me a moment ago. His exact words were "See you around lunchtime!" Which translates to, "it's raining here, and you're going to be on the bus".



Figure 10: Bus convoy from lowlands to highlands

The Second Town: Kuala Kencana

Anyone wishing to travel by air from elsewhere in the world to the mining area must first fly to Bali. Although a couple of small airlines fly the route between Bali and Timika, the majority of people prefer to fly on Garuda Indonesia Airlines, which operates one flight per day, leaving Bali at 1:50 in the morning, and arriving in the town of Timika at 6:00 in the morning. The airport is right on the edge of the mining concession, along with a resort-style hotel. The hotel caters almost exclusively to Freeport business. Periodically, government restrictions are imposed on travel to the area due to the presence of the mine⁶ as well as political unrest in the area, so very little tourist traffic comes through, and most tourists are Indonesians visiting relatives who live in the area. Occasionally a group of travelers who want to visit one of the local tribes for study or curiosity will arrive at the airport in Timika.

From the airport in Timika, there is a thirty-minute drive on a dirt road along the Ajkwa river, one of the tailings rivers from the mine, and through the jungle to Kuala Kencana. The rain and the road conditions are such that it must be graded twice a week, and still plenty of potholes are present. The trees along the road are tall and the jungle behind them is dark. Drivers must watch for panners, local people who walk through the jungle to the river to pan for the gold that escapes the pipeline. Few mammals live on Papua, but people often see snakes and cassowaries along the road. It's against company policy to stop, except for emergencies.

⁶ The area around the mine is considered a national resource area and access is controlled by the government.

Papua is home to a number of endemic species, such as the cendrawasih, also known as the bird of paradise, and new species of flora and fauna are often discovered here, such as the blue-eyed spotted *kuskus*, discovered in 2004 and various species of frogs (Goldberg, Bursey, & Kraus, 2013). Beautiful large moths, butterflies, hornbills, kites, and other birds and insects are objects of fascination and study. Geckos and lizards abound, with the occasional sighting of a monitor lizard or a python on the road to KK and in KK itself. Kuala Kencana is located in a rainforest, therefore it rains most days, at least part of the day or night. Mid-May to early October is considered the rainy season, with thunder and lightning accompanying the downpours. Mosquitos are common in the region and they carry both malaria and dengue fever, along with other illnesses. The rains provide myriad ponds and pools in which mosquitos can breed. In 1992, when Kuala Kencana was still on the drawing table, Freeport management decided to build the town in a way that would discourage mosquitos. The jungle was cleared, and the grading began. Rain water runs into drainage areas that flow away from the town. Town residents report standing water that is drained immediately. The Mimika district, which KK is a part of, reports over 4000 cases of malaria each month, yet no mosquito-borne illnesses have been reported as contracted in KK (Bangs, 2011).

Arriving in KK is a bit like coming into another world. The contrast between the jungle road and the paved, manicured, clean town is almost other-worldly. Looking at the town via Google Earth, the roads, golf course, and buildings can be seen in their own tiny spot, where it doesn't seem any should be. However, the town was carved out of the jungle, and the jungle weaves itself through the town.



Figure 11: Kuala Kencana, Courtesy of Google Earth

Kuala Kencana is reminiscent of an American military base. It consists of the two schools described in this study, two mosques, two churches, one grocery store, one general store, a recreation center, three small restaurants, two office buildings, a few small businesses, and a golf club, complete with an 18-hole Ben Crenshaw-designed course⁷. A warehouse complex along with maintenance facilities and the Nemangkawi Mining Institute, a technical high school, stand just a few miles from the residential area. About ten miles of road are in the town, with one recently installed traffic light near the main gate and one roundabout in the center for very little traffic. Most of the vehicles are company vehicles, although some employees have private cars, scooters, and motorcycles.

As of June 2019, KK has a population of 341 employees of the mining company and contractors, plus their families. Forty-seven of the employees are expatriates, and all of them live in company quarters. The expatriates are from a number of countries. Many are Australian; also currently represented are New Zealanders, South Africans, Ghanians,

⁷ The course at the *Klub Golf Rimba Irian* was designed by Ben Crenshaw and Bill Coore and built in 1996 for the employees and guests of Freeport.

Canadians, Americans, British, and Papua New Guineans. The expatriates hold a variety of jobs, but all have a certain level of responsibility or specific expertise. In order to gain a work permit, they must be doing a job that could not be filled by an Indonesian. In most cases, a part of their job is to train an Indonesian person to do the job; this is called a counterpart program. A small area in KK, about three blocks, is comprised of homes that are not owned by Freeport. When the town was being built in the mid-1990s, Indonesian employees were allowed to buy the homes in this area. Other employees beyond the 341 live outside of the mining town in Indonesian or tribal communities. All total, the population is about 2000.

All employees of Freeport and its contractors are provided with housing or a housing allowance, whether they live in KK or not. Students who live in KK may live in a western-style home or an Indonesian style home or an apartment⁸, most of which are owned by the mining company. Separate smaller units for employees were built for employees without families on jobsite. The housing to which a family is assigned depends on the employee's status within the company.

Freeport built, owns, and maintains the water treatment plant and the coal-fired electric plant that serve the communities of KK and Tembagapura. Residents pay an inexpensive fixed monthly cost for these services. A challenge faced by residents on the island of Papua is internet service. Until 2017, the fastest speed seen by most people was

⁸ The average western-style homes have about 1850 square feet, 3 bedrooms, 2 bathrooms with western plumbing and light fixtures, a living room, dining room, maid's quarters and air conditioning. The average Indonesian-style homes are closer to 800 square feet, with no air conditioning, small kitchens, and Indonesian-style bathroom fixtures. The apartments are about 1500 square feet with 3 bedrooms, 2 baths, western-style fixtures, and maid's quarters. Some larger homes were built for company upper-management. Indonesian families live in all styles of home. Expatriate families are usually in apartments or western-style homes.

the equivalent of a 56k modem. Now a fiber-optic cable runs underwater to the island from Singapore, and some people have subscribed to the service. This has also allowed the telephone company to offer 4G service, which many people use at home in lieu of the fiber-optic service. Several times since its installation, damage was done to the fiber-optic cable offshore resulting in no internet for a period of several weeks. Because of this insecurity of internet service, all documents related to this study were kept on a local computer as well as in a cloud service.

Music in Papua

It is the cannibal tribes in particular (and very good fellows they are) who love noisy band instruments. They are also the best singers and can sing in four parts (when taught) with excellent effect. - Beatrice Grimshaw, excerpt from a Letter to the Editor, Musical Times, March 1, 1920.

When I first arrived in Papua in July of 2011, a missionary told me that the music of the indigenous people might not sound like music to me, that it had a very limited range and a lot of odd sounds that were not really words. The missionary added, however, that hymns and other Western songs had been brought to the island and could also be heard. Papua has generally been considered to have the largest Christian population among islands of Indonesia. Because missionaries have been coming to the coastal areas of Papua for the last hundred and fifty years or more, the indigenous people of the coastal areas likely have had some experience with hymns and western song forms.

The purpose of this study is not to delve deeply into the musicology of Papua. As a large island with many regions and tribes, that would be a daunting task for even the most ardent ethnomusicologist. Instead, I will provide a general overview and briefly discuss some of the more prominent studies that have been done.

Multiple accounts about the ingress of foreigners into the highlands of both sides of the island note that some of the first non-Papuan people to explore the interior elevations were men looking for mineral resources in the 1920s and 1930s. Other accounts mention missionaries who arrived in the interior around the same time, and some of them set up permanent homes (Cutts, 1984; Feld, 1982; Gillespie, 2010; Wilson, 1984). One of the tasks of these missionaries was to learn the local languages in order to translate the Bible; another was to teach the local people to read so they could read the Bible for themselves. This was a long process, usually taking decades to accomplish (Cutts, 1991). Some Bible teaching was done through hymns.

In 1926, a team of Dutch and American scientists formed an expedition to what was then called Netherlands New Guinea. They spent time with the Kauwerawet tribe near the coast, then went to the Central Highlands by airplane, taking off and landing on a series of lakes. In the Central Highlands, the expedition made contact with a theretofore unknown tribe they referred to as “pygmies.” The Dutch leader, C. C. F. M. Le Roux made phonogram recordings of the indigenous people and brought the recordings back with him to Batavia (now Jakarta). In 1927, he asked musicologist Jan Kunst, who had not been on the expedition, to analyze the music. Kunst did this, even though, as he said, “it is a somewhat onerous task to write about exotic music when one has not heard it in its natural surroundings and has not, therefore, felt its impact” (Kunst, 1931).

Kunst’s second essay on Papuan music, *Songs of North New Guinea*, was written in 1931, just after the publication of his first essay, *A Study on Papuan Music* (1931). In this second essay, Kunst notes a Malayo-Polynesian influence in the music. He based his second essay on hearing representatives from tribes from the north coast of New Guinea,

who were in Batavia for an ethnological science congress. Kunst was able to listen to them in person in addition to recording them. In his final work, *The Native Music of Western New Guinea*, 1950, Kunst summarized what he had learned in the process of writing his first two essays and expanded upon what he had learned through analysis of recordings he received from Roman Catholic missionaries in Papua. Kunst did extensive research on the instruments that were being used in Papua at the time and created a map that showed where instruments were used. As much of the island was unknown in the early twentieth century, large blank areas exist on the map. Drums were common



Figure 12: Trumpet-like instrument

throughout the south of the island; however they were not much used in the highlands, except in the east (Kunst, Muller (see intro Pap)). Some of the other instruments Kunst mentions are one similar to a Jew's harp made of palm bark or roots, flutes of various kinds, rattles made of shells, bamboo, or human skulls, bells made of shells, fruit, or bronze, and two-tone xylophones.

Instruments and the materials from which they were made varied by region. In the Mimika region in the south, which borders KK, the main tribes are the Kamoro and the

Asmat. Both use similar drums, called *tifas*; however the Asmat drums tend to be more decorative. *Tifas* are hourglass-shaped and usually covered with the skin of the monitor



Figure 13: Kamoro drummers in the village of Ajkwa

lizard. They are held with one hand, using a handle carved into it or glued to it at the narrowest part. The drum is made by burning out the interior portion of a log and carving the exterior as desired. The skin head is glued on using a resin made from urine, blood, and tree sap. The drum is tuned by holding it over a fire until the glue loosens and the head can be tightened. Sometimes a band is wrapped around the head to help hold it in place. On the head of the drum the maker often puts dots of the resin, placed to help with the tuning. Other idiophones used in the south are clappers often made of shells, and metal bells made from scavenged parts, carved bones or gourds. Spears are used during dances as rhythmic instruments.

For two years in the 1970s, Feld (1982) studied the songs and music of the Kaluli people on the Great Papuan Plateau of Papua New Guinea, the eastern side of the island. He looked closely at the connection between music, language, and nature:

I began to find a pattern that connected myths, birds, weeping, poetics, song, sadness, death, dance waterfalls, taboos, sorrow, maleness and femaleness,

children, food, sharing, obligation, performance, and evocation. As I continued to work through the materials, the pattern kept pointing to linkages between sounds, both human and natural, and sentiments, social ethos and emotion. (Feld, 1982, p. 59)

Feld observed that while the Western idea of “song” is a stand-alone concept, for the Kaluli it was woven into the fabric of the lives of the people. Terms from nature were used to describe the way a song moved, e.g. “Your waterfall ledge is too long before the water drops’, ‘There is not enough flow after the fall’, ‘There is much splashing’; these were typical responses Kaluli made to my melodies” (Feld, 1982, p. 210).

In 2004, 2005, and 2007, Gillespie (2010) studied the music and traditions of the Duna people, also on the Great Papuan Plateau. She noted that there was no word in the Duna language for “music,” but that “music” is a part of the language itself. The Duna origin story of Mburulu Pango explains that there was a time when many people lived together in a big house. When the house fell down, the people spread out across the world. Each group that left developed their own language, but when they left they took many things that they had in common, such as drums.

According to the telling of the story of Mburulu Pango (and consistent with stories of this kind that are found all over Melanesia), the white man once lived with the Duna and other neighbouring language groups as their brother, often described as their first (or oldest) brother. They all shared knowledge and objects and when the time came when they no longer lived together, the different brothers (including the white brother) each took particular knowledge and objects away when they left. Once away from Mburulu Pano, the white brother developed the technology he now displays, building on the skills and items he took with him when he left (for example, the sound of the engine of an aeroplane is said to originate from within the Duna bamboo Jew’s harp, the *luna*). When first contact [with whites], some people therefore saw whites as ancestors returning from the dead. The Duna coveted items the whites had, but also the Duna might have considered these items as part of their own heritage, things to which they also had a right, because of the shared history between the brothers. (Gillespie, 2010, pp. 24-25)

Gillespie goes on to say that because of this belief, it was logical and easy for the Duna to accept Christian and secular songs into their lives. The Duna do not have people who specialize in tasks, including music, so music is created and performed by a large proportion of the people.

Kunst (1927), Feld (1981), and Gillespie (2010) all mention the importance of nature in the music of the people they studied. They all mention the commonality of descending scales in their music, the emotion that the music represents, and the integration of bird calls, twittering, gobbling, and quacking. Kunst also notes that while similarities exist between the lowland and highland tribes, that they are enough different that they seem to have come from entirely different sources.

Music is an important part of Indonesian and Papuan culture. Indonesian people are much less reluctant to participate in community music events than many people in other parts of the world, such as Australia or the United States. Even those who are shy are often willing to try singing or playing an instrument. I have been to parties in people's homes where guests of all ages are expected to sing or play just for fun. If a band is playing at a club or a restaurant, the performers and the audience expect that there will be a time for members of the audience to come up and play or sing. While some are stronger musicians than others, all are welcomed, supported and applauded for their contributions. Many children and adults are involved in community or church choirs and pop bands.

Iyakoko Patea is a community choir that was formed in 2006 by Pak Maradong Simanjuntak (Choky) and his wife, Ibu Sari Simanjuntak.⁹ Both had extensive individual

⁹ Indonesian people often do not use a second name. Even when they do, it is not usually a family name in the sense that Western people understand. However, they use "*Pak*" for a man and "*Ibu*" for a

and choral vocal experience in Jakarta and nationally (in Indonesia) prior to moving to Papua to work on the minesite in non-musical fields. In the regional Kamoro language, *Iyakoko Patea* means “melodious voice”. Once in KK, they founded *Iyakoko Patea*, with Pak Choky as conductor. Ibu Sari is the primary vocal coach and also founded a children’s arm of *Iyakoko Patea*. The choir was originally made up of Freeport employees, but is now much more diverse, including employees of other companies, housewives, and unemployed youth from the area. Members are from a variety of religious and educational backgrounds, although the majority are Christian, and the choir regularly sings in local churches.

Iyakoko Patea has become internationally known through their participation in various choir competitions and festivals such as those in Latvia (2014), South Africa (2018), Australia (2016), and Spain (2016), where they have consistently placed well in the competitions. For many of the choir, the travel to these games is the only time they have been outside of Indonesia; for others, the first time off the island of Papua. They



Figure 17: Iyakoko Patea Choir in Calella, Spain, 2016: Folklore Competition

woman when addressing them or talking about them. I will implement that practice for this paper out of respect for the traditions of the survey participants.

have a broad range of repertoire consisting of traditional classical choir music such as that by John Rutter and pop songs such “You’re the One That I Want” by John Farrar. However, the uniqueness of this choir is highlighted in their Papuan folklore music. They perform songs from a variety of areas in the Indonesian provinces of Papua and West Papua. In their performances, they mimic the way the people of the various tribes would sing, for example, using nasal vowel sounds and various bird calls as a part of the music. They dress in local traditional clothing and include culturally appropriate dance as a part of their performance. A goal of the choir is to spread knowledge about the indigenous people of Papua and their culture.

The *Iyakoko Patea* Children’s Choir was started in 2011 by Ibu Sari Simanjuntak and Pak Ferdnand Deda. Deda grew up in the north of Papua and attended university in Ohio. After graduation, he returned to Papua and began working for Freeport. In 2013, Pak JoSan Santoso, an experienced singer from Java who also works for Freeport, joined the coaching team, and today the choir is coached and conducted by Pak JoSan and Ibu Sari. The choir has had as many as 50 children, but usually has around 20 members. The majority of singers are from YPJ, but children also come from other schools. The choir is open to children of all religions. At times, the directors divide the singers into smaller ensembles such as duets or trios, but usually they focus on the full choir. Like the adult choir, they practice weekly, on Sunday, but if a concert or program is upcoming, they will practice up to three times per week. Their repertoire is varied, encompassing sacred, popular, and folksong genres. Many of the students in this choir continue in music programs in high school and university.

With the exception of the *Iyakoko Patea* Children's Choir, no established student musical organizations have been formed in Kuala Kencana other than through the schools.

School in Papua

The Indonesian government requires school attendance for students aged 7 to 15, however, data show that 2.3 million children are out-of-school in the country, not counting adolescents. Almost 19% of students who begin school do not finish primary school, which ends at grade six. Of those who do finish primary, 94.18% transition to secondary school. Having said that, the literacy rate of the Indonesian population has grown from 85.44% in 1980 to 99.67% in 2015 (UNESCO, 2018).

The provinces of Papua and West Papua are a different story. Because of the remoteness and the earlier lack of a central government, very few children outside of the cities attend school, as there was (and still is) a severe shortage of teachers in the remote areas. For example, in 2004, over 35% of the population had never attended primary school, only 17.56% finished high school, and 1.17% completed university (Mollet, 2007; *Statistik Kesejahteraan Rakyat Papua 2004, 2005*).

It has been my observation that even when the small villages have a school, students attend sporadically. The central government in Jakarta is responsible for sending teachers to these remote schools, and the curriculum is the Indonesian national curriculum, which often has little relevance for students in these areas.



Figure 14: Students in a school in Pogapa

Some villages have built their own schools, with the help of local missionaries, who also provide teachers. The teachers may or may not have university teaching credentials, but those who do not have usually been trained by experienced teachers. The teachers in these missionary schools are often Papuans who want to help their people. They usually work without pay, for housing and food.

Three such teachers, Ibu Lee and the two other teachers she has trained, Ibu Danika and Ibu Eliana, must walk 22 hours to get to Zotadi, the highland village where they work. Previously, they traveled weekly to different villages. The school in Zotadi is being built by villagers, but the classes are currently being held outside. Ibu Lee is from a family in comfortable financial circumstances and has a Nursing degree and a Pastoral degree from a four-year Bible college in Indonesia, but her passion is teaching Papuan children. Ibu Lee primarily received her teacher training from an Australian

teacher/missionary, with some practical observation and hands-on training at Mt. Zaagkam School in KK.



Figure 15: Village school in Zotadi

A number of other issues concern local Papuan students. Many of the indigenous children must help their parents with fishing, sago processing¹⁰, and growing crops. Families must pay for their children to attend school. Many parents cannot pay, and others do not see the value of schooling. Private missionary schools in remote areas as well as in towns suffer from lack of materials, electricity, teachers, and in some cases,

¹⁰ Sago is a type of palm. Many Papuan people depend on the pulp from it for their primary food source. It must go through a recovery, softening, and drying process before it can be ground into a type of flour. In addition, the bark and leaves are used for other purposes, such as roofing.

apathy on the part of students and their families. The remoteness of the island and the cost of importing materials makes it difficult to support schools.

It's in this context that the study occurs. MZS is unusual in this setting in that it serves international students and has resources and support beyond the national government. YPJ is very unique in that Freeport supports the school financially and students are not required to pay tuition to attend school there. This financial support allows many of the Papuan students to envision and realize a life much different from the one their parents live.



Figure 16: Kamoro homes along the river near Portsie

Chapter 5: The Two Cases

In this chapter I look at the specific histories and contexts of the schools in this study and the process of their adoption of the Primary Years Programme (PYP). The first case is Mt. Zaagkam School (MZS), the expatriate school. The first half of this chapter describes the school, its evolution, the adoption of the PYP and data from the site. In the second half of this chapter, I provide similar information for the national school, *Yayasan Pendidikan Jayawijaya* (YPJ). At the time of this study in 2019, both schools had two campuses, one in the highlands town of Tembagapura (TPRA) and one in the lowlands town of Kuala Kencana. While I will look at the history of both the highlands and lowlands campuses to gain an understanding of school and community context, specific case information is relative only to the schools in the lowlands.

Case 1: Mt. Zaagkam School



Figure 17: International School Tembagapura 1973

The first international families hired by Freeport arrived in Tembagapura in the summer of 1972 and the children prepared to begin school. The school building was completed and opened in October of 1972. Called the International School Tembagapura

(IST), the school catered to students in grades three through eight. Three of the original families, Americans, had lived in a similar mining community in Peru a few years earlier. The curriculum was American-based, as most of the small student body were American; however, one family was from Norway and another family from Canada (Seller, 2019). When the school opened, there were no specialist teachers. Adults now living in Tembagapura who were there as students in 1972 recall being in a Christmas program that year; however, they are not sure if there was a music teacher or if the classroom teacher directed the program.

By the mid-1990s, the school had close to two hundred students, and specialist teachers in art, music, and technology. At that time, Freeport contracted International Schools Services (ISS) to run the school, and ISS provided teachers as well as materials. Jeff Robinson, a teacher in Tembagapura from 1992 to 1999, remembers a simple but comfortable life. He and his wife were both teachers, and their two children attended the International School of Tembagapura. Robinson remembers driving down the mountain from Tembagapura to the hotel by the airport for a swim or just to have a picnic and being able to hike in the mountains around Tembagapura (Robinson, 2019).

Space is very limited in Tembagapura, as the town is built on the side of a very steep mountain and periodically pieces of road and buildings slide down the slope. In the 1990s, the mine and the mill underwent a large expansion. To accommodate the necessary infrastructure and additional staff with families, Freeport built a second town, Kuala Kencana, in the lowlands in 1996. Support departments of Freeport such as Accounting and Human Resources were to be based in KK, as well as additional family housing. The school in the lowlands, initially called the International School of Kuala

Kencana (ISKK), was designed with large classrooms to accommodate what was originally intended to be a large population.

The names of the expatriate schools were changed to Mt. Zaagkam International



Figure 18: Mt. Zaagkam School 2019

Schools in 2002, as reflected by the yearbook (NA, 2002). Another name change occurred in 2014 when the Indonesian government outlawed international schools in the country. The term “International” was dropped from the name, and as of 2019, the two campuses are known as Mt. Zaagkam School Tembagapura and Mt. Zaagkam School Kuala Kencana.

A tragic incident in 2002 spurred a number of changes in lifestyle for the residents of Tembagapura and Kuala Kencana. The entire teaching staff from the school in Tembagapura had driven halfway down the Main Supply Route (MSR) to have a picnic, which was commonly done at the time. While on the return drive, the small convoy of vehicles was ambushed by persons unknown. Three of the victims were killed, with the remaining evacuated to Australia for medical attention. Government officials believed

that the incident was an organized attack on Freeport, with the teachers simply being targets of opportunity.

The attack led to conversations that would change many things, including the school's curriculum. Dr. Susan Ledger, an Australian teacher in Kuala Kencana at the time, recalls the following:

After the incident, part of the reflective process undertaken at the school level included the updating of policies related to security and operational logistics. This process triggered discussion about school policies in general, including the existing curriculum. Debate began on the relevance of the pre-existing American curriculum and the worth of adopting a new curriculum with a greater international and global focus. In many respects the move was a strategy to remove association from the 'American' element of the multi-national mining company at the centre [*sic*] of the social unrest. Initially the reflection process exacerbated the tensions between national and international interests. Many teachers who aligned with the American curriculum struggled with the change. But, after lengthy research and discussion the IB-PYP was chosen as the new curriculum policy for the school. (Ledger, 2013, pp. 17-18)

The IB-PYP is the International Baccalaureate Primary Years Programme for students ages 3 to grade 5. According to Ledger (2013), while this curriculum change was initiated by reflection following the attack, it also represented a recognition of changes in the demographics of the mine site. Students were no longer predominantly American, but rather were from many countries, making it imperative for the schools to provide a more international educational perspective rather than a curriculum based on the policies and history of one nation. School administrators turned to the International Baccalaureate Primary Years Programme because it was one of the leading international school accreditation frameworks at the time.

Adopting the IB-PYP means seeking accreditation as an IB school. The process to become an IB school takes two to three years. During those years, the IB accreditation team expects the school to prepare for an authorization visit aimed at ensuring that the

requirements of the program can be met by the school and that stakeholders -- students, teachers, administration, parents, and community -- have acquired an understanding of what the PYP program entails. During the authorization visit, the visiting team speaks to all groups to ensure that stakeholders have been appropriately informed and trained regarding their role in a PYP school. The visiting team also investigates whether the school has the facilities and resources, including professional development for staff, to deliver the programme (IBO, 2006).

In 2008, Mt. Zaagkam School, both the Tembagapura and Kuala Kencana campuses together, was authorized as a single IB-PYP school. Further accreditation visits occurred in 2012 and 2014. In 2014, the school was authorized for five years. The next visit will occur in October 2019. For each visit, the school must undergo an extensive self-study involving all stakeholders to show progress on its five-year plan and to share its plan for the next five years.

In addition to the PYP, Mt. Zaagkam School is also accredited by the Western Association of Schools and Colleges (WASC). WASC is an American organization that accredits schools in some western states, such as California and Hawaii, as well as over 5000 schools internationally. Like the PYP, WASC requires involvement of all stakeholders in the accreditation process. Both organizations, WASC and PYP, have research-based guidelines for evaluation and require ongoing schoolwide action plans, professional development for staff, and clarification of the school's purpose. They also ensure the school is utilizing appropriate internal and external assessments and is staying current on research-based best practices in teaching (WASC, 2016).

From 2008 to 2018, nine different administrators were involved in the two MZS campuses. Administrators came and went for different reasons; however, that instability in administration contributed to instability in the practice of the PYP, as each administrator had opinions on how the school should be run and how the PYP should be practiced. The constant changes, and in some cases lack of oversight, resulted in inconsistency of program delivery throughout the school. In addition to a series of administrators, the school also had a series of PYP coordinators between 2008 and 2015. Since 2015, there has been one PYP coordinator.

A further complication in the delivery of the PYP is that most of the teachers who come to MZS have no prior PYP experience. Professional development for teachers is a challenge in remote schools. While excellent professional development (PD) can be provided by bringing experts to the schools, logistical planning, visa requests, and governmental approvals for visitors to the schools in Papua take about eight months. In addition, special arrangements must be made to pay anyone who comes from outside of Indonesia as two tax authorities are involved. The PD done onsite is always relevant to classroom teachers. Logistically it makes sense for PD practitioners traveling to Papua to be able to address the largest group (classroom teachers). Some PD, such as the course “Inquiry in the PYP,” which was provided in 2014, is also beneficial to specialist teachers. Specialist teachers, however, often feel that they are not staying up on current teaching practice in their field. Beginning in 2018, teachers are able to apply for funding every other year to help them meet their professional development goals. Any individual PD is usually done on school breaks due to the length of time needed to travel to and

from Papua. In addition, Freeport has a tuition assistance program for employees who wish to work on advanced degrees.

MZS is comprised of students who are present on the island solely because at least one parent works for the PT Freeport company, so these students have less natural connection with other communities on the island of Papua. In KK, all of the students at MZS live in town within walking distance of school. Because of company benefits and affluence of the parents, expatriate children and teachers tend to travel extensively. Student and teacher conversations at the start of each quarter usually include references to travel destinations such as Bali, Tibet, Europe, Australia, Cambodia, China, Dubai, or South Africa, which is not uncommon in international schools.

MZS caters to students through year eight (eighth grade). After year eight, they attend the boarding school of their choice for high school, with financial support from Freeport if they are Freeport dependents. Each of the contracting companies that operates onsite has its own policies. A number of secondary boarding schools in Southeast Asia with excellent reputations cater to international students, such as the International School of Penang (Uplands) or United World Colleges in Singapore. Uplands and UWC Singapore are popular because they offer the International GCSE (a British diploma) and the IB Diploma program, which gives students the credentials to attend university anywhere in the world.

Other high-school-age students choose to attend schools in their home country, such as the U.S. or Australia. A few have gone to boarding or day schools in Indonesia that offer international curriculums, such as Bali Island School. The only other expatriate school on the Indonesian side of New Guinea is Hillcrest School in Sentani on the north

side of the island. Hillcrest is a Christian school which was founded primarily to serve missionary children, and it follows an American curriculum. A few families from Freeport have sent their children there, but most choose international schools in Southeast Asia. Often, students go to a school where, initially, they don't know anyone. School is a family decision and is often dependent on where the student is likely to attend university.

At the time of this writing, most of the students who attend MZS have an Indonesian mother and a non-Indonesian father and are bilingual. This is not always the case. Some parents may stay in Indonesia when they are finished at Freeport while others will live elsewhere. Students must be prepared to integrate into whatever culture and school they find themselves.

In Spring of 2019, nine students were officially enrolled in the PYP program at MZS-KK: Early Years consists of one Pre-K4 student and one student in kindergarten; Elementary has three children in first grade, one in second grade, and two in fourth grade. Middle School is not part of the PYP program, although MZS continues much of the learning and teaching guidelines up through middle school. Six students were enrolled in middle school in spring 2019: two in sixth grade and four in seventh grade. By December of this year, all of the middle school students will like to have enrolled in boarding schools. Some will be going to Australia and will likely leave in December, which is the normal time for them to leave; others are leaving a year early because so few students are at MZS and parents wish for their children to have a larger social experience. The Early Years level expects to gain five three-year-olds in the Pre-K3 class.

Philosophy and Curriculum at MZS.

Teaching is an art in the sense that you need to have that creativity and you need to look at things and interpret them in a certain way or realize that your interpretation is one interpretation and that there are others as well. The science part are those really explicit things that you have to get done. The teacher that strives to find that perfect medium to blend them together is the one that's going to succeed. (William)

The vision and mission statements for MZS were created over a period of two days in December of 2013 in a meeting that included all teachers from the highlands and the lowlands schools, administrators, a selection of parents and company representatives.

The statements have remained unchanged since 2013 and are as follows:

- Vision: An innovative school and community that exhibits continuous growth in response to current and future developments in education.
- Mission: Ensure an environment of critical thinking, collaboration, and creativity that empowers all students to achieve their potential as lifelong learners in a global society.

Table 3 is a chart developed for the purpose of this research to show the alignment between the Foundational Guiding Statements of MZS and the PYP, as outlined in “Developing a Transdisciplinary Programme of Inquiry” (PYP, 2012). The purpose of the MZS Foundational Guiding Statements is to ensure that what is taught is within the PYP framework and the mission/vision of the school. These frameworks are regularly referred to when planning for the year. The right column outlines connections to the Common Ground Collaborative (CGC), which is an organization begun in 2014 by Kevin Bartlett and Gordon Eldridge. The goal of the organization is to cut through the busy-ness of schools and streamline education. The current superintendent brought the “Three Cs” of the CGC, Character Learning, Competency Learning, and Conceptual Learning into the MZS curriculum structure to demonstrate further connections to external established frameworks.

MZS	PYP	CGC
Core Values: Reflective, Open-Minded, Caring, Risk-Taker	The learner profile: Inquirers, Knowledgeable, Thinkers, Communicators, Principled, Open-Minded, Caring, Risk-Takers, Balanced, Reflective	Character Learning that is learned and demonstrated through action, empathy and reflection.
School-Wide Learner Outcomes: <i>Thinkers</i> who are nimble of thought, resourceful, and creative. <i>Social Agents</i> who are respectful global citizens focused on innovation and sustainable actions. <i>Communicators</i> who are knowledgeable and exchange ideas and information through a range of modalities at an interpersonal and global level. <i>Self-Managers</i> who are resilient, balanced, mindful, and act ethically. <i>Researchers</i> who inquire and seek practical solutions to global issues through experimentation and investigation.	The Approaches to Learning: Thinking Skills <ul style="list-style-type: none"> • Critical thinking • Creative thinking • Transfer Skills • Reflective/Metacognitive Social Skills <ul style="list-style-type: none"> • Positive interpersonal relationships and collaboration • Social-Emotional intelligence Communication Skills <ul style="list-style-type: none"> • Exchanging information • Literacy • ICT Self-Management Skills <ul style="list-style-type: none"> • Organization skills • States of mind Research Skills <ul style="list-style-type: none"> • Information-literacy • Media-literacy • Ethical use of media/information 	Competency Learning that is learned through formative and metacognitive processes toward mastery.
Learning Standards: Concepts and Outcomes are to be drawn from the adopted Learning Standards (see Table 4)	Knowledge: Transdisciplinary Themes: Who We Are Where We Are in Place and Time How We Express Ourselves How the World Works How We Organize Ourselves Sharing the Planet	Conceptual Learning that happens through inquiry.

Table 3: Alignment of MZS, PYP, CGC

As noted earlier and illustrated in Table 3, the PYP is a framework for learning. The PYP framework does not specify curriculum content, instead leaving the choice of specific curricula to the schools it certifies. The specific curricula adopted by MZS at the time of this study can be found in Table 4. These curricula were adopted after a thorough search and review by teachers and administrators, according to a set of criteria for alignment, content, structure, and adaptability.

English/Language Arts	Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers. [2010] Common Core State Standards for English Language Arts. Retrieved from www.corestandards.org/wp-content/uploads/ELA_Standards1.pdf .)
Mathematics	Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers. [2010] Common Core State Standards for Mathematics. Retrieved from www.corestandards.org/wp-content/uploads/Math_Standards1.pdf .)
Science	Next Generation Science Standards (NGSS Lead States. (2013). Next Generation Science Standards: For states, by states. Retrieved from http://www.nextgenscience.org/)
Social Studies	American Education Reaches Out (AERO) (U.S. State Department Office of Overseas Schools and the Overseas Schools Advisory Council. (2012). Retrieved from www.projectaero.org)
Creative Arts (Music, Art, Drama, Dance)	British Columbia Arts Curriculum (British Columbia Ministry of

	Education. (2018) Retrieved from https://curriculum.gov.bc.ca/curriculum/arts-education)
Bahasa Indonesia	Tasmanian Curriculum (Tasmania Department of Education. (2008) Tasmanian Curriculum Languages (LOTE) curriculum area Indonesian.)
Personal, Social, Health, Physical Education (PSHPE)	Ontario Curriculum for Physical Education (Ontario Ministry of Education (2018) The Ontario Curriculum, Grades 108: Health and Physical Education. Retrieved from http://edu.gov.on.ca/eng/curriculum/elementary/healthcurr18.pdf)

Table 4: Curricula adopted by MZS

Teachers at MZS do not report their assessments of students using letter or number grades. Rather, teachers monitor student progress along a spectrum of learning and write a narrative describing where the student is on the continuum of each learning area. Report cards go home twice a year, in December and June. Music, Art, Dance, and Drama are each a part of a cohesive Creative Arts program, where the skills of each are taught, but crossover units and connections are planned between them and between them and other learning areas. The learning areas that are reported on are Language Arts, Mathematics, Bahasa Indonesia, Creative Arts, and Personal, Social, Health & Physical Education (PSHPE).

The Programme of Inquiry. The Programme of Inquiry (POI) is the year-long overview of the units of inquiry (UOI). Each UOI is driven by one of the six transdisciplinary themes that are the same in every PYP school (Who We Are, Where We Are in Place and Time, How We Express Ourselves, How the World Works, How We

Organize Ourselves, and Sharing the Planet). The UOI includes the central idea that is the conceptual learning goal, specific learner profile and approaches to learning goals, key concepts (form, responsibility, causation, function, change, perspective, connection, and reflection), plans for activities, connection to other disciplines, and assessments (see Appendix E). These six UOIs form the POI. The POI format is the same in all PYP schools internationally. Social Studies learning is done within these units as well as much of the Science. All other areas of study may or may not connect to the UOI. Early Years (preschool and Kinder) students are required to complete four transdisciplinary units in a year; students in grades 1-5 complete six transdisciplinary units. While the PYP does not extend to middle school, MZS includes the middle school units on the POI because they are also inquiry units. Having the inquiry units for middle school students on the POI helps to ensure vertical alignment.

At MZS, the central idea of each UOI was developed by the PYP Coordinator and the Curriculum Advisor and approved by administration. Teachers met in grade level and specialist groups after that to develop the planners, which are the physical documents on which the plan for each UOI is recorded. They began to create the UOIs by choosing appropriate learner profiles, ATLs, key concepts, learning activities, and to discuss possible connections to other disciplines. The goal of the teachers was to design a unit that would help students to understand the central idea.

The International Baccalaureate is changing the programme requirements for PYP member schools beginning January 1, 2019, and now calls the programme the enhanced PYP. During the two-year period from Jan. 1, 2019 to Dec. 31, 2020, schools must update their implementation of the programme to align with the new guidelines. These

guideline updates do not affect actual material taught. At the time of this writing, MZS has partially updated. For those areas where change is in process at the time of this study, I describe those changes.

MZS-KK's elementary classroom structure offers a significant challenge and opportunity for learning. The seven students in grades one through four are in a single classroom. One teacher is assigned to the students, however, other teachers come in and out throughout the day. Due to the leaving of a teacher, I was temporarily teaching grades 1 and 2 Math in addition to creative arts at the time of this study, while the classroom teacher taught grade 4 Math. Phonics, Handwriting, and Readers and Writer's Workshop are taught concurrently with the Early Years (Pre-K and K) children, and the Early Years and Elementary teachers organize the students into ability groups, which flex between the subjects. Units of inquiry are generally led by the classroom teacher and the Bahasa Indonesia teacher, but also incorporate other teachers if the inquiry requires it. For example, if the study of a unit is leading to conversations or questions from students about changes in sound, the music teacher and/or science teacher would participate in the inquiry. Even though three grade levels (1, 2, 4) are combined in the elementary class, all students are focused on the same central idea in their units. They may develop different lines of inquiry and may go in different directions, e.g. in a unit exploring why humans migrate, one student may be interested in people who lost their homes due to war while another student may be interested in examining how lack of natural resources may cause people to leave their homes. At varying times in their units, students may work with other classroom teachers or specialists in the school, depending on their interests and where the direction of their inquiry takes them.

Creative Arts, PSHPE, and *bahasa* Indonesia are not required to connect with every unit of inquiry, only those with which a natural connection exists. For instance, in the unit “How the World Works,” if the lines of inquiry are pointing toward the growth of plants, music probably will not connect. However, if the lines are about social or other organizations, music may connect through the idea of ensembles and other types of musical organizations. Likewise, in the unit “Sharing the Planet,” if the lines of inquiry are pointing towards properties of materials, connections are possible through the properties of instruments. Connections can also be made through the key concepts of the units. For example, one of the key concepts is “Form”. If they are looking at form through the lens of their unit, they could also look at form in music and art. The process of “connecting” in units can be difficult and will be discussed further in the section on teacher perceptions of transdisciplinary teaching and learning.

One of the changes the IB allows as of January 1, 2019, is for the UOI “How We Express Ourselves” to be driven by the Creative Arts team and taught concurrently with other units of inquiry being studied in the classroom. While the PYP framework has always allowed the option of specialist teachers leading a UOI, the reality at MZS was that the classroom teacher put the inquiries together and led them, and specialist teachers came in when appropriate, as decided in planning meetings. With this new freedom, MZS leadership at the time of this study allows “How We Express Ourselves” to be led by the Creative Arts team, without a time limit on it for completion. In other words, this inquiry could conceivably take a year to complete. Meanwhile, students will also be working concurrently through the inquiries for the other five units in their classroom, or wherever those inquiries take them. These five units will also be expanded into the time previously

allotted for “How We Express Ourselves,” had it been an independent unit, allowing more time for the other five inquiries.

The central idea is the starting point of each unit. The central idea of each unit is determined by the PYP Coordinator and the Curriculum Advisor and approved by the school administration. Central ideas are designed to be broad to allow all elementary grade levels to work on developing an understanding of the same central idea through the years, and to allow students to develop their own paths to achieve that understanding as they focus on a different aspect of it each year. For example, figure 20 shows the unwrapping of the UOI “How We Express Ourselves” through the grade levels.

	HOW WE EXPRESS OURSELVES
Description	An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our
Central Idea	Different forms of expression help us extend our understanding of the world
PK3 - 4, K	Communication Culture, Forms, Connection
G1	Discovery Features, Behavior, Causation
G2	Appreciation Aesthetics, Opinion, Interpretation, Responding
G3	Expression Creating, Relationship (artist/audience), Purpose
G4	Representation Signs, Symbols, Features, Design, Influences
G5	Creativity Interaction, Innovation, Impact

Table 5: The UOI "How We Express Ourselves" through the grade levels

The outcomes for each unit of inquiry connect to the standards of the subject area curricula selected by the school. According to the PYP coordinator, who is involved with at least the initial planning of every unit,

Standards inform the building of the unit in the initial stages. Then the goals are determined, based on the standards - which transdisciplinary skills (approaches to learning), concepts, and learner profiles will be addressed. Teachers start with a generic concept and some related concepts. They will use those concepts to inform provocations of an initial task that is going to provoke students and make them ask questions. From those questions, the lines of inquiry are developed” (MZS PYP Coordinator, 2019)

For example, in “How We Express Ourselves,” students may look at a sampling of artwork, including tattoos and graffiti, to inspire discussion about what was being expressed, how the artist expressed emotions, and possibilities as to why the artist may have chosen that form of expression. These could lead students to brainstorm topics such as ways people express themselves, how they themselves like to express themselves, the purpose of the expression, the impact personal expressions can have on others, cultural expressions and many others. Teachers must ensure that students have a “voice and a choice” in what they will be studying. By encouraging students to look at broad ideas and allowing students to lead the discussion through questions and thoughtful conversation, students develop ideas about the direction they would like to take their inquiry.

Teacher Perspectives of the PYP at MZS. MZS- KK employed very few teachers at the time of this study due to low student enrollment, and that makes anonymity of teacher comments and observations difficult, particularly when considering that every staff member has a different job or jobs. In an attempt to preserve anonymity, where possible I will not identify the position of the staff member when including their observations and comments. The next section will highlight information, opinions, and thoughts offered by MZS teachers in their interviews, as well as information gleaned through examination of documents and observation in meetings.

Strengths.

We can let them take the time to inquire into something that they're interested in.
(Mary)

Having a small number of students allows for more personalization in learning.

The PYP supports individualization and learning through inquiry. This tailoring of education is evident in a variety of ways at MZS. One-on-one conferencing with students at all levels is the norm. Students have the opportunity for private music lessons in addition to their regular classroom music, and all students in the school have chosen to participate. Lessons are taught by me, as music teacher, our Indonesian teacher who is also a skilled musician, and a music teacher from YPJ who comes one afternoon a week to help.

This year MZS has trialed a powerful new schedule that allows students to make some individual learning choices. On Mondays from 2:30 to 3:15, and on Tuesday through Friday afternoons from 1:00 to 4:00, students in grades K-8 have some flexibility in their schedules. (Our single preschool student goes home at lunchtime.) Students are required to have a certain amount of Music, Art, PE, and Performance classes. However, time is also scheduled in for them to participate in extra PE sessions and extra Creative Arts, which includes Music, Art, Dance, Drama, and MakerSpace. Students have input into what those classes will be, or they may choose to work on an individual project. Their choices this year have included golf, tennis, cooking, piano/voice/instrumental ensembles, ballroom dancing, robotics, and art techniques. We also have a parent who comes in to teach Beginning Spanish to those students who are interested, and our *bahasa* Indonesia teacher offers a class in Indonesian children's games for the younger students. A community member comes to work on choreography with the students in preparation

for a performance. Every Saturday morning, the school is open for either Music, Sports, or MakerSpace. Students have the option of attending and of working on a personal or group project during those times. They may also work on something that ties into an inquiry from another class. For example, grade 1 and 2 students were interested in the effects of colliding objects, so in MakerSpace they built courses such as ramps from different materials to discover what would happen. Students of all ages also built wind, string and percussion instruments out of plastic and metal tubes, old guitar strings, milk cartons, wood and other assorted items.

Although most teachers who initially come to MZS do not have PYP experience, they are all experienced international teachers. They strive to ensure that students at MZS have a solid foundation of international-mindedness; the understanding and acceptance of a variety of cultures. All students are well-traveled, and many have bicultural families. International-mindedness is a foundation stone of the PYP. All UOIs are looked at from a personal, local, and global viewpoint, and the students themselves learn to consider a variety of perspectives.

Students learn that the world is not just black and white. One example of this is a fifth grader who was interested in the issue of gay marriage. Six years of experience with this student had taught the faculty that her interests lie in the realm of human rights. This student identifies as a Muslim, but she also felt that anyone who wanted to get married should be able to. She looked at the question from different viewpoints, personally, politically, locally and internationally. The questions she wrestled with were, “Does that mean I’m not a Muslim because I believe gay people should be able to get married?,” “Are Muslims (or people of any faith) who agree with the ban on gay marriage not good

people? What about people I love who don't agree with me?" These are big questions for anyone to try to resolve.

This is one reason the PYP values parents and community members as stakeholders in the school. This student was able to work through these questions through conversations at school and at home, as well as through research. She learned that resolution does not mean that all questions have been answered. Her teacher phrased the process this way, "You get to know the students and can facilitate where they go. They dive into something that's hard for them to figure out, but so personally meaningful and relevant and contextual to them" (Lia).

Our location and Freeport offer some very unique benefits to our students. We have the expertise of highly regarded experts and scientists who are available to talk to and work with our students. Freeport has a team of experts on mosquitos on site due to the high prevalence of mosquito-borne illnesses; they are considered to be the best in their field. Dr. Michael Bangs has lived and studied here for several decades and has taken our students into the lab to mix genetic material from mosquitos. Dr. Clyde Leys, the head geologist for Freeport, has taken students to the core shed where they store every core sample ever taken from the mountain, and he explained what geologists look at to determine if drilling is viable and worthwhile. Students have made coffee from beans, learned about how to market it, and have been inside the above-ground and the underground mine, the mill, and the de-watering plant. They have seen guard dog exhibitions and learned the basics about training animals. At the environmental center, students learn about tailings and what the company does to minimize the impact. They also learn about the impact on the environment of the illegal panners using mercury to

refine gold. The company and the school have connections with local tribes who come to the school to demonstrate and teach their traditions such as weaving, drumming, carving, and dancing. The human resources here are rich in knowledge and willing to share with students.

A first for MZS this year is allowing students to develop their lines of inquiry rather than having them be teacher-developed. In the past, the units were developed and planned out, including the lines of inquiry, prior to introducing them to the students. This led to a more structured form of inquiry than what we are now moving toward at MZS. The goal is to support students in their progress towards having increased agency in their learning.

Moving the development of the lines of inquiry to include student input is a change that all teachers commented on as being a challenge as well as a strength. In the younger grades, teachers provide more support in the development of the lines, as the students begin learning how to do it. In Early Years, the teacher will still develop the lines, but will converse with the students about them. In grade one, developing them is introduced to students. In grades two and above they gradually take on more ownership of the lines of inquiry. A group may develop their own, or an older student may decide for themselves the lines they will follow. The lines of inquiry relate to the central idea, the outcomes, and the concepts that are being studied. They were developed based on questions the students asked when the class was unpacking the central idea. For example, Table 6 is an outline of the unit “How We Organize Ourselves”.

Transdisciplinary Theme	How We Organize Ourselves: An inquiry into the interconnectedness of human-made systems and communities; their structure and function of organization, societal decision-
-------------------------	---

	making; economic activities and their impact on humankind and the environment.
Central Idea	Societal systems and organizations influence our world.
Key Concepts	Function, Connection, Responsibility
Lines of Inquiry	Grade 1/2: People live in groups instead of individually. Schools impact people’s lives. Leadership and service are important. Grade 4: Different cultures influence us. Monarchies, dictatorships, and democracies are different. We are all citizens. (What is citizenship?)
Learning Outcomes (Social Studies)	AERO Standard 5: Students will understand social systems and structures and how these influence individuals. AERO Standard 6: Students will understand why societies create and adopt systems of governance and how they address human needs, rights, responsibilities, and citizenship.

Table 6: Outline for a UOI: How We Organize Ourselves

The new POI appears to be a positive change. As of this writing, students are beginning their fifth unit of inquiry. Teachers observed that the UOIs provide a lot of flexibility that allows for broad connections throughout the curriculum. Strong connections are being made in Personal, Social, Health, and Physical Education (PSHPE) between the learner profile and Second Step, a program that addresses the social-emotional welfare of students. PSHPE is also directly addressing healthy living habits and working together. As our student body is so small, we do not have traditional team sports such as soccer, baseball, and basketball. Students do learn many of the skills, but little opportunity exists to put a team together. Specific activities are designed to give students the “team” experience.

In the future, the central idea of each unit will remain the same every year but as described in Table 6, the concepts and focus of the unit will be different. The units are not actually repeated because the lines of inquiry will change as the students grow and their interests change. “I think the approach to planning where lines of inquiry, renewed each unit based on what the kids’ interests are, is crucial because that, maybe more so than any other component of it [the UOI], lends itself to a new, vibrant, more personalized delivery of their interests” (Daniel).

A strength at MZS-KK is that teachers work to expand inquiry into all areas of teaching and learning. Some of the examples of inquiry through the curriculum are:

- Math - students work cooperatively to determine ways of solving questions and real life problems
- *Bahasa* Indonesia - Students develop stories about problem-solving, such as crossing a lake filled with crocodiles, in the Indonesian language
- PE - feeling the effect that running has on their bodies and learning how to manage the effects
- Creative Arts - investigating, creating, or re-creating a type of music or art that they are fond of
- Humanities - investigating the causes and effects of cultural migration (the specific migration or related issue to be determined by the students)

All units include time for reflection throughout the units, not just at the end. As Lia (2018) said, “We need to let students have think time, flail time, if we really want them to be reflective about their learning.”

Challenges.

It's easy to look at our demographics and think it's easy to teach here, but it's not really what people think it is. We do have more flexibility, but it comes with a tremendous amount of challenge. (Lia)

The challenges of working in a small, remote school are myriad. One of the first challenges is finding qualified people who will come here. A demand exists in the international school marketplace for PYP teachers, and it has been the experience of non-PYP teachers that many schools that would otherwise be a good fit, will not hire teachers who do not have this experience (Daniel). Often the teachers who come to Papua do not have PYP experience but wish to acquire it. One of the MZS PYP coordinators told me it takes about three years for a teacher to really understand the PYP and to use it effectively (Emily, 2012). If MZS hires three teachers each year between the two sites, that means that at any given time, as much as half of the teaching staff could be in their first three years of teaching the PYP.

The short terms of previous administrators at MZS have affected the coherency of the PYP in the school. Each administrator has come in with his or her idea of what the school and the PYP should look like, and made changes, sometimes extreme, that need time and consistency to evolve and become solid (Keith and William). Since becoming a PYP school, that time has not been granted. Each time a new administrator has come, the POI has been redone, in some cases more than once. A teacher who was trained at another school was told by a PYP trainer that no school should ever try to develop all of the units of the POI in one year, yet that has been done at MZS several times. Another teacher went so far as to say, "Some would question whether PYP is the best fit for this

school. The process and protocols have been changed again and again, rather than revising and growing. That makes it difficult.”

The current POI alleviates some of the problems specialist teachers face by specifying that all grade levels will be working on the same units at the same time, with the same central idea. This is new for MZS, as previously each grade level’s teachers chose the order of the units, and every unit at every grade level had a different central idea. Although specialists don’t usually connect with every unit of inquiry, it was conceivable that they could be working on more than one at a time, in addition to the stand-alone units for their own discipline.

One criteria has remained constant; the school in the highlands and the school in the lowlands should be consistent with each other. The two MZS schools are authorized by the PYP as one school, two campuses. This is significant because population-wise, the schools are very different, with fourteen students in the lowlands and approximately seventy students in the highlands. Because of this diversity, the class groupings are very different. MZS-TPRA has very few classes of combined grade levels, and those vary each year, while MZS-KK has the PYP classes organized into two groups: Early Years (Pre-K and K) and Elementary (1-4). The reality is, as one teacher remarked, “the two schools feel so apart - things are so different, not much collaboration. It shouldn’t be any different than if there were two classes in a school building” (William).

Regarding collaboration, the Program Standards and Practices of the IB requires the following:

1. The programme of inquiry and all corresponding unit planners are the product of sustained collaborative work involving all the appropriate staff.

2. Collaborative planning and reflection takes place regularly and systematically.
3. Collaborative planning and reflection ensures that all teachers have an overview of students' learning experiences.

Teachers at MZS-KK are united in the desire to have more planning time with colleagues teaching the same units on the TPRA campus. This is a logistical challenge because of the distance between campuses and because of the limited number of staff. Regular meetings used to be held between the grade level teachers at each campus, as well as between the specialists. The purpose of these meetings was to give teachers the opportunity to work collaboratively, to help each other with the planning of the UOIs and disciplinary studies. The variation in class demographics impacts the effectiveness of these planning meetings, because where MZS-KK has one classroom (elementary), MZS-TPRA has three. Likewise with the Early Years program; MZS-KK has one class and MZS-TPRA has two. Currently, the elementary teachers are not meeting across the campuses.

The Visual Art teachers met together with the PYP coordinator on a weekly basis, and the music teacher in TPRA also met with her. My positions as vice-principal and temporary math teacher made it difficult to schedule meetings with my music counterpart in TPRA, but we met sporadically, as time allowed. In the 2018-2019 school year, the visual arts and music teachers on both campuses were working to become a single Creative Arts team. This has proven to be a difficult step to take, as teachers are having to re-create the way we do everything, from curriculum to reporting. This year, the Creative Arts team adopted the British Columbia Arts curriculum as our curriculum because it aligns with PYP requirements and treats the Creative Arts as a holistic area of learning,

allowing effective integration across disciplines, while still valuing the skills necessary in the learning of Music, Dance, Drama, and Art.

Planned meetings are held twice a year on professional development days between classroom teachers and specialists between campuses, usually via Google Hangout, in an attempt to include all teachers in planning UOIs. Specialists and classroom teachers at each site often meet informally or as needed to finalize plans or to reflect. However, additional cross-campus (between KK and TPRA schools) UOI planning meetings occur when the specialist has the students. Because of this, the perspective of the specialist teachers is that they do not really have much input into the planning of the UOIs, as that is mostly done in meetings they do not attend. They are left trying to find good connections on their own, which don't always align as well as they could with what is happening in the classroom. As one specialist teacher put it, "We need more check-ins, more opportunity for discussions that maybe are not so structured. The one school, two campuses is a real challenge. Timetables are off and different people have different roles and responsibilities. I think more planning would help grow those authentic connections [for students in the units]." Classroom teachers report little to no interaction with specialists with planning a unit, but they do believe specialists are supporting the unit in their classes.

Along with the desire for more planning time, teachers also note the need to cover various roles as being a unique challenge of working in a small school, e.g. fewer teachers to cover duties, field trips, extra-curricular activities, or anything else that may arise. The lack of substitute teachers requires teachers to be flexible in timetabling and to be ready to adapt in the case of a colleague's absence.

Teachers who have taught in larger schools observed that this is one of the negatives of being in a small school - not enough people are present to make everything run smoothly (Joshua, Daniel, Mary). The small number of teachers affects the school, as does the small number of students. “It’s difficult to do an inquiry/exhibition (referring to the final PYP exhibition in grade 5) with just a few students. There is a huge collaborative piece missing. I think the teachers and kids do a great job, but when you have more people, you have more ideas. Class size is one of our biggest challenges” (Lia).

Teachers at MZS agree that being such a small school can be a double-edged sword. While it makes individualized learning a bit easier, group dialogue and brainstorming can be difficult because often the entire class is a small group. With fewer students, fewer ideas and thoughts are being churned and discussed. One reason our elementary students were combined into one classroom was so there would be more energy and ideas during discussion times. Students of all elementary grades are working on the same central idea

Teachers at MZS cite inherent differences between PYP and non-PYP schools as one of the major challenges of working at MZS. The challenge of not having a support team at their grade level makes the first year teaching at MZS very difficult. These differences include learning the nomenclature - the PYP has many abbreviations that are unique to the program. In his first year here, Daniel (2018) noted “There are new templates and a lot of terminology to learn with PYP. Contextually it’s coming into a place where everyone speaks a common language and you’re just learning it.”

Learning to use the prescribed PYP planners can be a time-consuming and frustrating process. One teacher said, “Developing a planner is one of the hardest things I’ve had to do here. It feels rushed.” Another questioned, “If the planner is so difficult to fill out, is it what it needs to be?” The enhanced PYP will include changes to the planner, but those have not yet been introduced at MZS. Regarding planning, a more experienced PYP teacher observed that “many teachers new to the PYP look at each element of the PYP as if it is a new subject that must be taught rather than looking at them as a means to teach through, or experiences to build around (Keith).”

At MZS, specialist information is separated from the main planner and from each other’s planners. Each specialist has an addendum document, where their information is entered. This is a concern for them; several specialist teachers mentioned this. One very experienced teacher articulated it this way, “I don’t like the way specialists are split out of the main planner - it separates everything” (William). Another specialist said, “It’s unlikely that classroom teachers or other specialists are going to go to three or four other documents to track what is being done in a unit. While the addendum is an easier planner to fill out, I believe it is counter to the concept of transdisciplinary teaching (Keith).”

The remoteness of the schools contributes to the creation of an insular culture. Teachers in general feel they do not have enough contact with colleagues from other schools; their entire PYP experience is what is offered onsite or online. Because of the constant influx of teachers with no PYP experience and the lack of professional development available, the PYP coordinator must “put all the pieces together” (Keith).

The IBO offers many week-long and weekend courses and workshops throughout the year that teachers in metropolitan areas are able to participate in. Teachers who

learned the PYP at other schools often speak of attending these workshops, as well as having a workshop at their own schools. This is a problem that every administrator has tried to work through, but is a logistical challenge, as teachers cannot leave just for a weekend due to the complexities of travel, and missing class days is discouraged because of the lack of substitute teachers and the disruption to classes. Teachers may also apply for school funding to take professional development courses on their breaks.

Another challenge due to the location of the school is ordering supplies. Within Indonesia, no supply companies carry materials that MZS is accustomed to having, such as construction paper and bulletin board paper. Discipline-specific items such as reading texts, Orff instruments, and many art supplies are hard to come by and must usually be ordered from outside the country, making them very expensive due to shipping and customs charges. Other supplies that are available in Indonesia, but not locally, include microphones, acrylic paints, and writing paper for students. Teachers must locate what they need, submit the request, and wait for the company buyers to negotiate the best price. It can take as long as 18 months to receive some orders. This makes it difficult to prepare for inquiry-based learning, because often we don't know what materials will be needed until students choose their lines of inquiry.

PYP-specific challenges for all teachers are the elements of agency and action. Action was mentioned by every teacher and the PYP coordinator as being the most difficult part of the PYP. The PYP links agency and action together in this way: "Student-initiated action will be considered a dynamic outcome of agency, and an integral part of the learning process that can arise at any time" (Learner in the Enhanced PYP, p. 5). Action has been a part of the PYP since its inception, while agency is being brought in

with the enhanced PYP. agency is the students' power to have voice, choice, and ownership of their own learning; the ability to influence the way they want to take an inquiry. Teachers expressed some confusion about how to best support student agency.

Action should be an outcome of the learning the students have done, and ideally is student-initiated. Individuals, small groups, classes and whole schools may be a part of action projects. Some examples of demonstrations of action are:

- Participation - contributing as an individual or a group
- Advocacy - action to support social/environmental/political change
- Social justice - relation to rights, equality and equity, social well-being and justice
- Social entrepreneurship - innovative, resourceful and sustainable social change
- Lifestyle choices - e.g. consumption, impact of choices (Learner in the Enhanced PYP, 2017, p. 5)

Several teachers commented that even though action is in some ways a culmination of the learning, that students are the most successful when they are keeping their minds open to possibilities for action throughout the unit. A teacher experienced in classroom PYP observed that action must be thought about even from the planning stages. In the enhanced PYP, less emphasis is placed on the timeframe of an action. In other words, action could happen early in the unit or could still happen long after the unit has been completed.

Transdisciplinary teaching and learning and teaching through inquiry are often both challenges for teachers if they have never taught that way before. It can be difficult to release the control of a unit to the students, and to let them be responsible for their learning. It changes the function of the teacher in the classroom from the "sage on the

stage” or the provider/director of knowledge to that of an enabler, an encourager, and a co-learner. It requires that students grow in the transdisciplinary approaches to learning: Social skills, Research skills, Thinking skills, Communication skills, and Self-Management skills. “It's an ongoing challenge to cross over and define opportunities for those standards to overlap and make those connections for kids, but the value in spending the time is worthwhile” (Daniel).

The other challenge for teachers in transdisciplinary teaching is to allow students to go in directions in which the teacher is not knowledgeable. This is one of the situations in which having multiple teachers/experts/resources for students to access is helpful. Multiple human resources for students help students to see connections between and around different ideas and areas of study.

Some of these challenges are unique to MZS, for example, location challenges. Others are the challenges of teachers learning a new way of being in the classroom, for example, allowing and encouraging student agency. Still others are logistical, like professional development for teachers. However, as one teacher said, “We’re all still a bit disconnected, but are taking steps in the right direction” (Joshua). One of the steps that improved teacher understanding in the 2018-2019 school year was the appointment of a Curriculum and Learning Specialist at the MZS-KK campus. Teachers met periodically with her to work on planning and to address any curriculum or PYP questions. This was an improvement because the PYP coordinator was based on the Tembagapura campus and was only in KK occasionally.

Teacher Perspectives on Transdisciplinary Teaching and Learning. One of the most difficult aspects of the PYP is the concept of transdisciplinary teaching and

learning, although transdisciplinarity is a fundamental tenet of the program. The PYP was designed based on the work of Ernest Boyer (IBO, 2012a) and more than twenty years later, transdisciplinarity is still articulated in PYP documents as a foundational principle. However, an experienced PYP teacher noted that "a lot of schools and teachers think they are transdisciplinary, but they are not. It's something of a buzzword; they are not authentic, not understanding what it is" (Joshua).

Before going further, I would like to note that a danger exists in assigning a hierarchy to disciplinarity. In chapter three, I looked at Gardner's statement, "disciplines exist for a reason and are our windows onto the world" (in Wiggins, 2001). Nicolescu (1994) says "there are no experts on transdisciplinarity, but rather researchers animated by an attitude of transdisciplinarity and are simultaneously experts in their own field." Transdisciplinarity is not the magic bullet of education; it is one way of teaching and learning, but it does not stand by itself, nor is it practical in every instance.

One of my research questions is "How do educators understand the concept of transdisciplinarity?" My purpose in asking this is to attempt to determine how educators define transdisciplinary education and if, or how, transdisciplinary learning is reflected in their teaching practice. The teachers at MZS were able to articulate their general understanding of it, but all acknowledged that transdisciplinarity is a difficult concept to express. Beyond their explanation, I also asked teachers for examples of transdisciplinarity in order to glean more information about what they consider to be transdisciplinary teaching and learning.

The chart below briefly summarizes and reviews three common types of disciplinarity: multidisciplinary, interdisciplinarity and transdisciplinarity:

MULTIDISCIPLINARITY	INTERDISCIPLINARITY	TRANSDISCIPLINARITY
Disciplines are separate from each other	There may be collaborative planning and teaching	Collaborative planning and teaching
Topics may be taught concurrently in more than one discipline, but they are taught as they relate to each specific discipline	Common concepts and skills	Common concepts and processes
Classes are content-based (separate plates at the dinner table)	May be a crossing of disciplinary boundaries, but disciplines are still identifiable (a stew - chunky)	Disciplines are indistinguishable (a cream soup)
Subject-based skills	Methods and/or content from one field may be used to solve a problem in another field	Students' authentic questions, interests, and concerns guide the inquiry
Result is knowledge about the discipline	Transfer of knowledge between disciplines	Involves real-world problems and interests of the student; leads to understanding of the world

Table 7: Three types of disciplinary¹¹

The International Baccalaureate, the parent organization of the PYP, defines transdisciplinarity as “concerning that which is at once between the disciplines, across the different disciplines, and beyond all disciplines” (Nicolescu (2014, p. 187). The importance of student voice is emphasized because the experiences, interpretations, and contexts of the student is what makes up the “beyond” in Nicolescu’s definition (Montuori, 2012). In the IB document, “Learning and Teaching (2018),” the IB writers state:

Transdisciplinarity transgresses subjects. It begins and ends with a problem, an issue or a theme. Students’ interests and questions form the heart of transdisciplinary learning. It is a curriculum-organizing approach where human commonalities rise to the top without regard for subject boundaries. Subjects become an instrument/tool/resource to explore a theme, problem or concept in depth. The result is a different or new organizing framework (IBO, 2018, p. 2).¹²

¹¹ (Choi & Pak, 2006; Drake, Savage, Reid, Bernard, & Beres, 2015; IBO, 2018; Nicolescu, 2014)

¹² The IB writers reference Beane, 1997 and Klein, 2006.

The Programme Standards and Practices (IBO, 2018) mention transdisciplinarity in the following guidelines:

- The school implements a schedule that provides for the development of the required number of transdisciplinary units of inquiry. (0201-03-0111)
- The school allocates adequate resources to support collaborative planning amongst subject specialists and classroom teachers for transdisciplinary learning. (0201-05-0111)
- The school designs a programme of inquiry that consists of six units of inquiry - one for each transdisciplinary theme—at each year or grade level, with the exception of students who are 3-6 years where the requirement is at least four units at each year or grade level. (0401-01-0511)
- The school demonstrates a commitment to transdisciplinary learning by ensuring that the programme of inquiry is collaboratively designed, planned and facilitated between the classroom teacher and specialist teachers to deliver the subjects included in each unit of inquiry. (0401-02-0112)

The structure of the PYP includes the overarching transdisciplinary themes that are taught every year. Also as part of the organizing material, the PYP framework provides the approaches to learning (ATLs), formerly known as the transdisciplinary skills. (see Table 3 for these themes and skills).

Of the eight teachers at MZS at the time of this study, three had PYP experience prior to coming to the school. Two of these three teachers had the same PYP coordinator at their previous school, and she is now at MZS. Of the remaining five teachers, two

teachers have been at MZS more than seven years and have experienced four different PYP coordinators, but only in the context of MZS. Three teachers had no PYP experience. One teacher at MZS had experience of the PYP at two other schools under different PYP coordinators. This is significant because the lack of a variety of experience in the school can affect the implementation of the program and the understanding of transdisciplinarity. Most teachers complete the PYP certification courses online, then continue to learn from the PYP coordinator, supported by other teachers. A shortage of teachers experienced in PYP can lead to misunderstandings and misinterpretations.

To begin to gain a general understanding of what teachers at MZS think about transdisciplinarity, I offered a thirty-five question survey to teachers, administrators, the Curriculum Specialist and PYP Coordinator, requesting general information about their teaching background, experience with and perceptions of the PYP, and understanding of transdisciplinary education. All ten responded to the survey. All but one of the respondents had more than ten years of teaching experience. In the survey, I posed the question, "Please describe what transdisciplinary education means to you." Respondents were given the opportunity to answer in their own words, without a space limit. Six answers contained the idea of connecting or interlinking different subjects, three answers focused on growth in one subject, three answers referenced real-life issues or problems, two answers specifically discussed a larger concept or big picture transcending the subjects, and one mentioned collaboration.

In the survey, I offered two scenarios. The first is as follows: "You are teaching the multiplication tables to your students. You find a wonderful song that helps them memorize the facts. What are the students learning?" This was a multiple choice answer,

with the choices being Music, Math, or Music and Math. A majority of teachers, both classroom and specialist, answered, “Music and Math”. Administrators and the Curriculum specialists answered “Math”. Those who answered simply—“Math” noted that students are not working on music skills or concepts, but rather using music as a tool to teach math. As one respondent said, “If you focus on singing skills and extend their learning in this area as they learn the lyrics involving math, I guess they could be learning music but the most probable thing is that they are using a learning strategy to learn root content. Nothing to do with musical development” (Mary).

The second scenario was a bit different: “The students are reading books they enjoy. To encourage further understanding, you give them a script and have them act it out. They do a wonderful job and when assessed, demonstrated that they comprehended nuances in the book. Is this a good transdisciplinary integration with drama?”

This scenario inspired deeper thought on the part of the interviewee. The responses were almost the same as in the first scenario. Curriculum specialists did not believe this scenario to be a good connection, but teachers thought it was, and this time administrators agreed. The explanations they gave shed some light on the confusion that can occur when discussing transdisciplinary connections. The responses (summarized) create a continuum of understanding of disciplinarity (*fig. 19*). Starting on the far left, comments A and B imply that the purpose of the drama is to deepen understanding of the story. In comment C, the teacher notes that expression of ideas and concepts connects the story to the drama. Comments D and E note that the drama doesn’t have student input, was not collaboratively planned, there were no drama skills expressly taught, concerns were not brought out, and assessment criteria were not noted.

Fogarty (1991) suggested a continuum of disciplinarity with ten different levels, as discussed in chapter three of this dissertation. Those ten levels were organized into to be subsets of the three types of continuum of disciplinarity with ten different levels, as discussed in chapter two of this dissertation. Drake, Savage, et.al (2015) note that “Educators tend to move further and further along the continuum as they become more and more familiar with integrated approaches and what they mean in practice.” Interestingly, that is exactly what happened in the response to the scenario about reading and drama. The teachers least experienced with the PYP made the comments on the left (A and B). Teachers with a few years of experience with the PYP wrote comments C and D, and the PYP coordinator and curriculum advisor were responsible for comments D and E.

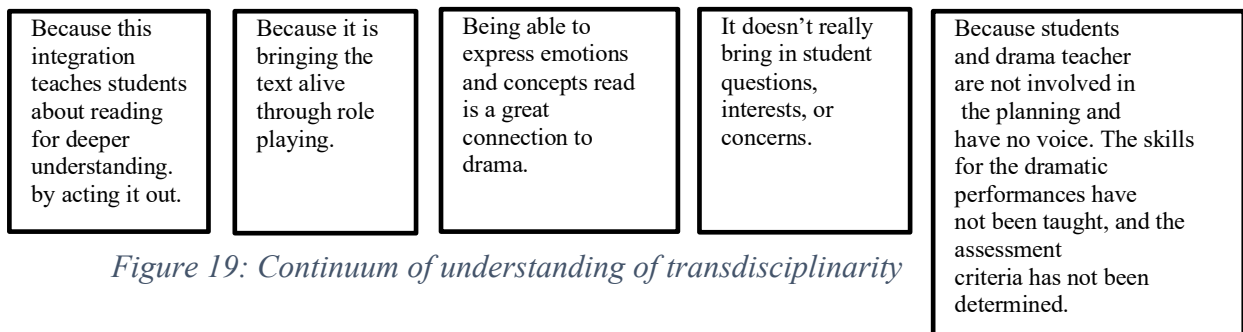


Figure 19: Continuum of understanding of transdisciplinarity

In interviews, educators were able to expand on their thinking regarding transdisciplinary learning. Everyone talked about “connecting” as a part of the program. A classroom teacher mentioned, “As much as possible, we want to make connections across all of the different subjects and on all of the different levels” (Mary) . Two participants specifically talked about transdisciplinarity connecting learning to real-life: “taking the walls down between subjects because everything is interlinked and it is just teaching where it’s all part of the students’ daily life” (William) , and “making

connections to as many real-life applications in the different subjects...how the same laws cross contexts” (Mary).

The multidisciplinary idea of connecting through content seems to be easier than connecting through an idea or concept, which is more difficult. An experienced PYP educator stated that “the biggest challenge is making conceptual connections in a transdisciplinary manner...connections cannot be forced just to comply with the framework” (Mary). In the PYP context, it is not expected that every discipline integrate with every unit. Integrations need to be authentic and natural in order for them to connect to real-world situations.

In my role as music teacher, I have had a number of conversations with the Physical Education teacher about connections between our disciplines and between our disciplines and other disciplines in the school. We often make connections through concepts or the learner profile. Both of our disciplines develop skills such as confidence, planning ahead, improvising, and ongoing evaluative skills. For instance, a basketball player must always have an awareness of what is happening around him and must be able to make a quick judgment and respond to an ever-changing situation. Likewise, with musicians when improvising or performing. These are skills that transfer naturally to many real-life situations unrelated to either sports or music, for example, driving a car. A good driver must always be aware and able to adjust quickly to a changing situation.

An example of transdisciplinarity offered by two participants during interviews is that of a unit focused on human migration outlined in Table 8.

Transdisciplinary Theme	Where We Are in Place and Time: An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between the interconnectedness of individuals and civilizations, from local and global perspectives.
Central Idea	Human migration has a cause and effect.
Key Concepts	Causation, Change, Perspective
Related Concepts	Adaptation, consequence, impact, subjectivity, prejudice
Lines of Inquiry	Factors that determine why people migrate The effect of human migration What makes migration successful.
Transdisciplinary Skills (Now called ATLs)	Research skills: formulating questions, planning, collecting data, recording data, interpreting data, presenting research findings. Communication Skills: listening, speaking, reading, writing, viewing, presenting, non-verbal communication.
Learner Profile	Open-Minded, Risk-Taker, Reflective
Attitudes	Commitment, Empathy, Tolerance
Summative Assessment task	Students will have an opportunity to create a migrant character. From that perspective they will create a diary, letter, movie, etc. showing the overall journey. They should include feelings, effects on their family and communities, location, culture, events along the way, and what made it successful or not. Students should also include PUSH and PULL factors (reasons).
Culture/Music	What do people take with them when they migrate? Does it change? If so, how and why?(culture) What might be familiar? Unfamiliar? (Consider effect on different generations in a family)

Table 8: Human migration unit outline

This unit was a collaboration between the grade 4/5 classroom teacher and the music teacher. The specific points of connection for music were the concepts of change, perspective and adaptation. During this unit, students were not limited to studying music only during the designated music class time. Both teachers worked with students during unit of inquiry time on whatever they were doing that day. This allowed students more time for exploration and inquiry. The class utilized different venues in the school for the unit. They spent time in their home classroom, the music room, and the library,

depending on what they were doing. Sometimes they were spread out, working independently.

The classroom teacher initiated the unit through the National Geographic film, “Global Patterns of Human Migration”. Students brainstormed connections between the video and the central idea of the unit. They reflected on their own travels and their family’s movements and looked at current events. At the time this unit was done, the Syrian refugee crisis was in the news. Together with their classroom teacher and the music teacher, students discussed what refugees would take with them and what would be left behind. Previous discussions in music about the cultural effects of migration (e.g. slave trade, Irish diaspora) informed some of their comments. This unit of inquiry lasted six weeks, and their final aim was to make a presentation based on the experiences of a character they created, developed and researched.

After research on migrations, diasporas, and other reasons for movement, students began developing the life experiences of the character they were each creating. Among others, their choices included a Vietnamese girl moving to England in the mid-1970s after the war in Vietnam, a Hmong girl from Lao moving to Australia in the same time period, a boy moving from England to the New World in the early 1600s, a Syrian boy whose family was trying to get to Germany in 2015, and a Jewish boy fleeing the Nazis in 1940 Germany.

Part of their research involved investigating the cultural changes that their character would experience as they migrated, such as different music, art, and food, as well as different attitudes and potentials for misunderstandings. Where possible, students collected information through interviews. For example, the student developing the

Vietnamese girl character interviewed the music teacher in Tembagapura, who is Vietnamese, and obtained some information from her both about Vietnam and about Vietnamese music in that time period.

Students were able to follow their interests in developing their character. The feelings, actions, and likes and dislikes of their characters were their own creation, based on their understanding and their own reactions to what they were learning.

Specific skills were learned in the context of this unit. Apart from the transdisciplinary skills mentioned in the outline, students learned to use a variety of technology tools for research as well as presentation. Math was explored through the use of charts and graphs and reading comprehension skills were developed through reading nonfiction literature for information. Map skills were developed through looking at the paths of migration. All students had a musical component in their presentation, which ranged from using culturally appropriate background music in videos they created about their characters' experiences to discussion of musical instruments unique to a culture to a discussion about the differences between the popular music of their homeland and the popular music of their new country.

In reflecting on the success of students being able to connect the central idea to the transdisciplinary theme, the classroom teacher wrote the following: "One of the biggest pieces of evidence for this was that the kids were making connections across time periods. My students made connections across WWII (Holocaust) fleeing, Vietnam (Boat people to Malaysia, England, Australia), and to the current day Syrian refugee crisis. They were able to see that this is a pattern that continues to happen, and although the specifics are different, the major reasons for migration stay the same" (Lia).

Every discipline has skills that need to be learned and that do not always authentically transfer into a UOI. The PYP requires that those skills still be documented on a planner; they are called stand-alone units. A stand-alone unit does not have the time limitations of a POI unit; it can run concurrently with other units and can even be year-long. For example, in music, five stand-alone units are taught each year: Rhythm, Listening and Analyzing, Singing, Playing Instruments, and Creating (composing, improvising, and arranging). These units come in and out of emphasis throughout the year. Some learning goals of these stand-alone units fit into some UOIs, others do not. Music operates as part of a Creative Arts team, so during our planning sessions, we plan collaborations on those parts of our stand-alone units that naturally fit with the units of inquiry. Sometimes connections occur with units in another subject, for example, the idea of form is an easily understood interdisciplinary connection between art and dance.

What Teachers Value.

What do I value? The philosophy. The whole reason behind everything is inquiry. (William)

In the initial survey, I asked all respondents, “Which aspects of the PYP, as evidenced in your school, do you feel are valuable?” Most respondents selected all of the possible answers: learner profiles, teaching conceptually, approaches to learning, agency, action, exhibition, holistic assessment, holistic assessment, units of inquiry, community of learners, PYP Planner, transdisciplinary teaching and learning, Planning meetings. Two respondents selected just a few of the possible responses. Both of them included holistic assessment, units of inquiry, community of learners, holistic assessment and transdisciplinary teaching and learning in their list of valuable components.

In the interviews, participants were more willing to consider aspects of the PYP that have more meaning or importance to them. While they were at different places in their understanding and ability to implement transdisciplinary teaching and learning, they all believe this type of education is a key to developing independent thinkers and lifelong learners.

Regarding connecting and exploring ideas with students, one teacher noted, “Creating lines of inquiry with students is a new approach for me, but an exciting one. It keeps the element of boredom at bay” (Daniel). Lia, an experienced PYP teacher, expanded on this idea, “We used to plan explicitly from the beginning... [but we are] moving to those units that are a bit more passion-based, project-based now. We want to hear what the students want to learn about. We don’t put it in the planner in the early stages, it comes later and we make those personal, local or global connections. We try to take the kids to the three different levels in every single unit.” The PYP emphasizes the importance of looking at personal, local and global connections as a part of developing international-mindedness in students.

Several teachers placed some emphasis on the approaches to learning (ATLs) (see table 3 on p. 151), previously called transdisciplinary skills in the PYP framework. The ATLs are viewed as “deliberate strategies, skills and attitudes that permeate the IB teaching and learning environments” (IBO website).

Although all of the ATLs are usually used in every UOI, each UOI focuses on two or three of them. These approaches help students learn to design their own learning. As one teacher commented, “We need to continue to explicitly develop those

transdisciplinary skills in the lower grades, specifically self-management. Even if they don't have those skills, they still need to start taking the reins on their learning" (Lia).

Two teachers specifically mentioned the learner profile as an aspect of the PYP framework that is valuable to them (*Table 3 on p. 48*). The learner profile articulates the goals the IB has for students in the program. The learner profile is also the IB connection to the social-emotional side of learning. The two teachers who mentioned it consider the learner profile to be an organic, flowing part of the PYP, something built into the program.

Overall, teachers expressed a sense of optimism on the MZS-KK campus regarding changes such as the new Programme of Inquiry and the combined classroom format that the school has put in place this year. As one teacher commented,

"One of the things I have done is to really open the opportunity up for students to design how they are going to present their end of unit information. Some examples are students being moviemakers and submitting a film at a film festival, slam poets who were presenting at a poetry festival, a public service announcement for school. Students knew what the standards were that they were expected to hit. Students at first felt that it was a huge thing for them to pick their topic, connect it, then decide how to present. But after doing it, they commented on how motivated they were because they got to pick and design the whole thing" (Lia).

Case 2: Yayasan Pendidikan Jayawijaya (YPJ)



Figure 20: Yayasan Pendidikan Jayawijaya

Yayasan Pendidikan Jayawijaya (YPJ), the National school for the children of Indonesian employees, was founded in Tembagapura in 1973. “*Yayasan*” is a legal designation that essentially translates to “foundation”. “*Pendidikan*” means “education,” and “Jayawijaya” is the name of the mountain range in which the company and school are located. In Indonesia, schools that are not public must be supported by a foundation. Freeport provides financial support for the *Yayasan*, which is the governing body for the school.

YPJ has always followed the Indonesian national curriculum in order to serve Indonesian and Papuan families in the Freeport community. The government does not allow national children to attend the expatriate school, as MZS provides neither religion classes¹³ nor preparatory classes for the Indonesian National Exam, which occurs after year six and year nine. Students’ families were from many of the other islands of

¹³ All Indonesian schools include religion classes for one or more of the following approved national religions: Islam, Buddhism, Hindu, Confucianism, Christianity, and Catholicism.

Indonesia as well as Papua, and from 1970 – 1996, the school was partnered with a Christian school in Jakarta (Supriyono, 2015).

When YPJ was founded in Tembagapura, the school consisted of Kindergarten through grade nine. In 1996, an *asram* (dormitory) was built to accommodate some students from villages in the highlands. The Freeport mining area incorporates land that was traditionally the home of the *tujuh suku* (seven tribes), which include the *Amungme*, *Kamoro*, *Damal*, *Dani*, *Nduga*, *Mee* and *Moni*. Children without a familial connection to Freeport are selected from these tribes to attend YPJ by a selection board comprised of nine men from the *tujuh suku*. The number of students selected varies each year based on the number of students that graduated from grade nine the previous year. In 2019, fifty-two boys and eight girls lived at *Tomawin*, the dormitory. Lack of gender equality is a very large issue among many tribes, and girls are often sold or given away to be married at a young age, resulting in fewer Papuan girls attending school (Ibu Angela; John Cutts, 2019).

YPJ opened two new campuses in KK when the town was built. The main campus was built for students in grades one to nine, and the Early Years campus, known as *Pendidikan Anak Usia Dini* (PAUD), was built across the street for children ages two and one-half through Kindergarten. The school continued to offer the National Curriculum. By 2010, the KK school was overwhelmed with students, and new buildings were built to accommodate them. For the school years 2010 through 2012, students at YPJ were split into two groups, with each group attending school only half a day, due to space limitations. In 2019, 897 students attend YPJ-KK, and the school now operates on a common school schedule.

Like the students at YPJ-TPRA, the students at YPJ-KK are all Indonesian and may or may not be from the island of Papua. In 2019, the school is comprised of 30 to 35% Papuan students, 29% Papuan staff, and 29% Papuan leadership. Of these, some are *tujuh suku*, some are from Biak or Jayapura, and some are from other parts of Papua. Of those who are not Papuan, students from many of the islands of Indonesia represent a large amount of ethnic diversity. At YPJ, students and staff are from a wide range of cultural backgrounds, ethnicities, religions, and languages, creating a very diverse campus. According to one informant, “An admirable trait of Indonesians per se is that they are respectful of the subcultures and that is a strength. Greater diversity in your system provides greater strength and resilience for the perturbations that come” (Pak Michael).

As is traditional in Indonesian schools, students wear uniforms to school. They have some choice in what they wear. Girls can wear pants or skirts, and they may wear a hijab if they choose. Students wear a different uniform for each day of the week. Boy Scouts (*Pramuka*) are an important part of the school and all children (boys and girls) in grades four through six participate and wear their Scout uniform one day a week.

Panca sila, or *pancasila* (five principles), is an important concept to understand when discussing any Indonesian organization. *Pancasila* is considered the foundation of the government as well as the structure of interactions between individuals and between organizations. All organizations within Indonesia are required to support and operate using *pancasila*. Sitorus (2016) summed up *pancasila* in this way: “*Pancasila* is actually the core of social responsibility...it reflects the nation’s identity which does not chase

after material value in the life purpose. *Pancasila* accommodates the values and society's living arrangement in behavior" (p.8).

Table 9 explains the five principles of *pancasila*:

PRINCIPLE	SUMMARY	EXPLANATION
Ketuhanan Maha Esa	Devotion to God	Affirms that the Indonesian people believe that God does exist and that the pursuit of sacred values will lead to a better life after death. This is embodied in the 1945 Constitution: "The state shall be based on belief in the One and Only God."
Kemanusiaan yang adil dan berahad	Human society which is just and characterized by mutual respect	Human beings are to be treated with due regard to their dignity as God's creatures. There should be no physical or spiritual oppression of human beings.
Persatuan Indonesia	The unity of Indonesia	Love for the country of Indonesia – the need to foster unity and integrity of all the people of Indonesia, regardless of ethnicity. Social differences in daily life should never affect national unity and integrity.
Kerakyatan yang dipimpin oleh hikmat kebijaksanaan dalam bermusyawararan/perwakilan	Democracy guided by the inner wisdom in the unanimity arising out of deliberations amongst representatives	This implies that democratic right must always be exercised with a deep sense of responsibility to God Almighty according to one's own belief, with respect for humanitarian values of dignity and integrity, and with a view to preserving and strengthening national unity and the pursuit of social justice.
Keadilan sosial bagi seluruh rakyat Indonesia	Social justice for the whole of the people of Indonesia	The equitable spread of welfare to the entire population in a dynamic and progressive way. All of the country's natural resources and national potentials should be used for the greatest possible good and happiness of the people. People should work according to their abilities and fields of activity. Protection should prevent willful treatment by the strong and ensure the rules of justice.

Table 9: The Five Principles of Pancasila

Sitorus (2016) summed up *pancasila* in this way: "*Pancasila* is actually the core of social responsibility...it reflects the nation's identity which does not chase after material value in the life purpose. *Pancasila* accommodates the values and society's living arrangement in behavior" (p.8).

In July of 2012, an expatriate with extensive education experience in Indonesia, and fluency in *bahasa* Indonesia, began working with the interim leaders of YPJ. After

initial counter-parting (working with an Indonesian administrator), PTFI management appointed the expatriate as head of the *Yayasan*. This was a controversial appointment given local politics, a foreigner appointed to a previously held Indonesian position, and some YPJ staff and parents were concerned that the school would be internationalized. The expatriate was charged with leading the school through a PYP authorization and creating a school equivalent to high quality schools in Jakarta. Over thirty schools in Indonesia were PYP accredited schools at that time, the closest of which was on West Nusa Tenggara, over twenty-five hundred miles away. All of those schools used English to deliver curriculum. PYP accreditation would make YPJ the only accredited PYP school whose language of instruction was *bahasa* Indonesia.

Upon appointment of the expatriate head, the school began its work toward PYP accreditation. At the time, the Indonesian national curriculum of 2006 was in place, and the subjects were “isolated islands that needed to be connected conceptually” (Beardmore, 2016, p. 2). The national curriculum dictated discrete subjects and emphasized content coverage with specific allotments of time for each subject. Students were taught through direct instruction, memorization, coverage without application or depth, and “drill and kill” techniques considered by educators to be essential pedagogy to prepare students for the national testing that occurs at the end of grade 6 and grade 9 (Beardmore, 2017; Pak Michael).

In addition to the superintendent, in 2012 there were six other expatriate staff - technical experts (TEs) - the title given by the Indonesian government to those who impart knowledge and training to Indonesian counterparts. Their job was to share their knowledge of teaching and learning with the Indonesian teachers, many of whom had

alternate (non-education) university credentials. Of the six TEs, all had experience with inquiry and four had experience as PYP teachers. The six TEs served as learning coaches in the development of the PYP at YPJ.

The key to the success of YPJ was the establishment of key structures and systems and growing the capacities of staff through school-based training. To address parental concerns and ensure that stakeholder needs were being met, new collaborative leadership structures were put in place at all campuses, and a senior leadership team was created to integrate information and strategies. The teams reviewed established policies and philosophy, and revised policies on teaching and learning congruent with the tenets of the PYP and contemporary educational research. The expatriate team established collective commitments on teaching and learning and communicated policies to respective stakeholders. An “aspirational inquiry-eased process of strategic planning was conducted to reinvigorate and create a YPJ vision, mission, and values with a broad, overarching, whole school focus. This was to encompass a whole perspective because we had more than just the elementary. The guiding statements were framed utilizing language from the PYP” (Pak Michael).

The TEs built strong relational leadership models for the Principals and divisional leadership of the YPJ schools in order to support growth of understanding about the PYP. A professional growth approach to teacher evaluation was put in place and separated from any type of performance-based component. Expertise was built from within the organization, then coupled with external consultants coming to the school to train teachers through classroom-based modelling and reflective conversation. Extensive

parent education was offered, led by the national administrators and supported by technical experts.

YPJ-KK reached their goal of becoming a PYP school more than three years earlier than originally planned. In November of 2015, the school became the first school to offer the IB-PYP in *bahasa* Indonesia (Indonesian language). As one prior administrator put it, “This proud achievement is certainly a success of all YPJ stakeholders, including teachers, admin teams, YPJ management, PTFI management and parents and other supporting parties. For this reason, it is appropriate for us to express our deepest gratitude, especially to the entire YPJ academic community and stakeholders in general” (Maryanto, 2015, p. 2)

Philosophy and Curriculum at YPJ.

“I think one of the things that eventually sold parents was when we were able to establish a much broader comprehensive reporting system and then got into workshares and student-led conferences... parents’ perception of the PYP changed when they saw the reflective, metacognitive, and passionate response of students.” (Pak Michael)

The mission, vision, and values of YPJ were developed through meetings with representatives of all stakeholders. At the time of this study, the vision and mission statements were:

- Vision: Sekolah kebanggaan yang inovatif dan progresif.
(A school proud to be innovative and progressive.)
- Mission: Menumbuhkembangkan generasi muda yang cerdas, berkarakter, beriman, unggul dan mampu bersaing menghadapi tantangan masa kini.
(To develop smart young people of character, faith, excellence and able to compete with the challenges of today.)

The curriculum being used at the time of this study is the National Curriculum, known as *Kurikulum dua ribu tujuh belas* (Curriculum 2013), or sometimes just “2013”. The following chart shows the foundational elements of YPJ and how they are aligned with the PYP and with Kurikulum 2013.

YPJ	PYP	KURIKULUM 2013
<p>Core Values: Honesty, Responsibility, Empathy, Open-mindedness, Integrity</p> <p>Learner Outcomes:</p> <ul style="list-style-type: none"> • Faith in the Almighty God and noble character • Honest, disciplined, happy to work together in everyday life, in accordance with the values of the <i>Pancasila</i> • Logical thinking, critical, creative and innovative • International mindedness • Continuing to the next level of education (SMP) 	<p>The Learner Profile: Inquirers, knowledgeable, Thinkers, Communicators, Principled, Open-Minded, Caring, Risk-Takers, Balanced, Reflective</p>	<ul style="list-style-type: none"> • Balance between spiritual and social attitudes, curiosity, creativity, cooperation with intellectual and psychomotor abilities • Community as a learning resource and a place to apply what is learned in school. • Develop attitudes, skills, knowledge and apply them in school and community • Allow time to develop attitudes, knowledge and skills
<p>Learning Process</p> <ul style="list-style-type: none"> • Planning is carried out in accordance with the 2013 Curriculum, carried out collaboratively by the entire classroom teacher team • The learning process in educational units is held interactively, inspiring, fun, challenging, motivating students to actively participate, and providing sufficient space for initiatives, creativity, and independence in accordance with the talents, interests and physical and psychological development of students. In addition, in the learning process educators provide exemplary • Inquiry and UOI Advisors • Assessment: knowledge, attitudes and skills in the process. (formative, summative, self-assessment, rubric, anecdotal, project,) 	<p>The Approaches to Learning:</p> <p>Thinking Skills</p> <ul style="list-style-type: none"> • Critical thinking • Creative thinking • Transfer Skills • Reflection/Metacognitive <p>Social Skills</p> <ul style="list-style-type: none"> • Positive interpersonal relationships and collaboration • Social-Emotional intelligence <p>Communication Skills</p> <ul style="list-style-type: none"> • Exchanging information • Literacy • ICT <p>Self-Management Skills</p> <ul style="list-style-type: none"> • Organization skills • States of mind <p>Research Skills</p> <ul style="list-style-type: none"> • Information-literacy • Media-literacy • Ethical use of media/information 	<p>Learning Process</p> <ul style="list-style-type: none"> • Student-centered learning • Interactive teaching and learning • Networked learning • Active learning • group/team based learning • Multimedia-based learning tools • Individualized learning • Critical learning • Collaborative teaching
<p>Indonesian <i>Kurikulum</i> 2013</p>	<p>Knowledge: Transdisciplinary Themes: Who We Are</p>	<p>Conceptual Learning that happens through inquiry.</p>

YPJ	PYP	KURIKULUM 2013
	Where We Are in Place and Time How We Express Ourselves How the World Works How We Organize Ourselves Sharing the Planet	

Table 10: Foundational guidelines for YPJ

In Indonesian schools religion is an obligatory subject because religion is part of *pancasila*, and a significant part of Indonesian culture. Six religions are nationally accepted in Indonesia: Islam, Hindu, Buddhist, Confucianism, Christian, and Catholic. Muslim, Christian, Catholic, and Hindu students attend YPJ, so classes for each of those religions are provided. The Hindu teacher is not full-time on campus as only a few students are Hindu. He travels in from Timika each week to teach one class.

Bahasa Inggris (English language) is not a part of the national curriculum, but is offered at YPJ because English is perceived as a useful language for students. Several teachers commented that English is relevant for students because more resources for students are in English, more technology is in English, and some of the students may go to Australia or the United States for university. Another teacher observed that some of the students are likely to work for Freeport when they have finished school, and that English will be beneficial to them in their career. Because English is not in the national curriculum, a curriculum from Australia was adopted and developed for English instruction at YPJ. The music and art curriculums are based on the PYP scope and sequence for the Arts.

Regarding the use of the national curriculum with the PYP framework, one teacher put it this way, “Personally, I feel comfortable...comfortable because of the basic competency that we have in the national curriculum. We apply it by using strategies from PYP, so the students get the feeling that it [learning] is not always book-oriented. It is

student-oriented. They have many resources to explore and ways to express their learning so I can say that it's nice. It's good to have the national curriculum with help from the strategies of the PYP (Joko).”

YPJ must file a report annually with the Indonesian education authority. They require YPJ to show a quantitative assessment grade for the students. However, internally, in the *Sekolah Dasar* (SD, translating to Basic School or Elementary), a standards-based developmental continuum is used. This continuum report gives parents a more descriptive picture of how their students are progressing at school.

The Programme of Inquiry.

Teachers have to create a learning engagement that is interesting or challenging ...they must find the things that make the unit relevant to the students so they will ask questions. For example, they look at schools in other places and ask, ‘Why don't they have to wear uniforms? Why do they have to walk to school?’ Teachers can respond with questions, ‘Why do you think?’ They do more research to find out. (Ibu Dewi)

One of the challenges of implementing the PYP program at YPJ is the vocabulary. The PYP is nomenclature-heavy, with many acronyms. Some of the English words do not translate easily to Indonesian and must be socialized within the staff to gain understanding; “agency” is one of those words. As of this writing (2019), YPJ has not started using the enhanced PYP, so the concept of student agency has not yet been introduced to the teachers. The reduced use of summative assessments is another change that has not been instituted at YPJ but was changed in the enhanced PYP. The enhanced PYP is moving away from a pre-planned summative assessment in order to allow for more individualization of the lines of inquiry. At YPJ, summative assessments are still decided on early in the planning of a unit. Another note on nomenclature is also relevant

here: educators at YPJ use the term “indicators” more often than “outcomes,” although both words refer to the same thing. For the purpose of this section, I will use the words interchangeably.

The structure of the YPJ POI and the units of inquiry (UOIs) are definitive, yet flexible, in that teachers, with reflection and consensus, can make changes to them. The POI document is very detailed, including all of the indicators for each subject area that will be covered. For this reason, I have included only the section that covers Grade 1 (Appendix F). A quick look reveals quite easily how each subject connects to the units.

With over eight hundred students, YPJ (including PAUD) has no multiple grade classrooms. Grades one through five have three classes at each grade level, grade six has four classes. Each class has between nineteen and twenty-six students.

The POI at YPJ has been in use since 2013, when the new curriculum was introduced. Teachers are able to use the same UOIs every year because they do not have multi-grade classrooms. Still, changes are made to UOIs each year as teachers meet and discuss things that worked and things that did not work. Every teacher in a grade level, including specialists, works from the same UOI, but students may work in small interest groups rather than only in a large class group.

A few weeks before a UOI begins, the homeroom teachers meet with the PYP coordinator, the specialist teachers who will be connecting with the unit, and the literacy coordinator. The unit will likely have been carried forward from the previous year, as will the transdisciplinary theme, the central idea, the lines of inquiry, the key concepts, attitudes, and transdisciplinary skills, as well as the reflections teachers wrote the last time the unit was used. Prior to the meeting, leaders expect that everyone involved review

the unit. Teachers may then request to change something about the UOI, to update it or somehow make it more relevant, as necessary. The entire unit is laid out on a large piece of butcher paper (Fig. 20). Indicators are mapped out under the themes, then courses are planned. Teachers may use the same UOI outline that they had the previous year, yet change the approach, the summative experience, or the activities, so units rarely look exactly the same each year. The different specialists then add in their connections. The PYP coordinator at YPJ considers this first meeting to be very important.

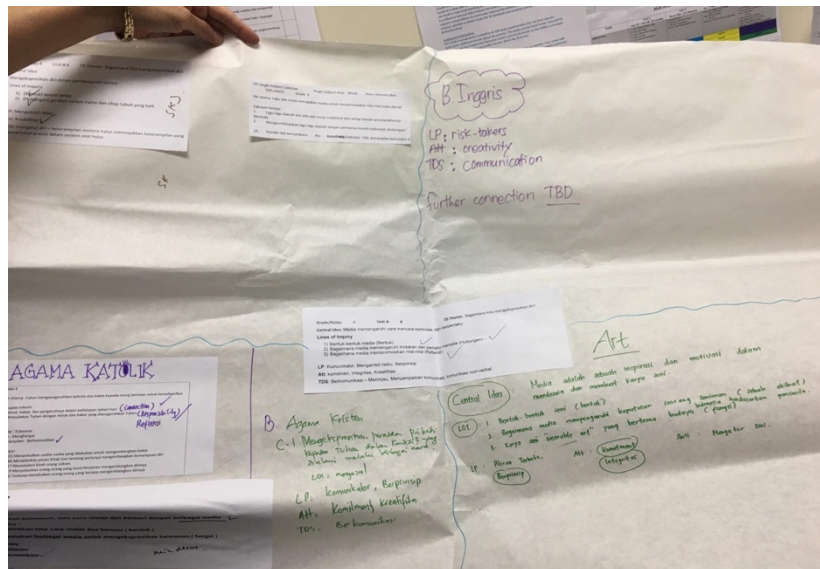


Figure 21: Worksheet for Planning

Consistent with the PYP, specialists at YPJ are not required to connect to every unit because they have a responsibility for their own indicators. Specialist classes include music, art, *bahasa Inggris* (English Language), Physical Education, Catholicism, Islam, Christianity, and Hinduism. Teachers may choose to connect to UOIs through one or more of the lines of inquiry or through the key concepts. They also have the option to add a line of inquiry for their classes, which allows them to make the inquiry more relevant to their curriculum and their students.

The specialist teachers fill out a simplified planner which is an addendum to the school's regular PYP planner. After each connecting specialist teacher has filled in their planner, the PYP coordinator copies the information onto the PYP planner so that everything is in one place. The goal of doing this is to keep the working planner manageable for each individual teacher.

At YPJ, specialists use their regularly scheduled class time for UOI activities, rather than sharing UOI or classroom time. Other than initial planning, little interaction occurs between the classroom and specialist teachers regarding the unit. After the initial planning, classroom teachers, the PYP coordinator, the literacy coordinator, and an assistant principal meet together weekly to monitor progress of the unit and for literacy planning. Math planning is done in a separate meeting, as it often does not connect to the UOI. The PYP coordinator meets weekly with each specialist teacher. These meetings help to coordinate what is happening in the various subject areas and offer support to teachers when necessary.

Not all specialists at YPJ do stand-alone units (units outside of the POI). When they do, the stand-alone unit must still be under the same transdisciplinary theme as the POI unit, although the unit may have its own central idea and other related elements. If no stand-alone unit exists, the classwork in the specialist teacher's discipline is connected to the UOI. Stand-alone units ensure that the specialist areas can cover their own indicators.

Teacher Perspectives of the PYP at YPJ. Many of the teachers and administrators at YPJ in 2019 were at the school through the accreditation period, so have perspectives of the school both pre-PYP and post-accreditation. The staff members that I

interviewed were positive about the changes they have seen since the school became a PYP school. They commented on the development of students in the areas of learning and in social-emotional growth, and on their own growth as educators.

Strengths.

Creativity from the children is pure. They are not always guided by a teacher telling students, ‘You need to do this ...no, no, no, like this...’The students can also tell the teacher what is good and what is not. (Pak Jonah)

All teachers I interviewed at YPJ commented positively on the support they have had for learning the PYP philosophy, as well as the ongoing support they receive in implementing the PYP in their classrooms. With integration, there can be a “degree of tension for the specialists - how does this relate to me?” (Pak Michael). However, specialists at YPJ appreciate the support they receive from the PYP coordinator and the literacy coordinator. The consistency and structure of the meetings has helped in the success of integrations. As one specialist put it, “Ibu Dewi gave me an idea, I suggested ideas, then we combined all of the ideas and discussed how we could turn them into material for the students. I collaborate with the classroom teachers to determine how I can support them and support other specialist teachers. It [the unit] is much stronger because it [the planning] is collaborative” (Pak Henri).

Administrators and teachers at YPJ feel that they are well and consistently supported in their day-to-day teaching through weekly planning time and professional development. They would like to have more interaction with other PYP teachers, and to be able to have more external PYP professional development in the Indonesian language.

Using the PYP planner can be difficult, but one teacher cited it as a strength. He felt that the planner makes all of the connections between the different elements clear.

While the inquiry can be open, each UOI and project also has a structure so that it “cannot go wild; the project can be clearly done” (Pak Nando).

YPJ teachers and administrators reported that although parents had concerns about the PYP in the beginning, they are very supportive now, with few exceptions. Parents often comment on the confidence their children are developing. Some have expressed surprise that their previously overly-shy child can talk about their learning and even do well in performances, including drama and music. Classroom teachers regularly ask students to discuss their units with their parents and to talk with them about their projects. Students then bring their ideas from home to school to discuss with their teacher and class.

Teachers at YPJ reported that they are learning how to get students to relate to their learning through questioning. They encourage students to ask their own questions that are related to their lives and to demonstrate curiosity about new things.

All teachers I interviewed mentioned the strength of *pancasila* and the values of the national curriculum as naturally expressed in the PYP through the learner profile and attitudes. They believe this expression of values to be a real strength of the bond between the national curriculum and the PYP. The *pancasila* principles allow connections to be made across disciplines and through the key concepts. For example, when grade 3 did the unit “Who We Are,” one of their lines of inquiry was about self-esteem. This line of inquiry connected across the disciplines to involve taking care of themselves (PE), pride in expressing themselves (Art, Music), and honoring what was given to them by God (all religion classes). Their action for the unit was to create a story in comic book form about these things and to share it with other students.

Interviewees agreed that “the PYP honors the forward change in the 2013 [national] curriculum” (Pak Michael). Another interviewee noted that “Our curriculum relieves the school from having to determine indicators corresponding with the school basic competencies. We are able to map indicators [from the national curriculum] corresponding to the units there. Our curriculum also requires skills and attitudes to be considered” (Ibu Dewi).

YPJ teachers and administrators also felt that the structure of the PYP aids in assessment of students. The PYP emphasizes backwards design, where assessments are designed prior to the unit. The summative and formative assessments are chosen early in the planning process. Two teachers noted that they feel confident in assessment because students have learned how to continually assess their own work. One teacher commented that prior to using backwards design, he was concerned about scoring students because he did not want to discourage students from enjoying being creative. With backwards design, this same teacher observed that students successfully assess themselves, they evaluate their confidence, their expression, and can discuss elements of their work with others, including parents, teachers, and peers. They have learned to continually assess their work and see their own growth.

The YPJ community has access to the same financial resources as the MZS community. Similar experiences are available to the students, for example, students go on multiple field trips every year to learn about the company and the environment and people around them. Teachers invite local people to teach students music and dance, and to support extra-curricular activities such as the Papuan dance group. Examples of other extra-curricular opportunities the students have are sports such as swimming, badminton,

and basketball, photography, Scouts, a foreign language club, science club, and math club. Students in grades five and eight also have the option to participate in an Extended Studies trip to another part of Indonesia to learn more about their country.

In the PYP, at the end of grade five, students are required to participate in an in-depth project known as the PYP exhibition. The purpose of the exhibition is for students to:

work collaboratively to conduct an in-depth inquiry into real life issues or problems. Students collectively synthesize all of the essential elements of the PYP in ways that can be shared with the whole school community. The exhibition represents a unique and significant opportunity for students to exhibit the attributes of the IB learner profile developed throughout their engagement with the PYP...and for schools and students to celebrate the transition of learners to the next phase of their education. (IBO, 2009)

Grade five students create the exhibition from one of the six transdisciplinary themes. The large class sizes at YPJ offer students the opportunity to form quite a few inquiry groups with a broad variety of interests. Each group finds a mentor, who could be a teacher, a parent, or a community member. The mentor's task is to support the student group in their project. The task of the group is to create their unit, including the central idea, lines of inquiry, transdisciplinary skills, key concepts, and action, and determine a way or ways to present their material. The goal is for them to draw on their PYP experience to showcase what they are learning in and through the units. The YPJ exhibition in May of 2019 included displays of shadow play, choreography, poetry, student-composed music, posters, videos, skits, dancing, art, demonstrations, explanations, and other creative ways of showing their knowledge. The transdisciplinary theme they used was "How We Express Ourselves" and the central idea was "By investigating the most demanding problems we can take action towards a solution and

deliver through various forms of media and expression.” Each group of students determined how they would show their understanding of the central idea and lines of inquiry. Their understanding of the learner profiles (knowledgeable, principled, risk-taker, balanced, thinker, caring, inquirer, communicator, reflective, and open-minded) was demonstrated in the process of doing their exhibition project as well as in the presentation. The motivation of the students along with the support of the YPJ community in helping students to share their learning through exhibition and throughout the year is a positive indication of the strength of the PYP philosophy on the YPJ campus.

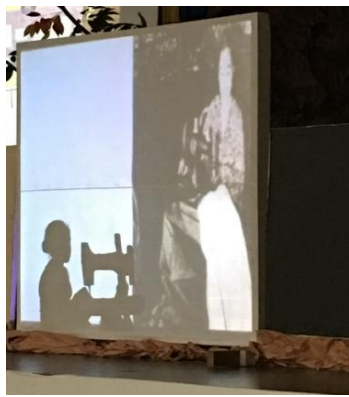


Figure 22: Pictures from YPJ Exhibition 2019

Challenges. When YPJ began the journey towards PYP accreditation, parents and teachers voiced concerns about the Ujian Nasional (national exams) that are given in grades 6 and 9. These are quite important because the cumulative grade of the two exams is the determining factor for a student's next educational step. The PYP is officially designed to extend through grade five, however in schools where grade six is still in elementary school, schools have the option of continuing the PYP through that grade. At YPJ grade six students continue the PYP through the first semester of grade six; the second semester shifts to a focus on the upcoming exams. Overall, YPJ students have done well on the exams, and many continue on to schools in other parts of the country.

A wide number of ethnicities, religions, and cultures are represented among the students of YPJ, even though all are Indonesian. Teachers and administrators reported that occasionally cultural issues arise between Papuan and non-Papuan students, but they are few and short-lived. YPJ is committed to “changing the environment from traditional methods of addressing behavior ... looking at building up the more restorative model of justice, if you like, or moving away from an industrial relations model of sanctions without management or understanding of students” (Pak Michael). This approach, along with the character education inherent in the PYP, has helped to lessen tensions as well as model positive, appropriate behaviors for students to learn and use.

Academically, some of the Papuan students struggle because they were enrolled in school at a late age and are placed in classrooms appropriate for their age level, not necessarily their ability level. It can happen that a student coming to school for the first time may be placed into the fourth, fifth, or sixth grade. Some of these students do not know their age and speak only their home language, that of their tribe. Those who do

speaking Indonesian will not have learned to read and write the language. This presents a challenge for the teacher and for other students in the classroom.

Some socioeconomic issues exist at the school. For various reasons, although all families have at least one member employed by Freeport, some children still live in poverty situations. School staff try to ensure that all students who need one receive a lunch at school, and if a uniform is needed, the school helps with that need also.

Initially, YPJ teachers who were employed at the time of transition to the PYP were concerned about the changes that the PYP would bring. For example, the religion teachers did not believe that their subjects could be contained in the PYP framework. A contingent of teachers were sent to Bogor Raya School, an accredited PYP school in Bogor, Java, Indonesia. Those teachers returned with very positive perceptions about what the PYP can offer students. Through continuous growth opportunities and the commitment of the staff, the school is now inclusive of all special subject areas in the PYP units.

Like other remote schools, professional development is a challenge for YPJ. Thirty-three other schools in Indonesia are PYP-accredited, however the closest one is on the island of West Nusa Tenggara, over 2500 miles away. An additional issue for YPJ, however, is one of language. Many of the teachers only speak Indonesian, so for PD to be useful, it must be offered in that language.

As previously mentioned, the vocabulary of the PYP, and the IB in general, is a challenge for anyone who uses it. Not all the words translate into Indonesian, and terms must be socialized with the faculty.

Several teachers reported that in some cases, collaboration among teachers in YPJ is not strong. While all respondents believe that most staff work well collaboratively and have embraced the PYP ideology of being open-minded, global citizens and lifelong learners, some reported that a few teachers remain conservative in their view of teaching and collaboration. The school continues to provide professional development and support to help all staff understand and use the PYP model.

Like students at other schools, students at YPJ have limited time with each of their specialist teachers. Music is offered once a week for forty minutes, and art is offered twice a week for forty minutes each session. *Bahasa* English meets for a double block (80 minutes) once a week. Teachers must incorporate their collaborations as well as their subject area outcomes into that time. An additional challenge for specialist classes are the approximately fifteen national holidays that fall during the school year. It can happen that a teacher who sees students only once a week may not see a class for several weeks.

Similar to MZS, the PYP concept of “action” is considered by most respondents at YPJ to be the most difficult part of the PYP and action continues to be a concern for them. Overall, teachers feel that action has to be a big event. One respondent said, “Sometimes we are confused for this action placement...not all of us can make an action” (Ibu Alida). The PYP coordinator encourages teachers and students to talk about what they may have done at home or outside of the classroom that would be considered action. She helps teachers to understand that action does not have to be a large project.

Teacher Perspectives on Transdisciplinary Teaching and Learning.

It’s more than a subject. It will enrich you – not traditional, beyond the learning in the classroom; many subjects together enrich and support. (Ibu Dewi)

One of the research questions for this study was “How do educators understand the concept of transdisciplinarity?” My goal in this chapter is not to question whether the educators’ definitions of transdisciplinarity match external definitions, but rather to ascertain how transdisciplinary teaching and learning is defined and put into practice at YPJ. A challenge for me as the researcher in this section was to ensure I had a good understanding of the meanings of the participants at YPJ, as the surveys and interviews were primarily conducted in *bahasa* Indonesia, the Indonesian language. To this end, I translated data myself, which allowed me to consider non-verbal responses, then also had a professional translator in Jakarta translate the same data. The merging of these translations provided me with the information I needed. The one thing I could not entirely account for in the translation was the understanding of PYP-specific vocabulary. I assumed that the understanding of PYP vocabulary among YPJ teachers and administrators was good because they had been using the PYP for a minimum of three years. But that may not have been the case for all staff. When national staff at YPJ began their accreditation process in 2012, none had previous PYP experience, so the introduction of the framework to YPJ was an ambitious undertaking. In 2019, four teachers on staff had PYP experience at a school prior to coming to YPJ.

Several of the YPJ staff I interviewed exhibited a sense that transdisciplinary learning is the PYP and the PYP is transdisciplinary learning. This is evidenced through the following comments: “Transdisciplinary education teaches through themed units given an environment around issues that become of concern so that students get experience studying with the inquiry method” (Pak Joko); “A curriculum program based on six basic themes: “Who We Are, Where We Are, How We Organize Ourselves,

Sharing the Planet, How The World Works, and How We Express Ourselves as a unit that supports itself. Transdisciplinary education is also used in every subject.

Transdisciplinary education is the framework we use together with our curriculum” (Pak Henri).

In the online survey, the same two scenarios were offered to YPJ teachers as were offered to MZS teachers. The first one, “You are teaching the multiplication tables to your students. You find a wonderful song that helps them memorize the facts. What are the students learning?” This was a multiple choice answer, with the choices being music, math, or music and math. All respondents except one felt that both math and music were being taught and learned. The sole outlier felt that only music was being learned. Another respondent noted that singing helped the students remember their multiplication tables. Actually, in this example, music is being used to help teach math; no musical learning is happening.

The second scenario was as follows: “The students are reading books they enjoy. To encourage further understanding, you give them a script and have them act it out. They do a wonderful job and when assessed, demonstrated that they comprehended nuances in the book. Is this a good transdisciplinary integration with drama?” All teachers responded that yes, this was a good integration. One respondent commented, “Yes, because they use communication skills to understand the reading” (Pak Henri). This teacher used the transdisciplinary skill of communication to support his positive answer. Another respondent noted, “It was integrated with other subjects, e.g. music or drama for deeper understanding of the concept learned within the unit. Also, the activity was engaging for students as well as relevant to their learning” (Ibu Kemala). Still

another respondent introduced student choice into her response, “students do the inquiry first when they want to understand the book and when they want to present, they choose drama as one way to retell this and show they integrate language skills with the ability to make a small play” (Ibu Dewi).

During the interviews, participants expanded on their thoughts about transdisciplinary teaching and learning. Only one interviewee commented on the difficulty of understanding what transdisciplinary education is: “the complexity of what [transdisciplinary teaching and learning] means is hard to understand. Is it also integration? I think there is definitely authentic integration in the literacy components being developed in the units of inquiry” (Pak Michael).

An administrator explained transdisciplinary education using the PYP transdisciplinary themes and emphasized lifelong learning:

Transdisciplinary education provides a lot of experience for oneself and for students, with varied educational strategies, broader knowledge because it is not focused on one learning resource. Students and teachers complement each other, because this education is unlimited for life... providing opportunities for all children to show who they are, where they come from, how to express themselves, how the world works, and how they can organize themselves and share the planet. (Ibu Tika).

Another example of using PYP verbiage to illustrate transdisciplinary education was written by an experienced PYP teacher who described it as, “an approach of learning through knowledge, concepts, skills, attitudes, and action which is integrated into the curriculum of each subject where everyone is involved in a collaborative manner to create authentic, engaging, challenging, and relevant learning” (Ibu Indah).

One respondent focused on the advantages of transdisciplinary education relative to child development and creativity, noting, “Transdisciplinary education is very good for

students in accordance with their current development, the children’s development. It is very relative - they make their own ideas into something tangible, what they think into something visible. It makes children think creatively, when they are making something, they think, ‘Oh, this is it’” (Pak Henri). In further discussion, this respondent also noted that because students work from their own ideas, they are more discerning about their outcomes and better able to self-assess.

Several respondents noted that while it is relatively easy to include language arts material into integrations, mathematics can be a struggle. One teacher specifically noted that many math-specific skills are difficult to include in the UOIs. “In my experience, mathematics is very difficult to integrate. It’s usually a stand-alone. However, in exhibition, all the subjects are integrated” (Ibu Tika).

The following unit outline shows integration of classroom and specialist teachers (Table 11).

Grade	2
Transdisciplinary Theme	How We Organize Ourselves: An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.
Central Idea	Humans have a responsibility to develop and follow their routines in society
Key Concepts	Function, Form, Responsibility
Lines of Inquiry	<ol style="list-style-type: none"> 1. Simple rules in the community (function) 2. Organize yourself in society (form) 3. Rights and responsibilities in society (responsibility)
Transdisciplinary Skills (Now called ATLs)	Self-Management: Organization, Codes of Behavior, Time Management, Informal Choices Social Skills: Accepting Responsibility, Respecting others
Learner Profile	Principled, Reflective
Attitudes	Commitment, Cooperation

Christianity	Through biblical teaching about the discipline and responsibility of Christian children and their influence on themselves and others around them, it is hoped that students adhere to the principles of Bible teaching and are able to reflect on themselves and are committed to carrying out their duties and responsibilities at home, school and society independently and show good self-regulating skills.
Islam	In this unit it is in accordance with the theme in the class, indicated by role play activities about love according to verses 1 and 3 in <i>surah al Faatihah</i> . About rules in everyday life.
Art	Concept connection: Function. How students can arrange themselves before entering the art room and in class activities can implement a system that has been agreed upon and an independent attitude to work with skills that have been learned, from the beginning of drawing to assessing artwork. The final work should reflect the art elements creatively.
<i>Bahasa</i> English	Activities in English language learning for this unit are: identifying safe and unsafe actions in the classroom and safe and unsafe actions at home. This activity is related to the scope of material 1 - "self-management in society" and the scope of material 2 - "rights and responsibilities in society". These activities are designed to develop students' awareness to be independent, collaborative, and committed to being responsible in society.
Music	In this grade 2 unit, children learn about the rules in the music room, including the consequences of each violation agreed upon. Arrangement and grouping of musical instruments and other learning support tools. Children also learn the elements of music. They are committed to self-regulation before performing for other people and respecting others.
PE	Students are able to demonstrate good self-management skills in following each instruction on road variations, running and jumping. Students are able to perform several movements independently, understand their rights and responsibilities in PE learning activities, and are able to reflect on the systems of simple games. simple games.
ACTION	Students considered rules for safety and behavior in various places and created posters about them.

Table 11: Unit Outline - How We Organize Ourselves (YPJ)¹⁴

This UOI, a collaboration unit that included all specialists at YPJ, demonstrates connections that are natural through the elements of the PYP and various disciplines. Specific points of connection in this unit were made primarily through the transdisciplinary skills and manifested through the attitudes. Each key concept was addressed specifically through a line of inquiry. This unit is a good example of how all

¹⁴ translated from *bahasa* Indonesia

the pieces can work together. It also highlights how the principles of *pancasila* relate to the PYP and to learning at YPJ.

Teachers at YPJ took different approaches in explaining their understanding of transdisciplinary education. Transdisciplinarity was acknowledged by all to be a difficult idea to articulate (in any language). Few respondents had a working definition at hand. Most had to think about it and then talk about it to explain their thinking. Pak Joko very concisely summed up his view this way, “[Transdisciplinary education] is multi-source, multi-perspective learning alignment in the goals of both classroom teachers and specialists.”

What Teachers Value.

I still want to learn and learn if there are people who can teach me, I will learn again, because my education is not pure education, so if there is an expat or friend, even when I leave on vacation, I ask my friends out there, we share what good teachers are like. (Pak Jonah)

In answer to the survey question, “Which aspects of the PYP, as evidenced in your school, do you feel are valuable,” four respondents chose all of the possible responses: learner profile, teaching conceptually, transdisciplinary skills, action, exhibition, holistic assessment, international-mindedness, community of learners, units of inquiry, PYP planner, transdisciplinary teaching and learning, and planning meetings. Others chose a selection of the possible responses, but all respondents selected the following: learner profile, transdisciplinary skills, holistic assessments, and international-mindedness.

In the interviews with participants at YPJ, the elements of the PYP that came up in every conversation were collaboration, planning, and values education (learner profile and attitudes). All participants perceived collaboration between teachers, between

students, and between students and teachers to be vital to learning in the PYP framework. One teacher phrased it like this, “The practice of collaboration is an on-going process with everyone involved as lifelong learners that reflects PYP philosophy” (Ibu Tika). Along with collaboration, in that same statement she noted that learning should be lifelong, and later stated that teachers also continue to be learners. The YPJ teachers included professional development and online resources as a part of collaboration.

I get experience from, like when we went to Jakarta and took the exhibition class, I took so many ideas from other schools and applied them to YPJ. I like that because there are ideas from other teachers I can use - we help each other, it’s practical. (Pak Joko)

Several interviewees mentioned using the online resources of the IB-PYP, such as ibo.org, blogs.ibo.org, or twitter.com/pypdunia to network and get ideas from other PYP practitioners. Another teacher noted that “collaboration is not just from within the school, but from within the PYP system, because everyone has good ideas” (Pak Joko). Teachers appreciate knowing that if something in the planner is not working, it can be adapted or changed.

The YPJ staff I interviewed believe the teaching of values is very important and that the PYP values tie in with their national philosophy as well as the national curriculum. The PYP learner profile and attitudes as implemented in the framework of their curriculum allows them to plan the “teaching of character” into their units. It is important for these teachers that students look at their learning through different perspectives. Several respondents noted that “some students do not have good models in their home lives and for them to experience success in life. They need to learn these lessons at school” (Pak Michael).

Individual participants singled out elements of the PYP that they believe are especially important at YPJ. For example, one participant noted that including music and the arts education in the unit planning is useful for students because students learn more about expressing not only the arts, but their learning in all subjects. The arts are also enjoyable for students and help them gain confidence.

According to the teachers and administrators at YPJ, the general process of learning through transdisciplinary units helps students develop the ability to articulate and self-assess their learning. Inquiry keeps the students interested in what they are learning, and the ability to ask their own questions builds their confidence as well as their knowledge. Teachers perceive that students work well independently because they have had a hand in designing their learning plan. The PYP framework works well even for students who need more support throughout their unit, and differentiation for students occurs during assessment.

YPJ tries to follow up with students who have moved on to high schools in other places or have moved to other schools. According to administrators in this study, students who have entered traditional classrooms after their YPJ experience often say things such as, “We have a lot of textbooks to read” and “the teachers don’t really teach us, they just give us books to read.” Some students in some of these cases have reported back to YPJ that they “know how to take charge of their learning; if they want to know more, they know how to find things out for themselves” (Ibu Dewi).

All of the YPJ participants in this study felt that the work that YPJ did to achieve PYP accreditation made them stronger educators and benefitted the students. A long-term teacher commented, “I’ve seen really good results of the PYP in the kids, especially sixth

grade - they've had it [PYP-based instruction] a long time now. There's change, even in the hard kids - good changes" (Ibu Indah). An administrator noted, "Our school changed from a traditional school to a school with international insight; the whole school community changed and understood that the change is positive" (Ibu Tika).

Chapter 6: Reflection

In this chapter I review my original research questions and their relevance to this study. Second, I will discuss the themes that emerged through data generation, what I learned in each thematic category and how themes may relate to both schools. Following the thematic summary, I discuss possible implications of knowledge and understandings gained in this study and, in the last section, consider possible future research.

Overview and Review of Research Questions

This research was done in partial fulfillment of a Ph.D. in Music Education, yet oddly enough, none of my research questions mention music. The relevance of music and the arts to the school curriculum is taken for granted in this study, as is the relevance of language, mathematics, social studies, and other disciplines. My aim in this research was to look at education holistically, with the arts holding their place on a level field with all disciplines studied in school. The curriculum framework under examination in this study, the International Baccalaureate Primary Years Programme (IB-PYP or just PYP), requires an arts program in the schools it accredits. The PYP is a transdisciplinary education framework and in twenty-first century education, information on transdisciplinary teaching and learning should be as relevant to a music teacher as it is to a science teacher.

The two schools in this study are located in a remote area of Papua, Indonesia on the island of New Guinea, and are separate but related schools. They are both supported by the same multinational mining company. One of the schools, Mt. Zaagkam School (MZS) caters to expatriate students from around the world and uses curricula from other countries. The second school, *Yayasan Pendidikan Jayawijaya* (YPJ) uses the Indonesian

Kurikulum Nasional 2013 (national curriculum) and serves Indonesian national students from local areas as well as from other Indonesian islands. Both schools use the PYP as their curricular framework.

My research questions are as follows:

1. How do educators in two remotely located schools understand the concept of transdisciplinarity?
2. How are the elements and aspects of the PYP framework (knowledge, approaches to learning, agency, action, key concepts, lines of inquiry, learner profile, international-mindedness, transdisciplinarity) implemented in each school? Are these elements and aspects affected by or related to the curriculum in each school? If so, how?
3. What outcomes of the PYP do teachers identify with and value (or not value)?
4. Do the elements of the PYP align with the schools' mission and vision statements? Why or why not?

Two connecting ideas underpin these questions: the PYP philosophy, and transdisciplinary teaching and learning. Transdisciplinary teaching and learning exists outside of the PYP but is also a fundamental part of the PYP philosophy.

Transdisciplinary education reaches across, between, and beyond individual disciplines with the intention of making all information accessible to learners so that they may create responses to a question, problem or idea.

It can take time to build an understanding of transdisciplinarity into school culture. The PYP uses the elements of knowledge, approaches to learning, agency, action, key concepts, the learner profile, and lines of inquiry as connecting points between and across disciplines. These elements provide a framework within which the school

curriculum sits. The PYP was originally developed to be a framework for international schools but is now being adopted for use in national schools all over the world. The research questions in this study were designed to provide lenses to examine how the PYP and transdisciplinary education occurs (or not) in two different schools in the same remote location: a school with international curricula and a school with a national curriculum.

Logistics of Place and Time

Both schools in this study are located on the island of New Guinea in the country of Indonesia. Mt. Zaagkam School (MZS) was once advertised as “the most remote international school in the world” (Latham, 2011). If it is not, it is surely one of the top five. At the time of this study, MZS housed fifteen students with parents from six countries in grades P3 (3 year old preschool) through 8, who were served by nine teachers and administrators. *Yayasan Pendidikan Jayawijaya* (YPJ) school, a half-mile away from MZS on the same road, is an Indonesian national school. At the time of this study, YPJ served 897 students from Indonesia in grades P3 through 9, and the number of teachers and administrators was eighty-nine. Both schools are supported by the same American mining company, both are dual-campus schools, and both are PYP accredited. The location, demographics, and history of the schools impacted decisions about learning and teaching in both schools and continue to do so.¹⁵

Because of their remoteness, both schools face challenges in recruiting teachers to come to the schools. Some YPJ teachers are from the local area, but the majority are from

¹⁵ Each of the schools, MZS and YPJ are lowland campuses. They both have another campus in the highlands, in another town run by the mining company.

other regions of Indonesia. Most of the teachers at YPJ expect to spend a number of years there, if not their entire career. With the exception of the *bahasa* Indonesia teacher, MZS teachers are all professional expatriates who anticipate leaving the area when they are finished working at the school. Some MZS teachers are there partly because it is a PYP school, and they either are experienced PYP teachers or wanted to gain PYP experience. Even through times of large staff turnover, the PYP structure is a constant at MZS. At YPJ, the PYP was not a reason for teachers to come to the school. At the time of this study, all but four YPJ teachers had no PYP experience prior to arriving at YPJ. The PYP may not be a reason to come to YPJ, but the PYP structure is also now a constant in the school, and for some teachers and administrators, may be a reason to stay.

A major difference between the schools is class size. At the time of this writing in 2019, the total student count for YPJ was 897, and the total student count for MZS was 15. This disparity in size changes the way the PYP is implemented from one school to the other. At least three classes are at each grade level at YPJ, providing students with opportunities to be a part of large groups as well as a variety of small groups. Students can brainstorm more ideas, more problems, and more solutions. At MZS, the student – teacher ratio is slightly higher than two-to-one, and with only sixteen students at the time of the study, there were two classes with multiple grades in them. Even though the entire elementary (seven students) were in the same classroom, students often ended up working with the same one or two peers. In some ways this limits opportunities for cooperation and collaboration, for example, in reasoning out solutions just a few minds are at work. Socially, the low student number emphasizes the need for cooperation and collaboration because they all must work together, regardless of age. For example, there

were two fourth grade students and zero third grade students. The fourth grade students, by default, did their work together. But there were times when a larger group was needed, and the entire class of first through fourth graders worked together on a project.

Students' educational and social histories are also different between schools. MZS students may have had a series of schools in their history and will possibly have others in their future. They know that they are likely to leave Indonesia for high school and university. YPJ students are all Indonesian citizens, some from Papua and some from other islands. Some students know that they may leave Papua but will probably stay in Indonesia; others know that they will stay in Papua. Some will not continue in school after they leave YPJ in ninth grade. The transitory nature of the students and their families was a consideration of the decision to use the PYP framework, particularly for MZS. Students can leave their school in Papua and go to another PYP school almost anywhere in the world and the framework will be the same. Students are encouraged to be global thinkers and problem-solvers, as well as independent, self-directed learners.

Another consideration for students at both schools is the employment of their parents, which is the reason the schools exist. Livelihoods wax and wane with the fortunes of the mining company. Most families working on the Freeport jobsite have a lifestyle that is better than what they would have had "back home," whether that is another country or another Indonesian island. The opportunity for a better lifestyle is usually the reason that parents of MZS and YPJ students agree to live and work in this remote area. In the event parents are no longer employed with Freeport or one of the contractors, families leave the schools, their homes, and in most cases, the island of Papua. MZS students move on, probably to another country and another culture. Though

YPJ students have not left their home country, most of the students are operating in a culture that is different from that of their parents, as the cultures of the other Indonesian islands is significantly different from that of Papua. Just as most students changed cultures when they arrived at Papua, leaving Papua and YPJ means they will have to assimilate into a different culture. After grade eight at MZS and grade nine at YPJ, students will leave for high school. Almost all MZS students leave Indonesia for a boarding high school. Most YPJ students who are not native Papuan leave the island. The Papuan students may or may not leave the island for high school depending on their family's choices; some will leave the country for high school if they get a scholarship.

The negotiation of cultures, the transitory nature of families, a privileged lifestyle, and the company identity are consistent with descriptors of third culture kids (TCKs) in the literature. Vidal (2000) noted, "Third Culture Kids [are] an example of a people whose experience and cultural identity cannot be understood within the limiting [traditional] frameworks of culture" (p. 16). Pollock and van Reken (2009) observed that "For a TCK this cross-cultural experience occurs during the years when that child's sense of identity, relationships with others, and view of the world are being formed in the most basic ways. While parents may change careers and become former international businesspeople, former missionaries, former military personnel, or former foreign service officers, no one is ever a former third culture kid. TCKs simply move on to being adult third culture kids" (p. 22). The multi-faceted nature of the PYP, with its emphasis on looking at events and problems from local, national, and global perspectives may help students to understand their lives and who they are in the context of the third culture, rather than in a traditional way of "fitting in" only with what is familiar. This is just as

relevant for the national students at YPJ as it is for the international students at MZS, as all students are learning to look beyond what is familiar to themselves. Teachers of students who would be making the transition to boarding school in the next few years commented that it is a strength for their students to be able to look at varied perspectives of an issue.

In fact, the uniqueness of this place—Papua—where we, the students, teachers, and families of MZS and YPJ and the Freeport mines all live, creates a bond between many that seems unaffected by time and distance. Facebook groups, blogs, reunions... these are evidence of the connection that occurs simply because people have spent time on the Freeport jobsite. A common phrase for Freeport community members is “you can’t understand it unless you have lived it.” A commonality between the students of the two schools in this study is that they have the same “different” experience.

Connections to the PYP

The depth of experience educator-respondents had with the PYP impacted their perspectives and understanding of the PYP framework. Participants at both schools, regardless of experience, expressed their desire to learn more about the PYP and transdisciplinary education. An important principle of the PYP philosophy is lifelong learning, and the PYP documents suggest that teachers should model this value. This desire for lifelong learning is evident at both schools and should be considered a strength.

At YPJ, teachers commented on direct connections in the national curriculum that supported the PYP elements of teaching of attitudes (such as appreciation, integrity, and confidence) and the learner profile. The learner profile is a collection of characteristics the IB has identified as being part of international-mindedness. These characteristics are

open-minded, reflective, communicator, thinker, knowledgeable, inquirer, risk-taker, caring, well-balanced, and principled. YPJ educators noted that many of these characteristics are directly related to the principles of *pancasila* that guides the national curriculum, and those teachers with less PYP experience found these connections between the national curriculum and the PYP framework to be very helpful in their collaborations and connections between disciplines in the transdisciplinary units.

As noted above, MZS uses disciplinary curricula adopted from different countries and structures these curricula within the PYP framework. While it may seem that this could lead to inconsistency, the MZS criteria for selection of the curricula are structured enough that multiple curricula all work together within the PYP; interdisciplinary and transdisciplinary connections to occur organically.

Educators at both schools commented on the amount of IB and PYP framework-specific vocabulary involved in the program. A teacher (or student) new to the PYP can be easily confused by the number of terms and acronyms that must be negotiated. Even after a year of using the PYP, one of the teachers commented that he still needs to stop and think about the meanings of terms and acronyms sometimes. Few of the English words have counterparts in *bahasa* Indonesia, making it an even greater challenge for the teachers who only speak that language.

In both schools, while collaboration is highly valued, it is still the norm that the PYP planner—the guiding organizational document for each UOI—is created by the classroom teachers (in a grade level group at YPJ), and then the specialist teachers are invited to contribute from their respective areas. Specialist teachers are rarely a part of planning a unit of inquiry from the beginning. At MZS, this absence of specialists during

planning is often a result of timing. Planning meetings occur by default when students are with specialist teachers. Why specialists were not included in planning sessions at YPJ is less clear. This planning structure, where specialists are absent, is not the stated aim of the IB, which emphasizes collaboration as well as common/shared planning time between and among teachers, but separation does seem to be the norm in both schools. The classroom teachers are traditionally responsible for most of the students' time. In addition they are responsible for the majority of the assessments that are completed. This is one result of school days being scheduled and structured around the teaching of disciplines, which is contrary to the aims of transdisciplinarity and the PYP.

At both schools in this study, it was very difficult for less experienced PYP educators to provide examples of connected learning experiences that did not put the interests of one discipline above another. In some cases the teachers recognized this imbalance but were not sure how to change it; in other cases, this imbalance between disciplines or the failure to achieve transdisciplinarity was not recognized.

Other than the YPJ PYP coordinator, MZS has the more experienced PYP educators, partly because it has been a PYP school longer but also because three of the eight teachers previously worked at other PYP schools. One other teacher has been at MZS for eight years and another teacher has been at MZS three years, both working with the PYP. A strength of MZS is the collaborative relationship between teachers on the KK campus examined in this study. Even though some MZS teachers are inexperienced with the PYP, the staff is close and has enough PYP-experienced teachers to help guide the units. The shared leadership structure of MZS is also useful, as all of the staff on campus

are actively teaching, involved in all of the units, and aware and able to support each other as needed.

Strengths for YPJ include the structure of their meetings and their large student body. The YPJ staff have weekly meetings that include at least three teachers at each grade level plus specialist teachers. The teachers have the advantage of multiple teacher colleagues at each grade level when brainstorming how they will manage the units with their students. The larger groups of teachers and students at YPJ offer more ideas to be shared when planning units of instruction and considering transdisciplinary approaches.

The PYP documentation available at both schools was thorough. At YPJ, the PYP coordinator maintained all of the documents, from the POI to the UOI planners, and added to them as teachers planned and executed the units. The coordinator ensured that the documents were kept up to date and established a consistency between all of the YPJ documentation. At MZS, all teachers maintained the planners, with support from the PYP coordinator when necessary. An advantage of this is that the voice on the planner was that of the person or people using it. The last three sections of the planner are for teacher notes and reflections; having the teachers' reflections is particularly useful if the planner will be used again.

Both schools in this study use a separate school-created addendum for specialist teachers to fill out. This is not an official IB document. Specialist teachers at YPJ like this addendum because it allows them to focus their planning and reflection on their area of teaching. At MZS, some of the teachers feel as though the addendum to the planner divides the planning, therefore dividing what should be a cohesive unit. My observations during this study suggest that the division of the planners leads to a lack of collaborative

effort as often teachers will only reference their own document--classroom teachers view “their” document, and specialist teachers view “their” document, with little crossover.

Some participants in this study seem to have the understanding that “PYP” and “transdisciplinary education” are different names for the same thing. However, transdisciplinary education is not unique to the PYP. Transdisciplinarity is not defined by the framework or themes or concepts, rather the PYP, via the framework, themes, and concepts, helps structure transdisciplinarity into a usable, somewhat consistent form that encourages creativity in thought and transdisciplinarity in action.

A few participants in this study provided responses to survey questions or comments in interviews that indicate some confusion between PYP policies and school policies. For example, “there is no homework in the PYP;” the decision at YPJ not to have homework is a school policy, not a PYP policy.

One of the research questions of this study is: Do the elements of the PYP align with the schools’ mission and vision statements? Why or why not? Table 12 shows the mission and vision statements of the IB and of both schools. The mission and vision statements of MZS were created in 2013, about five years after the school became PYP accredited, so the mission and vision statements of MZS reflect the PYP nature of the school. One teacher noted that there is nothing related to “caring,” which is part of the PYP learner profile, in either the mission or the vision statement. With that exception, MZS teachers felt that the vision and mission statements are accurately reflected in the school’s current drive to emphasize creativity, innovation, and individualized learning, and that this is consistent with the PYP framework. This emphasis on creativity, innovation, and individualized learning is evidenced through the school’s investment in

time and money in the Creative Arts program. Flexible programming is further enhanced by the low student-to-teacher ratio. The reference to a “global society” in MZS’ mission statement is demonstrated in the MZS planning documents and in teacher’s references to supporting students in addressing problems and questions on a local, national, and global levels. Teachers also noted that students commonly look outside of their immediate environment to ask how something works in another place.

YPJ’s mission and vision statements were created as the school was going through the PYP accreditation process. The YPJ mission and vision statements reflect the school’s commitment to the Indonesian principles of *pancasila*, international-mindedness, and respect for all students. The YPJ teachers who were interviewed all spoke of these characteristics in the school, demonstrating that these concepts are a part of ongoing discussions. Activities to build respect and international-mindedness were also evident in the YPJ planning documents.

	VISION	MISSION
IB		The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end the organisation [<i>sic</i>] works with schools, governments and international organisations to develop challenging programmes of international education and rigorous assessment. These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.
MZS	An innovative school and community that exhibits continuous growth in response to current and future developments in education.	Ensure an environment of critical thinking, collaboration, and creativity that empowers all students to achieve their potential as lifelong learners in a global society.
YPJ	A strong innovative and progressive school. We are committed to think globally and to focus on students’ education where all students are included, given challenges, and respected (translated from bahasa	To inspire the young generation with intelligence, character, religiosity; to seek for excellence when encountering competitive challenges in the future. Our mission is a student-centered approach. We aim to develop the capacity of each student, instill the values of global citizenship, have international-mindedness

	Indonesia)	and resilience. These characteristics are developed by showing the values of our school, school learner profiles, and attitudes in all aspects of life. All individuals have beliefs and celebrate diverse religions which are recognized in <i>Pancasila</i> , our foundational philosophical theory. We strive for excellence for every student to experience a broad education where progressive knowledge, skills, and concepts are built in depth, sophisticated and complex; where social skills, collaboration self-management, thinking and communication skills are used with full awareness. We see this as a "learning way" and connect knowledge which is important to be understood to meet today's challenges, and also rapidly changing future challenges (translated from <i>bahasa</i> Indonesia)
--	------------	--

Table 12: Vision - Mission alignment

Impact of Culture

The IB has been accused of being western-centric (Bunnell, 2012; Drake et al., 2015; Van Oord, 2007a). The stated values of the IB, and by extension of the PYP, while thought of as being universal, may not necessarily be universal. The IB is marketed and used in schools around the world. Yet, school personnel must be cautious about what they teach in many countries. An extreme example of inconsistency and reason for caution would be the PYP learner profile attribute of “open-minded.” How is that taught in a country where free speech is not recognized, for example, in China?

In Indonesia, religion is very strong, and yet not all religions are state-sanctioned. Six religions are recognized: Islam, Hindu, Buddhism, Confucianism, Christianity, and Catholicism. Judaism, for example, is not recognized by the Indonesian government, and because of this, the Papuan separatists use the Israeli flag as a symbol of rebellion. Islam is by far the most prominent religion in Indonesia. The provinces of Papua and West Papua were considered Christian for many years, but in the last thirty years, many people from other islands have moved to Papua for various reasons, so the religious landscape is

more diverse. Animistic beliefs still exist in the Papuan villages and mix with the Christian religions that were brought in by missionaries over the last two hundred years.

All national schools in Indonesia teach religion, including the national school (YPJ) in this study. The religion taught in each Indonesian school is one or more of the state-sanctioned religions and is relevant to the children in the school. In many cases, religious values and the values of the PYP align in an authentic way. For example, the foundational principles of *pancasila*, though not a religious statement on the whole, also align with the values of the PYP. Yet when examined more closely, some questions may arise. For example, the first principle is the belief that there is one god, but some of the state sanctioned religions are not “one god” belief systems.

Other principles of *pancasila* encourage open-mindedness, mutual respect, democracy, and social justice. Indonesian *Kurikulum 2013*, the national curriculum used in YPJ, introduced changes to Indonesian schools such as student-centered learning, inquiry, and collaboration, which made *Kurikulum 2013* seem to be a natural fit with the PYP.

The schools in this study are located in Papua and situated in Papuan culture. The PYP has a focus on international-mindedness, with a mandate to look at issues from local, national and global perspectives. The students at both schools in this study have opportunities to learn about various Indonesian cultures including the local Papuan culture. The community of KK, in which the schools are located, is rich in people who have come from many parts of Indonesia and who are willing to come to the schools to teach students about the cultures of the islands they come from. At MZS, students have opportunities to learn about the traditional weaving, carving, dancing, drumming, food,

cooking, and other aspects of Kamoro culture from tribal members who live in villages near the school. YPJ has ongoing Papuan dance groups and other opportunities to make cultural connections. Fifth-grade students at YPJ also have the opportunity for a week long extended study to other Indonesian islands.

At YPJ, the indigenous children who attend the school are negotiating their lives between a traditional culture at home and the school culture. From some contemporary viewpoints, these children are being given a great opportunity, but it must also be considered that, for some of them, their lives up to the point of their entry into school have not prepared them for what is essentially a western-based school system and ways of learning. These children may be quite proficient at going into the jungle and capturing a *kuskus* for their lunch but sitting in a classroom and learning to count beyond the number of fingers and toes they have may (very logically) seem irrelevant. What is their perspective on the “great opportunity”? Who can say that preparing them for the modern world is better for them than learning from their elders what they need to learn to survive in the jungle? If they spend their time reading, will they learn how to protect their families or find food? How do these students reconcile in their lives what is traditionally done in their home lives and what is now expected of them in school? How do their parents, or their teachers? And yet, how long will their current worlds exist? How long will the jungle exist? Does formal schooling cause the loss of traditional cultures? How will learning about the music and art of cultures other than their own change the students’ perceptions and performance of their traditional music and art, whether they are students at MZS or YPJ? Should indigenous students be educated by people who are not from their culture for a life that only exists outside of their current understanding? Yet how

could “we” *not* prepare them for a future in the modern world? These are hard questions but are issues that come to school with children every day. Educators at YPJ, and in some respects at MZS, are dealing with cultures not only in place, but very much in time.

In 1961, when discussing comparative education, Kandel made several observations about education in countries that gained independence post-World War II. He could be describing Indonesia and particularly Papua when he says, “Nor have most countries had to face the problem of welding together into a national community peoples of different tribal loyalties, different dialects, and different customs and cultures by a process which would lift most of them from their almost primitive level to the civilization of the twentieth century” (p. 134). Education in this context, he suggests, relies on the development of a social spirit so that everyone in the community has a stake in education. This use of the community as a support system and the acknowledgement of the community as a full stakeholder in education was a key element in the success of bringing the PYP to both schools.

Disciplinarity

Tension is inherent in transdisciplinary learning and necessary for learning; it is through constantly questioning and challenging previously held assumptions that learning discoveries are shaped and connections are made. (IBO, 2012)

Different forms of disciplinarity was a difficult concept to talk about among the teachers in both schools in this study. While the word “transdisciplinary” was used by teachers quite a bit, various understandings and misunderstandings about what transdisciplinarity is exist among the teachers and staff at MZS and YPJ. Generally, transdisciplinarity is thought by the participants in the study to occur when more than one discipline is involved in learning, but the mere presence of two disciplines is not

necessarily transdisciplinarity. The example in the survey that asked about whether music or math was being taught when singing a song that included multiplication had a striking majority of respondents who answered “both.” Some of the more experienced respondents answered “math,” with the explanation that there were no musical skills being taught. Using Table 13 as a reference, the goal of learning the times tables in math is addressed, and the technique of singing is used to help with memorization. This is a great strategy for teaching the times tables. But there is no mention of any music learning happening or any music learning goals. Further, there is no note of student input or interest. In the PYP framework, this is not an example of transdisciplinarity.

MULTIDISCIPLINARITY	INTERDISCIPLINARITY	TRANSDISCIPLINARITY
Disciplines are separate from each other.	There may be collaborative planning and teaching.	Collaborative planning and teaching.
Topics may be taught concurrently in more than one discipline, but they are taught as they relate to each specific discipline	Common concepts and skills	Common concepts and processes
Classes are content-based (separate plates at the dinner table)	May be a crossing of disciplinary boundaries, but disciplines are still identifiable (a stew - chunky)	Disciplines are indistinguishable (a cream soup)
Subject-based skills.	Methods and/or content from one field may be used to solve a problem in another field.	Students’ authentic questions, interests, and concerns guide the inquiry.
Result is knowledge about the discipline	Transfer of knowledge between disciplines.	Involves real-world problems and interests of the student; leads to understanding of the world.

Table 13: Disciplinarity

The other question in the survey aimed at gaining insights into teachers’ understanding of transdisciplinarity was the question about students acting out a book they were reading. Several respondents noted that this was transdisciplinary because it deepened the students’ learning of the book, which may indeed occur. However, where is the conceptual learning or the creativity? One respondent suggested students could create

a script about the book. That scenario could provide opportunities for learning about how scripts are written or how to read and follow them. At that point, some learning about drama is happening. This respondent also noted that creating the script and a play could be a way that students choose to demonstrate their learning, which could be their PYP required action project.

A better transdisciplinary scenario would be if the book were not the center of the discussion, but one of several tools/strategies used to develop the learning of a concept, for example using the book “Inside Out and Back Again” by Thanhha Lai to introduce a unit focusing on the concepts of “change” and “form.” This book could be used to introduce or unpack a variety of units, and the concepts can be addressed in a variety of ways, allowing students to go in different directions (lines of inquiry) and to learn disciplinary material, including music, art, history, and language, while focusing on a real world problem or idea. One possibility is to use the book to introduce the transdisciplinary theme “Where We Are in Place and Time.” Learning about a piece of literature is valuable, but doing so as the purpose of a unit is not transdisciplinary.

Again it is important to note that all types of disciplinarity are necessary and useful in learning and teaching (Drake, 2015). My intention is not to imply that students at MZS and YPJ are not learning valuable things or that teachers are failing in any way, although they may be engaging in transdisciplinarity much less than they believe. The PYP does not say that transdisciplinary learning is the only path; some units sit outside of the POI. But I would ask the question, does an understanding of the PYP translate to an understanding of transdisciplinary learning? Does it not? How important is the

distinction? What do actions reflect? The PYP is not the only path for transdisciplinarity. Educators and school stakeholders can gather information from a number of sources on the internet that are not IB-related, such as integrallleadershipreview.com, in order to develop an understanding of transdisciplinarity. However, the IB has worked to develop and refine a PYP framework in order to provide teachers with a structure for transdisciplinary units and an inquiry process through which students can gain understanding of a real world issue.

Interestingly, the most experienced PYP facilitators in this study seemed to question themselves more frequently and more thoughtfully about their understanding of transdisciplinarity than newer teachers. They reflected about how the structures they have put in place (e.g. UOIs) may or may not facilitate student learning, and they expressed a developed sense of the “beyond” of transdisciplinarity—the idea that it is more than having several disciplines looking at a subject or problem. One of the MZS teachers said she looks back at units she had done in previous years and sees where she didn’t let go enough to allow the students to follow their interests. She suggested that oftentimes units “come out of a box” and go back into the box at the end of the unit, with all students having learned what they were supposed to, but not anything beyond what had been planned ahead of time. She explained that with “units out of a box” she could be sure she could tick certain outcomes as having been taught, but now believes this approach actually limited student learning. A creative balance must be negotiated between the teaching of specific outcomes and releasing students to follow their interests within the framework of the UOI. .

At MZS, the school schedule includes specifically designated UOI times at least four days a week throughout the school. This designation of UOI time allows specialist teachers to be available to work with the students if the specialist teachers are involved with the unit. This practice strengthens the connection between and among teachers and allows students to have access to teachers' different expertise in order to follow their own inquiry. If done well, the teachers also become learners in the unit. The MZS scheduling practice also allows specialist teachers to use their scheduled time for specific disciplinary teaching, although sometimes that time is used for the UOI. At YPJ, specialists use their own class time to connect to UOIs and do not integrate into the class UOI time at all. In my observations, I noted that scheduling practices may enable, but don't guarantee transdisciplinarity.

My personal understanding of transdisciplinarity is that it is not something taught in and of itself; transdisciplinarity is beyond what the teacher can specifically direct, other than to facilitate and encourage students to follow their pathways, and to ensure they are learning the skills to continue to do so along the way. Transdisciplinarity is a difficult concept to work with, but worth the effort, because, in my experience the differentiating qualities are student interest and understanding the real world. If I want to teach a student to read quarter notes, I have choices about how to teach him, but the goal is still a very specific piece of knowledge. I could use math vocabulary to help him learn, but that does not make it transdisciplinary. Teaching a quarter note is so disciplinary-specific that transdisciplinarity may not be possible.

On the other hand, as I was writing this document, a first grade student looked at a pinwheel blowing and commented that it looked like the turbine of a jet engine. That

intrigued him enough that he wanted to find out more about the power of air, which led him to look at other things that are powered by air, including windmills, kites, and instruments, specifically the saxophone. He had the opportunity to talk to a community member who had worked in the aircraft manufacturing industry for many years. The learning experience also made him think about how other things are powered. This is an example of a young student showing his teachers the power of inquiry and transdisciplinarity.

Throughout the study, I reflected on why issues with transdisciplinary teaching and learning concerned me in the first place. My first layer of thought was that I have seen teachers (not currently at the schools in this study) pretending the transdisciplinary requirement of the PYP is not there, and teaching as they have always taught. This caused resentment on many sides, which lasted years, as it was perceived as disrespectful. As a specialist teacher, I have felt that disappointment when the subject area of my expertise is not included when the school makes a transdisciplinary claim. It is concerning that a sense of hierarchy still exists in some teachers' minds based on the content they teach. In a true transdisciplinary system, if even one teacher doesn't buy into the process, the whole program is poorer. Roadblocks may exist among either classroom teachers or specialists or both; either situation can cause problems. I believe that in most cases, "roadblock teachers" don't realize that they are in the way of enhanced student learning opportunities. As a music teacher I am particularly sensitive to the mistake of subjugating one discipline (usually a specialist one) to another and calling it transdisciplinary education, when this is actually the opposite.

Boyer's Basic School plan, which I introduced in chapter one and which served as a foundational guide for the PYP, proposed four essential elements: the school as community, a curriculum with coherence, a climate for learning, and a commitment to character. These four elements are reflected in the comments of the educators and in the documents of both schools in this study. Community involvement is very strong at YPJ, largely due to the size of their student body. MZS parents are less active, but stay involved in school activities and committees. Non-parent community involvement is also present, for example, participation in and support for school performances. At YPJ, the required use of the national curriculum assures some consistency through their program. MZS uses a variety of curricula, but those curricula were chosen because they work together cohesively, consistently, and rigorously. A positive climate for learning is evidenced at MZS through emphasis on individualized and student-directed learning, such as student creation of the lines of inquiry. At YPJ, the larger student body makes individualized learning more difficult, but their emphasis on collaboration and cooperation in the development of units allows for student input. The educators at YPJ especially valued the character education aspect of the PYP (learner profile, international-mindedness) because they felt it connected strongly to the Indonesian principles of *pancasila*. MZS teachers noted the teaching of international-mindedness as being critical to student development.

In both schools in this study, I found a sense of building something together among the teachers and administrators I interviewed. Both teachers who have been there awhile and new teachers feel they are part of a group that is working together for

something greater. The participants at both schools are sincere in their commitment to education and to the practice of the PYP and voiced the desire to continue to learn.

To summarize my findings and observation by research question, I provide the following:

Research question 1: How do educators in two remotely located schools understand the concept of transdisciplinarity? At MZS, there were mixed understandings. The teachers more experienced with the PYP demonstrated deep understanding. Some teachers noted that they are aware they do not have the insight yet that they need. At YPJ, teachers talked about how the students learn about prescribed topics in different classes, from varying viewpoints. This is more like multi- or interdisciplinary education. All educators from both schools reflected that they hope to continue to grow in their understanding and implementation.

Research question 2: How are the elements and aspects of the PYP being implemented in each school? Are these affected by or related to the curriculum in place in each school? If so, how? MZS staff aligned their adopted curricula with the PYP prior to adoption. Some MZS educators noted difficulty putting action into place and need to have a better understanding of what that looks like. Student agency and reflection of their own learning is growing. YPJ educators all noted that incorporation of the learner profile and attitudes taught in the PYP is relevant because of the connection to *pancasila*. A goal they are working on is to become more student-centered, which is directed in *Kurikulum 2013*. *Kurikulum 2013* is very different from the previous curriculum and is more like the PYP, inquiry based.

Research question 3: What outcomes of the PYP do teachers identify with and value (or not value)? Teachers at both schools highly valued the learner profile. At YPJ, educators mentioned that it was easy to make connections between the learner profile and the Indonesian national curriculum, as well as with *pancasila*. Many educators recognized the value of action, but also noted that they sometimes struggled with implementation. At MZS, some teachers expressed that they valued all of the elements equally, that they work best together. Most teachers expressed the need to really emphasize the approaches to learning (ATLs) in the younger students in order to encourage student independence.

Research question 4: Do the elements of the PYP align with the schools' mission and vision statements? Why or why not? Educators at both schools believe the elements align with the mission and vision statement at each school. At MZS, one teacher mentioned the lack of reference to "caring" in either school statement.

Thinking Forward

This study has weaknesses. I interviewed only teachers who volunteered to be interviewed. Did this skew my information? Possibly, although the feeling at both schools about the PYP and transdisciplinary education was very positive - upbeat. I interviewed a good representation of the specialist teachers, and they see most or all of the students and interact with most or all of their classroom teacher colleagues. A few teachers and administrators interviewed indicated that some of their colleagues are not completely happy with the PYP, but that they are few and are learning. Are they unhappy with the PYP or the way it is being implemented at MZS or YPJ? Or is it that the

understanding of transdisciplinarity is still evolving, or that the mindset has not yet developed?

The data generation tools in this study were a survey, interviews, and document review. I did not observe teachers in their classrooms. What teachers say about the PYP and transdisciplinarity and what teachers do may not be the same.

When considering the responses of non-English or limited-English speakers, I had to consider the element of language, both in their understanding and my understanding. To combat misunderstandings, teachers were encouraged to answer in the language in which they were most expressive. To ensure my understanding, a professional translator was used to translate responses from Indonesian to English. Still, opportunities for misunderstanding are abundant, and I may have missed important meanings.

While implementation of the PYP is well underway in both schools, areas of growth in both schools could be expanded collaboration between classroom and specialist teachers. Scheduling is always an issue, but ideally UOIs could be planned with all teachers, including specialist teachers, involved from the beginning. While, some units may not logically connect with all disciplinary content, some ideas about connections (or no connections) may be based on incomplete information or faulty assumptions. Brainstorming and conversation should occur as units are developed and *prior to* decisions about what connections may or may not be feasible. Likewise, continued meetings throughout the development of the unit would be beneficial to teachers and students. Possible further research could look at how a wide selection of PYP schools handle planning meetings and unit development.

Educators at both schools in this study expressed a desire for more face-to-face professional development in PYP-related pedagogy. A number of logistical reasons make this difficult, and the schools' leadership are working on this problem. One possible support might be for experienced teachers at both schools to lead workshops that involve teachers from both schools. Language would be a consideration, but perhaps two leaders, one speaking English and one speaking Indonesian, could facilitate learning for everyone.

It is my belief that good research, like a good story, should leave the reader wanting to know more. Further, the philosophy of inquiry demands it. As I progressed through the study, delving deeply into the PYP documents as well as other documents on transdisciplinary education, more questions evolved. Are educators developing transdisciplinary units with a goal of inquiry and problem-solving, or are we trying to mold units and the *idea* of transdisciplinarity to fit into traditional ways of teaching? Is the PYP really transdisciplinary? The organization acknowledges that some units sit outside the POI, that there is discipline-specific information that must be taught, and that there is interdisciplinary teaching that is not transdisciplinary. What proportion of teaching and learning is transdisciplinary? How should the understanding be socialized to teachers to help eliminate misunderstandings of what transdisciplinarity is? Is it necessary that teachers understand this?

As long as schools are dividing school days into time blocks, and having students focus on different subjects at specific times, can any education really be transdisciplinary? Conversely, how do schools not specify learning the disciplines in a structured fashion? We must have disciplinary knowledge in order to be transdisciplinary. Or is it possible for disciplinary learning to emerge from or follow a transdisciplinary

experience? Why is transdisciplinary education valuable? Nicolescu (1999) said, “transdisciplinarity is radically distinct from multidisciplinary and interdisciplinarity because of its goal, the understanding of the present world, which cannot be accomplished in the framework of discipline research” (p. 3).

In December of 2018, as the new year approached, I was sitting in a stateroom on the small luxury ship, *Seabourn Quest*. I was as far as I could be from the jungles of my home in Papua, Indonesia. Looking out my window, across the veranda, I saw the land mass of Antarctica, icebergs and tiny Adelie penguins. There were thousands of the small creatures on the land, and more swimming in the bay, porpoising their way to and fro in their quest for food. Some jumped up onto the larger chunks of ice. Directly in front of me sat a unique volcano which was actually formed under ice. (I now know more about these things than I ever thought I would!) It was snowing, and the outside temperature was about 1 degree Celsius, not quite as cold as I expected it to be.

I had just returned from an early morning zodiac cruise of the bay. As the ten of us drifted amongst chunks of brash ice and blue ice sculptures, I felt a thump on my back, then another. One of the Adelie penguins that had been swimming in the bay had jumped up on the edge of the zodiac right behind me! I’m sure he was as shocked as I was. He proceeded to thump his way down the edge of the boat, bumping into other passengers sitting on that side, until he made his way to the end, whereby he dove straight back into the water. Of course, this all happened so fast, there was no opportunity to react in any way other than surprise.

What does this have to do with Papua? All things in life are connected. This is one of the things we teach our students. *Connection* is an important concept in the

International Baccalaureate. I was in Antarctica because my job in Papua allowed me to have the time and the resources to travel extensively. It would take no great analysis to conclude that it must also be a characteristic of my nature to appreciate remote, unusual locations.

A highly skilled team of specialists in subjects such as bird life, geology, geography, Antarctica, and weather, among other disciplines were also on board. Their job was to make the polar regions accessible to all passengers, regardless of age or, in some cases, infirmity. (After observing the attitudes of some passengers, I would unkindly have to add ignorance and arrogance to the list of challenges our specialists had to deal with.) I listened to an expert on tropical ecology speak very knowledgeably on the subject of glaciers; to a geologist identify Antarctic wildlife; to an Antarctic scientist explain the geopolitical nature of the continent and much more. While all members of the team had an area of disciplinary focus, their study and their passion led them to connect with other disciplines in a conceptual manner that brought them to a transdisciplinary understanding of the interactions and connections in the world around them. Passenger education and expedition work is a part of their professional lives. Their interests and their work are irrevocably intertwined.

Transdisciplinary education – this is it. This is the path. Concepts, themes, profiles, connections – going around and beyond the disciplines themselves to gain deep understanding of the world. Taking that understanding on the road, so to speak; always knowing that there is more.

Many years ago, a teacher told me that she believed in the way she was learning to teach, and if it didn't work well, then she would reflect on her pedagogy and try it

again the next year. If it didn't work then, she would reflect further and do it again. The philosophy, the process, the goals, the elements, the collaboration . . . learning to put them together cohesively takes time and honest reflection. The joy that the educators in this study demonstrated when they talked about the positive impact of the PYP philosophy on their students, and even in their own learning was palpable. They are believers in the philosophy, even though they may have questioned their own understanding, knowledge, or confidence in their practice. Their questioning and continued desire to learn bodes well for the future of the PYP and for the students in these two very unique, remote schools.

REFERENCES

- Alida. (2018) /Interviewer: A. Erikson.
- Anderson, L. (1976). The Role of Social Studies in the International Education of Children and Young People. Working Paper. S.I.]: S.I. : Distributed by ERIC Clearinghouse.
- Andrews, F. F. (1917, May 18, 1917). Warned to Teach No Hate. *The New York Times*.
- Andrews, F. F. (1948). *Memory pages of my life*. Boston, MA, USA: Talisman Press.
- Angela (2019).
- Bagnall, N. F. (2010). *Education Without Borders: Forty Years of the International Baccalareate, 1970 - 2010*. Berlin: VDM Publishing House Ltd. .
- Bangs, M. (2011) Conversation with Michael Bangs/Interviewer: A. Arden.
- Beane, J. (1996). On the Shoulders of Giants! The Case for Curriculum Integration. *Middle School Journal*, 28(1), 6-11.
- Beane, J. A. (1993). Problems and Possibilities for an Integrative Curriculum. *Middle School Journal*, 25(1), 18-23.
- Beane, J. A. (1995). Curriculum Integration and the Disciplines of Knowledge. *The Phi Delta Kappan*, 76(8), 616-622.
- Beardmore, S. (2017). A Snapshot of Our PYP Journey.
- Bedales. (2017). Bedales Schools. *Bedales Schools*. Retrieved from www.bedales.org.uk
- Belle-Isle, R. (1986). LEARNING FOR A NEW HUMANISM. *The International Schools Journal*, 27.
- Benninga, J. S., Berkowitz, M. W., Kuehn, P., & Smith, K. (2006). Character and Academics: What Good Schools Do. *The Phi Delta Kappan*, 87(6), 448-452.
doi:10.1177/003172170608700610
- Berkowitz, M. W., & Bier, M. C. (2004). Research-Based Character Education. *The Annals of the American Academy of Political and Social Science*, 591(1), 72-85.
doi:10.1177/0002716203260082
- Bibby, C. (1956). A Victorian Experiment in International Education: The College at Spring Grove. *British Journal of Educational Studies*, 5(1), 25-36. doi:10.2307/3118674
- Blake, D. W. (1982). The Purposes and Nature of Comparative Education: The Contribution of I. L. Kandel. *Comparative Education*, 18(1), 3-13.

- Bolon, A. (2002). At home abroad/Third Culture Kids: nowhere to call home but I like being a global nomad. *The New York Times*.
- Boyer, E. L. (1995). *The Basic School A Community for Learning. Advance Copy. S.l.]: S.l. : Distributed by ERIC Clearinghouse.*
- Bray, M. (2007). International and Comparative Education: Boundaries, Ambiguities and Synergies. In M. Hayden, J. Thompson, & J. Levy (Eds.), *SAGE Handbook of Research in International Education* (pp. 51-56). London: SAGE Publications, Ltd.
- Brickman, W. W. (1960). A Historical Introduction to Comparative Education. *Comparative Education Review*, 3(3), 6-13. doi:10.1086/444810
- Bunnell, T. (2008a). The Global Growth of the International Baccalaureate Diploma Programme over the First 40 Years: A Critical Assessment. *Comparative Education*, 44(4), 409-424.
- Bunnell, T. (2008b). International education and the 'second phase'" a framework for conceptualizing its nature and for the future assessment of its effectiveness. *Compare: A Journal of Comparative and International Education*, 38(4), 415-426. doi:10.1080/03057920701420841
- Bunnell, T. (2014). *The Changing Landscape of International Schooling: Implications for theory and practice: Taylor & Francis.*
- Bunnell, T. (2015). The Yew Chung Model of International Education: The Scope for Investigation and Research. *Journal of Research in International Education*, 14(3), 258-270. doi:10.1177/1475240915615785
- Bunnell, T., Fertig, M., & James, C. (2016). What Is International about International Schools? An Institutional Legitimacy Perspective. *Oxford Review of Education*, 42(4), 408-423. doi:10.1080/03054985.2016.1195735
- Choi, B. C. K., & Pak, A. W. P. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Clinical and investigative medicine. Medecine clinique et experimentale*, 29(6), 351-364.
- Clark, B., & Button, C. (2011). Sustainability Transdisciplinary Education Model: Interface of Arts, Science, and Community (STEM). *International Journal of Sustainability in Higher Education*, 12(1), 41-54. doi:10.1108/14676371111098294
- Clarkson, J. (2009). What is comparative education. In L. G. Wendy Bignold (Ed.), *Global Issues and Comparative Education* (pp. 181-582). Great Britain: Learning Matters Ltd.
- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data : complementary research strategies*. Thousand Oaks: Thousand Oaks : Sage Publications.

Cottrell, A. (2007). Explaining Differences. In G. H. Bell-Villada, N. Sichel, F. Eidse, & E. N. Orr (Eds.), *Writing Out of Limbo*. Newcastle upon Tyne: Cambridge Scholars Publishing.

Cottrell, A., & Downie, R. (2012). TCK - The History of a Concept. *FIGT Research Network Newsletter*, 5.1, 7-8.

Cutts, J. (2019) /Interviewer: A. Erikson.

Cutts, W. (1991). *“Weak Thing” in Moni Land*. Pennsylvania: Christian Publications.

Daniel. (2018) /Interviewer: A. Erikson.

De Goni, J. I. M. D. M. (2004). *What is International Education? UNESCO Answers*. Retrieved from San Sebastian:

Dede, S., & Baskan, G. A. (2011). Theoretical basis of comparative education and suggestion of a model: comparative education council in Turkish education system. *Procedia - Social and Behavioral Sciences*, 15, 3536-3542.
doi:10.1016/j.sbspro.2011.04.331

Denzin, N. K., & Lincoln, Y. S. (2011). The Discipline and Practice of Qualitative Research. In *Sage Handbook of Qualitative Research* (4th ed., pp. 784). Los Angeles: Sage Publications.

Denzin, N. K., & Lincoln, Y. S. (2018). *The Sage handbook of qualitative research* (Fifth edition.. ed.): Los Angeles : Sage.

Dewi. (2019) /Interviewer: A. Erikson.

Dimmock, C., & Walker, A. (2000). Globalisation and Societal Culture: Redefining Schooling and School Leadership in the Twenty-First Century. *Compare*, 30(3), 303-312.
doi:10.1080/713657474

Dolby, N., & Rahman, A. (2008). Research in International Education. *Review of Educational Research*.

Downie, R. D. (1976). RE-ENTRY EXPERIENCES AND IDENTITY FORMATION OF THIRD CULTURE EXPERIENCED DEPENDENT AMERICAN YOUTH: AN EXPLORATORY STUDY. (Dissertation/Thesis),

Drake, B. (2004). International Education and IB Programmes Worldwide Expansion and Potential Cultural Dissonance. *Journal of Research in International Education*, 3(2), 189-205.

Drake, S., Savage, M., Reid, J., Bernard, M., & Beres, J. (2015). An Exploration of the policy and Practice of Transdisciplinarity in the IB PYP Programme. Retrieved from

- Duane, R.-H. (2002). Indonesia: Out of One, Many? *The Fletcher Forum of World Affairs*, 26, 223-239.
- Ellingson, L. (2014). 'The truth must dazzle gradually': Enriching relationship research using a crystallization framework. *Journal of Social and Personal Relationships*, 31(4), 442-450. doi:10.1177/0265407514523553
- Elliott, J., & Lukeš, D. (2008). Epistemology As Ethics In Research And Policy: The Use of Case Studies. *Journal of Philosophy of Education*, 42(supplement), 87-119. doi:10.1111/j.1467-9752.2008.00629.x
- Epstein, Erwin H. (1992). Comparative Education and International Education. *Comparative Education Review*, 36(4), 409-416.
- Epstein, E. H. (2008). Setting the Normative Boundaries: Crucial Epistemological Benchmarks in Comparative Education. *Comparative Education*, 44(4), 373-386.
- Epstein, Erwin H., & Carroll, Katherine T. (2005). Abusing Ancestors: Historical Functionalism and the Postmodern Deviation in Comparative Education. *Comparative Education Review*, 49(1), 62-88. doi:10.1086/426161
- Fail, H., Thompson, J., & Walker, G. (2004). Belonging, identity and Third Culture Kids: Life histories of former international school students. *Journal of Research in International Education*, 3(3), 319-338. doi:10.1177/1475240904047358
- Filene, P. (1963). The World Peace Foundation and Progressivism: 1910-1918. *The New England Quarterly*, 36(4), 478-501. doi:10.2307/363108
- Fink, C. (1980). Peace Education and the Peace Movement since 1815. *Peace & Change*, 6(1-2), 66-73. doi:10.1111/j.1468-0130.1980.tb00406.x
- Flick, U. (2007). *Designing Qualitative Research*. London: Sage Publications.
- Fogarty, R. (1991). Ten Ways to Integrate Curriculum. *Educational Leadership*, 49(2), 61-65.
- Fox, E. (1985). International schools and the International Baccalaureate. *Harvard Educational Review*, 55(1), 53-69.
- Fraser, S. E., & Brickman, W. W. (1968). A history of international and comparative education; nineteenth-century documents. Glenview, Ill.: Scott.
- Fulcher, J. (1978). Liberal Education: Interdisciplinary Study of Integrative Topics. *Improving College and University Teaching*, 26(1), 44-49.
- Gellar, C. (1993). How international are we. *International Schools Journal*, 1(26), 5-7.

Getchell, L. A. (2010). Effects of International Baccalaureate Primary Years Programme on teacher philosophy, perceptions of efficacy, and outlook on education: ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.

Gibson, W., & Brown, A. (2009). *Working with Qualitative Data*. London: Sage Publications.

Giddings, J. (2013). *History of the Primary Years Programme*. Retrieved from Cardiff, Wales:

Gilgun, J. F. (2010). Reflexivity and Qualitative Research. *Current Issues in Qualitative Research*, 1(2).

Gillis, Nelson, Driscoll, Hodgins, Fraser, & Jacobs. (2017). Interdisciplinary and Transdisciplinary Research and Education in Canada: A Review and Suggested Framework. In *Collected Essays on Learning and Teaching* (Vol. Vol. X, pp. 203-222). Windsor, Ontario: University of Windsor.

Goldberg, S. R., Bursey, C. R., & Kraus, F. (2013). Helminths of ten species of Litoria frogs (Anura: Hylidae) from Papua New Guinea. *Journal of Natural History*, 47(29-30), 1891-1910. doi:10.1080/00222933.2013.770932

Grant, J., Kuhns, E., & Pickert, S. (1995). Precollegiate International Schools: Leach's "Ideal-Type" and Today's "Reality". *International Review of Education / Internationale Zeitschrift für Erziehungswissenschaft / Revue Internationale de l'Education*, 41(6), 501-510.

Gunesch, K. (2004). Education for cosmopolitanism: Cosmopolitanism as a personal cultural identity model for and within international education. *Journal of Research in International Education*, 3(3), 251-275. doi:10.1177/1475240904047355

Gunesch, K. (2013). Intercultural understanding via local and global educational citizenship: A contribution to international education via a lived-in substantiation of multilingualism and cosmopolitanism. *Journal of Research in International Education*, 12(2), 173-189. doi:10.1177/1475240913498658

Hamilton, L., & Corbett-Whittier, C. (2013). *Using Case Study in Education Research* (Vol. 3775). London: United Kingdom, London: SAGE Publications Ltd.

Hancock, D., Algozzine, Bob. (2017). *Doing Case Study Research: A Practical Guide for Beginning Researchers* (Third ed.). New York: Teacher College Press.

Hannerz, U. (2002). Cosmopolitans and Locals in World Culture. In *Transnational Connections: Culture, People, Places* (pp. 102). Florence, US: Routledge.

Hanvey, R. G. (1982). An attainable global perspective. *Theory into Practice*, 21(3), 162-167. doi:10.1080/00405848209543001

Harley, J. E. (1931). *International understanding : agencies educating for a new world*: Stanford University, Calif. : Stanford university press ; London : H. Milford, Oxford University Press.

Harris, I. (2010). History of Peace Education. In G. a. C. Salomon, Edward (Ed.), *Handbook on Peace Education* (pp. 11-18). New York: Psychology Press.

Harris, I. M. (2004). Peace education theory. *Journal of Peace Education*, 1(1), 5-20. doi:10.1080/1740020032000178276

Harris, I. M., & Morrison, M. L. (2003). *Peace education* (Vol. 2nd). Jefferson, N.C: McFarland.

Hassingier, R. E. (2016). No child is an island: A study of the effect on student sense of belonging through their participation in a formal program of character education. (Dissertation/Thesis), ProQuest Dissertations Publishing,

Hayden, M., & Thompson, J. (1995). International Schools and International Education: a relationship reviewed. *Oxford Review of Education*, 21(3), 327-345. doi:10.1080/0305498950210306

Hayden, M., & Thompson, J. (1998). *International education: Principles and practice*: Psychology Press.

Hayden, M., & Thompson, J. (2000). International education: flying flags or raising standards? *The International Schools Journal*, 19(2), 48.

Hayden, M., & Thompson, J. J. (2008). *International schools: Growth and influence*: United Nations Educational, Scientific and Cultural Organization.

Hayden, M., & Thompson, J. J. (2013). Antecedents, Current Issues and Metaphors for the Future. In *International Education and Schools: Moving Beyond the First 40 Years*. London: London: Bloomsbury Publishing.

Hayden, M. C., & Thompson, J. J. (1997). Student Perspectives on International Education: a European dimension. *Oxford Review of Education*, 23(4), 459-478. doi:10.1080/0305498970230403

Henri. (2019) /Interviewer: A. Erikson.

Henscheid, J., O'Rourke, M., & Williams, G. (2009). Embedding the Humanities in Cross-Disciplinary General Education Courses. *The Journal of General Education*, 58(4), 279-295.

Hill, I. (2000). Internationally-minded schools. *The International Schools Journal*, 20(1), 24.

Hill, I. (2001). Early stirrings: The beginnings of the international education movement. *The International Schools Journal*, 20(2), 11.

Hill, I. (2002). The international baccalaureate: Policy process in education. *Journal of Research in International Education*, 1(2), 183-211.

Hill, I. (2003). Phenomenal Growth of the IB. In A. Peterson, I. Hill, & D. Sutcliffe (Eds.), *Schools Across Frontiers: The Story of the International Baccalaureate and the United World Colleges* (Second ed.). Chicago: Open House Publishing.

Horowitz, S. (2010). Some Thoughts About Johan Galtung's Teaching and Cooperative Learning Methods. In J. Johansen & J. Y. Jones (Eds.), (pp. 77 - 88). Cape Town: Pambazuka Press.

Huxley, J. (1948). *UNESCO : its purpose and its philosophy*: Washington, D.C. : Public Affairs Press.

IBE-UNESCO. (2019, 2019). International Bureau of Education. Retrieved from <https://www.ibe.unesco.org>

IBO. (2006). Primary Years Programme: School guide to the authorization visit. In (pp. 15). Geneva, Switzerland: International Baccalaureate Organization.

IBO. (2010). The Primary Years Programme as a model of transdisciplinary learning. In Cardiff, Wales: International Baccalaureate.

IBO. (2012a). Developing a transdisciplinary programme of inquiry. In Cardiff, Wales.

IBO. (2012b). Making the PYP happen: A curriculum framework for international primary education. Cardiff, Wales: International Baccalaureate Organization.

IBO. (2017). *The Learner in the Enhanced PYP*. Retrieved from Cardiff, Wales:

IBO. (2018). Learning and Teaching. In (pp. 100). Cardiff, Wales: International Baccalaureate Organization.

Indah. (2018) /Interviewer: A. Erikson.

Institute, W. P. (2013, 2013). History. Retrieved from www.worldpolicy.org

Jacobsson, K. (2016). Analysing Documents through Fieldwork. In D. Silverman (Ed.), *Qualitative Research* (pp. 243-264). London: Sage Publications Ltd.

Joko. (2018) /Interviewer: A. Erikson.

Jonah. (2019) /Interviewer: A. Erikson.

Joshua. (2018) /Interviewer: A. Erikson.

- Kandel, I. L. (1956). Problems of Comparative Education. *International Review of Education / Internationale Zeitschrift für Erziehungswissenschaft / Revue Internationale de l'Education*, 2(1), 1-15.
- Kandel, I. L. (1961). Comparative Education and Underdeveloped Countries: A New Dimension. *Comparative Education Review*, 4(3), 130-135.
- Kaplan, A. (1988). Galileo: An Experiment in Interdisciplinary Education. *Curriculum Inquiry*, 18(3), 255-287. doi:10.2307/1179829
- Kauffman, N. (2005). Variations on a theme: Implementation of the International Baccalaureate Primary Years Programme. *Journal of Research in International Education*, 4(3), 243-261.
- Keith. (2018) /Interviewer: A. Erikson.
- Kemala. (2018) /Interviewer: A. Erikson.
- Klein, J. T. (2013). The Transdisciplinary Moment(um). *Integral Review*, 9(2), 189-199.
- Krosnick, J. A., Fabrigar, Leandre R. (1997). Designing Rating Scales for Effective Measurement in Surveys. In B. Lyberg, Collins, de Leeuw, Dippo, Schwarz, Trewin (Ed.), *Survey Measurement and Process Quality* (pp. 141-164). New York: John Wiley.
- Lasswell, H. D., & Sakamoto, Y. (1972). THE RATIONALE OF THE WORLD ORDER MODELS PROJECT. *The American Journal of International Law*, 66(4), 244-252.
- Latham, B. (2011). Mt. Zaagkam International School
- Lawson, M. (1995). The International People's College, Helsingor, Denmark: Seven Decades of Peace Education. Peace Education Miniprints No. 71. S.l.]: S.l. : Distributed by ERIC Clearinghouse.
- Leach, R. J. (1969). International schools and their role in the field of international education ([1st ed.]. Oxford, New York,: Pergamon Press.
- Leestma, R. (1969). OE's institute of international studies. *American Education*, 5(5), 5-8.
- Leith, D. (2002). Freeport and the Suharto Regime, 1965-1998. *The contemporary Pacific.*, 14(1), 69-100. doi:10.1353/cp.2002.0023
- Lia. (2018) /Interviewer: A. Erikson.
- Lovat, T. (2011). Special Issue: Values education and holistic learning. *International Journal of Educational Research*, 50(3), 145-146. doi:10.1016/j.ijer.2011.07.007

- Lovat, T. J., Toomey, R., Daily, K., & Clement, N. (2009). *Project to test and measure the impact of values education on student effects and school ambience*. Retrieved from Canberra: http://www.valueseducation.edu.au/values/val_articles,8884.html.
- Lummis, T. (1988). *Listening to history: The authenticity of oral evidence*: Rowman & Littlefield.
- Mansilla, V. B. (2005). Assessing Student Work at Disciplinary Crossroads. *Change*, 37(1), 14-21.
- Mansilla, V. B., & Gardner, H. (1997). Of Kinds of Disciplines and Kinds of Understanding. *The Phi Delta Kappan*, 78(5), 381-386.
- Mansilla, V. B., & Gardner, H. (2008). Disciplining the Mind. *Educational Leadership*, 65(5), 14-19.
- Marshall, J. (2005). Connecting Art, Learning, and Creativity: A Case for Curriculum Integration. *Studies in Art Education*, 47(1), 227.
- Mary. (2019) /Interviewer: A. Erikson.
- Maryanto. (2015).
- Mateescu, B. N., Moraru, M., & Mărunțelu, L. C. (2015). Transdisciplinary Education and Human Micro Universe Decipherment – the Key to Universal Knowledge. *Procedia - Social and Behavioral Sciences*, 180, 389-394. doi:10.1016/j.sbspro.2015.02.134
- McCaig, N. M. (2002). Raised in the margin of the mosaic: global nomads balance worlds within. *International Educator*, 11(2), 10-17.
- McDonough, G. P. (2005). Moral maturity and autonomy: appreciating the significance of Lawrence Kohlberg's Just Community. *Journal of Moral Education*, 34(2), 199-213. doi:10.1080/03057240500127186
- Melenciano, S. (2006). *Moral development*. (Dissertation/Thesis), ProQuest Dissertations Publishing,
- Merriam, S., & Tisdell, E. (2016). *Qualitative Research: A Guide to Design and Implementation*. San Francisco: Jossey-Bass.
- Mertens, D. (2015). *Research and Evaluation in Education and Psychology*. Los Angeles: Sage Publications, Inc.
- Meyer, A. (1949). *The Development of Education in the Twentieth Century* (E. G. Payne Ed. 2nd ed.). Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Michael. (2018) /Interviewer: A. Erikson.

- Moore, A. M., & Barker, G. G. (2012). Confused or multicultural: Third culture individuals' cultural identity. *International Journal of Intercultural Relations*, 36(4), 553-562.
- Morales, A. (2015). Factors Affecting Third Culture Kids'(TCKs) Transition. *Journal of International Education Research*, 11(1), 51.
- Muller, K. (1997). *New Guinea - Journey into the Stone Age*. Illinois: Passport Books.
- Muller, K. (2011a). *The Highlands of Papua*. Indonesia: Passport Books.
- Muller, K. (2011b). *Introducing Papua*. Indonesia: DW Books.
- NA. (2002). *Mt. Zaagkam School Yearbook*. Tembagapura: Mt. Zaagkam School.
- NA. (2019). Yokohama International School/History. Retrieved from <https://www.yis.ac.jp/about-us/history>
- Nando. (2018) /Interviewer: A. Erikson.
- Newell, W. H., & Green, W. J. (1982). Defining and Teaching Interdisciplinary Studies. *Improving College and University Teaching*, 30(1), 23-30.
- Nicolescu, B. (1994). *Towards transdisciplinary education*. Retrieved from
- Nicolescu, B. (2014). Multidisciplinarity, Interdisciplinarity, Indisciplinarity, and Transdisciplinarity. In *RCC Perspectives* (Vol. No. 2, pp. 19-26): Rachel Carson Center.
- Nowacek, R. S. (2005). A DISCOURSE-BASED THEORY OF INTERDISCIPLINARY CONNECTIONS. *The Journal of General Education*, 54(3), 171-195.
- Nussbaum, M. C., & Cohen, J. (1996). *For love of country: debating the limits of patriotism*. Boston: Beacon Press.
- Oates, S. (2016). Does the international baccalaureate's primary years programme facilitate students' motivation toward self-regulatory, autonomous learning? In: ProQuest Dissertations Publishing.
- Ogawa, M. (1991). American Contributions to the Beginning of Public Music Education in Japan. *The Bulletin of Historical Research in Music Education*, 12(2), 113-128.
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, 34(5), 1189-1208.
- Pearce, R., & MyiLibrary. (2013). International education and schools: *moving beyond the first 40 years*. In (pp. 1 online resource (xx, 238 pages)). Retrieved from <https://login.ezproxy1.lib.asu.edu/login?url=http://lib.myilibrary.com/detail.asp?id=603536>

Peterson, A. D. C. (1972). *The international baccalaureate; an experiment in international education*. London,: G. G. Harrap.

Phillips, D. (2006). Michael Sadler and Comparative Education. *Oxford Review of Education*, 32(1), 39-54. doi:10.1080/03054980500496346

Pollock, D. C., & Van Reken, R. E. (1999). *Third Culture Kids : Growing Up Among Worlds*. Yarmouth, Me.: Intercultural Press.

Post, R. (2009). Debating Disciplinarity. *Critical Inquiry*, 35(4), 749-770. doi:10.1086/599580

Prior, L. (2016). Using Documents in Social Research. In D. Silverman (Ed.), *Qualitative Research* (pp. 265-284). London: Sage Publications.

PYP. (2018). Learning and Teaching in the Enhanced PYP.

Ramsey, B. F. S. S. J. (1999). The Global Nomad Experience: Living in Liminality. *Mobility, September*.

Randles, C. (2015). *Music education: navigating the future*. New York: Routledge.

Reardon, B. A. (2002). Human Rights and the Global Campaign for Peace Education. *International Review of Education*, 48(3), 283-284. doi:10.1023/a:1020369813176

Renaud, G. (1991). The International Schools Association (ISA): historical and philosophical background. In P. L. Jonietz & D. Harris (Eds.), *World Yearbook of Education 1991: International Schools and International Education* (pp. 6-14): Routledge.

Reyal, G. M. (2015). *Global identity formation and current life choices: Adult third culture kids*. (Dissertation/Thesis), ProQuest Dissertations Publishing,

Rising, W. (2018). [Email].

Rowley, J. (2012). Conducting research interviews. *Management Research Review*, 35(3/4), 260-271. doi:10.1108/01409171211210154

Saldaña, J. (2011). *Fundamentals of qualitative research*. New York: New York : Oxford University Press.

Samptakumar, R. (2007). The SAGE Handbook of Research in International Education. In M. Hayden, J. Levy, & J. Thompson (Eds.), *The SAGE handbook of research in international education* (pp. 70-78). London: United Kingdom, London: SAGE Publications Ltd.

Savage, M., & Drake, S. (2016). Living Transdisciplinary Curriculum: Teacher's Experiences with the International Baccalaureate's Primary Years Program. *International Electronic Journal of Elementary Education*, 9(1), 1-20.

Scanlon, D. (1960). *International education, a documentary history*. New York,: Bureau of Publications, Teachers College.

Scanlon, D. G. S., J.J. (1968). Introduction: Scope and Purpose of International Education. In D. G. Scanlon & J. J. Shields (Eds.), *Problems and Prospects in International Education* (pp. ix-xxii). New York: Teachers College Press.

Schaetti, B. F. (1996a). Global Nomad, Third Culture Kid, Adult Third Culture Kid, Third Culture Adult: What do they all mean. Retrieved from <http://www.crossculturalkid.org/cck.htm>

Schaetti, B. F. (1996b). Phoenix rising: A question of cultural identity. Strangers At Home. Essays on the Effects of Living Overseas and Coming "Home" to a Strange Land. Bayside, NY: Alethia Publications.

Schaetti, B. F. (2000). *Global nomad identity: Hypothesizing a developmental model*. (Dissertation/Thesis), ProQuest Dissertations Publishing,

Sellers, E. D. (2011). *Exploration of themes evolving from the experiences of third culture kids*. (Dissertation/Thesis), ProQuest Dissertations Publishing,

Spaulding, S., & Colucci, J. (1982). International Education: A United States Perspective. *European Journal of Education*, 17(2), 205-216. doi:10.2307/1502656

Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. New York: The Guilford Press.

Stoker, S. (1933). *The Schools and International Understanding*. Raleigh, North Carolina: The University of North Carolina Press.

Supriyono, S. (2015). Profesionalisasi Guru Bahasa Inggris Sekolah Yayasan Pendidikan Jayawijaya Menuju Sekolah Bertaraf Internasional: Sebuah Analisis Reflektif dalam Perspektif Psikologi. *Konstruktivisme: Jurnal Pendidikan & Pembelajaran*, 7(1), 13-28.

Sylvester, R. (2002a). *The First International School: The Story of the London College of the International Education Society (1866- 1889)*. Paper presented at the Interpreting International Education - Dimensions of Theory and Practice, Geneva.

Sylvester, R. (2002b). Mapping international education: A historical survey 1893-1944. *Journal of Research in International Education*, 1(1), 91-126. doi:10.1177/1475240902001001271

- Sylvester, R. (2003). Further Mapping of the Territory of International Education in the 20th Century (1944-1969). *Journal of Research in International Education*, 2(2), 185-204. doi:10.1177/14752409030022004
- Sylvester, R. (2005). Framing the map of international education (1969-1998). *Journal of Research in International Education*, 4(2), 123-151. doi:10.1177/1475240905054386
- Sylvester, R. (2007). Historical Resources for Research in International Education (1851-1950). In M. Hayden, Levy, Jack & Thompson, Jeff (Ed.), *The SAGE handbook of research in international education* (pp. 11-24). London: Sage Publications.
- Synott, J., & Harris, I. (2002). Guest editors' introduction: peace education for a new century [Paper in: Peace Education for a New Century, Harris, Ian and Synott, John (eds.)]. *Social Alternatives*, 21(1), 3-6.
- Thomas, W. G. (1974). *American education abroad*. New York: Macmillan Information.
- Tika. (2018) /Interviewer: A. Erikson.
- Travers, M. (2009). New methods, old problems: A sceptical view of innovation in qualitative research. *Qualitative Research*, 9(2), 161-179. doi:10.1177/1468794108095079
- Ulbricht, J. (1998). Interdisciplinary Art Education Reconsidered. *Art Education*, 51(4), 13-17. doi:10.2307/3193705
- UNESCO. (2018). Indonesia: Education and Literacy. Retrieved from <http://uis.unesco.org/en/country/id?theme=education-and-literacy>
- Useem, R. H., & Downie, R. D. (1976). Third Culture Kids. *Today's Education*, Sept-Oct, 103-105.
- Van Oord, L. (2005). Culture as a configuration of learning: Hypotheses in the context of international education. *Journal of Research in International Education*, 4(2), 173-191. doi:10.1177/1475240905054389
- Van Oord, L. (2007a). To Westernize the Nations? An Analysis of the International Baccalaureate's Philosophy of Education. *Cambridge Journal of Education*, 37(3), 375-390. doi:10.1080/03057640701546680
- van Oord, L. (2007b). To Westernize the Nations? An Analysis of the International Baccalaureate's Philosophy of Education. *Cambridge Journal of Education*, 37(3), 375-390. doi:10.1080/03057640701546680
- Van Reken, R. (2011). *Writing out of limbo : international childhoods, global nomads and third culture kids*. Newcastle upon Tyne: Cambridge Scholars Publishing.

- Van Reken, R., & Bethel, P. (2005). Third culture kids: Prototypes for understanding other crosscultural kids. *Intercultural Management Quarterly*, 6(4), 3-9.
- Walker, A., Bryant, D., & Lee, M. (2014). The International Baccalaureate continuum: Student, teacher and school outcomes. *Bethesda, MD: The International Baccalaureate Organization*.
- Walker, G. (2000). One-way streets of our culture. *The International Schools Journal*, 19(2), 11.
- WASC. (2016). Accrediting Commission for Schools Western Association of Schools and Colleges.
- Werner, R. J. (1980). A Disciplinary Approach to Teaching the Arts. *Art Education*, 33(5), 24-25. doi:10.2307/3192466
- Wiggins, R. A. (2001). Interdisciplinary Curriculum: Music Educator Concerns. *Music Educators Journal*, 87(5), 40-44. doi:10.2307/3399707
- William. (2018) /Interviewer: A. Erikson.
- Wilson, D. N. (1994). Comparative and International Education- Fraternal or Siamese Twins? A Preliminary Genealogy of Our Twin Fields.pdf. *Comparative Education Review*, 38(4), 449-486.
- Wilson, F. (1981). *The Conquest of Copper Mountain*. New York: Atheneum.
- Wolman, M. G. (1977). Interdisciplinary Education: A Continuing Experiment. *Science*, 198(4319), 800-804.
- Yin, R. K. (2016). *Qualitative Research from Start to Finish*. New York: The Guilford Press.
- Yow, V. R. (2005). *Recording Oral History: A Guide for the Humanities and Social Sciences*. Lanham, MD: AltaMira Press.

APPENDIX A
SURVEYS

TABLE OF CONTENTS

1	CLASSROOM TEACHER SURVEY.....	255
2	SPECIALIST TEACHER SURVEY	262
3	PYP/CURRICULUM COORDINATOR SURVEY	269
4	ADMINISTRATOR SURVEY	276
5	SURVEI GURU KELAS.....	283
6	SURVEI GURU SPESIALIS	289
7	SURVEI KOORDINATOR PYP/KURIKULUM.....	298
8	SURVEY ADMINISTRASI.....	306

CLASSROOM TEACHER SURVEY

Classroom Teacher Survey

This survey is one section of a study into the question of transdisciplinary education in remote schools. Your answers will only be seen by the primary researcher. Please answer completely and to the best of your ability.

* Required

1. Do you work at YPJ or MZS?

Mark only one oval.

- YPJ
 MZS

2. How many years have you been an educator? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

3. What is your highest level of formal education? *

Mark only one oval.

- High School Diploma
 Bachelor's Degree
 Master's Degree
 Doctoral Degree

4. What field are your degrees in? *

5. How many years have you worked in PYP schools? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

6. How many years have you worked at your current school? *

Mark only one oval.

- 0-3
- 3-6
- 7-10
- More than 10 / Lebih dari 10 Tahun

7. What best describes your job responsibilities? (Check all that apply.) *

Check all that apply.

- Classroom teacher
- Creative Arts Specialist teacher (Music, Visual Arts, Dance, Drama)
- Other Specialist teacher
- PYP Coordinator
- Curriculum Coordinator
- Administrator

8. Please describe what transdisciplinary education means to you. / *

9. How well do you think transdisciplinary education works in your school? *

Mark only one oval.

1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

10. How confident are you in the practice of transdisciplinary teaching at your school? *

Mark only one oval.

1	2	3	4	5	6	7	
Not at all confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very confident

11. **What has helped you to understand transdisciplinary teaching? Check as many as apply. ***

Check all that apply.

- PYP Workshops
- Mentoring by another teacher
- Mentoring by the PYP coordinator or Curriculum coordinator
- Staff Professional Development
- Personal study
- Other: _____

12. **If other, please describe. ***

13. **Do you meet with Art or Music specialists to plan units of inquiry? ***

Mark only one oval.

- I never meet with Art or Music specialists to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.

14. **Do you meet with PE or Bahasa Indonesia specialists to plan units of inquiry? ***

Mark only one oval.

- I never meet with PE or Bahasa Indonesia specialists to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.

15. **How often do you meet with other classroom teachers when preparing and teaching Units of Inquiry? (Select as many as necessary to best answer.) ***

Check all that apply.

- We never meet. / Kita tidak pernah bertemu
- We meet once for every unit, just to plan.
- We meet once a year to set out the POI, then I plan the UOI's myself.
- We meet regularly during a unit.

16. **What specialist classes in your school integrate with your Program of Inquiry? ***

Check all that apply.

- Art
- Music
- PE
- Other

17. How well do you feel the units of inquiry are represented in specialist classes? *

Mark only one oval.

	1	2	3	4	5	
POI units are never considered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	POI units are a part of teaching and learning in specialist classes.

18. How often does Music integrate with the POI units? *

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

19. How often does Art integrate with the POI units? *

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

20. How often does PE integrate with the POI units? *

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

21. How is the planning handled? *

Mark only one oval.

- I meet with the PYP coordinator to plan the unit, then the specialists contribute their part.
- I plan the units, then the specialist teachers put their parts in, then the PYP coordinator reviews it all.
- The PYP coordinator meets separately with the classroom teachers and specialists to plan.

22. How often do you work together with a specialist and students? *

Mark only one oval.

	1	2	3	4	5	
Never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very regularly

23. In your opinion, does your curriculum fit with the PYP elements? *

Mark only one oval.

	1	2	3	4	5	6	7	
No. Our curriculum does not fit with PYP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very well. I think the curriculum fits inside the PYP framework easily and naturally.

24. In your opinion, does your curriculum fit with the PYP elements (Learner Profiles, Key concepts, Knowledge, Approaches to Learning, Action, Agency, and International-Mindedness)? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

25. In your opinion, does the Knowledge element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

26. In your opinion, does the Learner Profile element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

27. In your opinion, do the Approaches to Learning in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

28. In your opinion, does the Action element in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

29. **In your opinion, does the Agency element in the PYP align with your school's mission and vision statements? ***

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

30. **Which aspects of the PYP, as evidenced in your school, do you feel are valuable? (Check as many as apply) ***

Check all that apply.

- Learner Profiles
- Teaching conceptually
- Approaches to Learning (ATL's)
- Agency
- Action
- Exhibition
- Holistic Assessment
- International-Mindedness
- Community of Learners
- Units of Inquiry
- PYP Planner
- Transdisciplinary Teaching and Learning
- Planning Meetings

31. **You are teaching the multiplication tables to your students. You find a wonderful song that helps them memorize the facts. What are the students learning? ***

Mark only one oval.

- Mathematics
- Music
- Mathematics and Music
- Other

32. **The students are reading a book they enjoy. To encourage further understanding, you give them a script and have them act it out. They do a wonderful job and when assessed, demonstrated that they comprehend nuances in the book. Is this a good transdisciplinary integration with drama? ***

Mark only one oval.

- Yes
- No

33. **Why or why not? ***

34. Please describe an integration with music, art, drama, or PE that you have done or may do. *

35. What professional development courses would be beneficial to you? (check as many as apply)

Check all that apply.

PYP Introduction

PYP Inquiry

Planning for Integration

Course content, i.e. Mathematics, Language Arts, etc.)

Using the PYP planner

36. Is there anything else you would like to mention regarding your opinion of the PYP and how it works in your school?

37. I would like to interview some respondents to this survey to get more information. Would you be willing to be interviewed? If so, please put your contact information below. Thank you very much for your help. *

SPECIALIST TEACHER SURVEY

Specialist Teacher Survey

This survey is one section of a study into the question of transdisciplinary education in remote schools. Your answers will only be seen by the primary researcher. Please answer completely and to the best of your ability.

* Required

1. Do you work at YPJ or MZS?

Mark only one oval.

- YPJ
 MZS

2. How many years have you been an educator? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

3. What is your highest level of formal education? *

Mark only one oval.

- High School Diploma
 Bachelor's Degree
 Master's Degree
 Doctoral Degree

4. What field are your degrees in? *

5. How many years have you worked in PYP schools? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

6. **How many years have you worked at your current school? / ***

Mark only one oval.

- 0-3
- 3-6
- 7-10
- More than 10

7. **Please describe what transdisciplinary education means to you. ***

8. **How well do you think transdisciplinary education works in your school? ***

Mark only one oval.

- 1 2 3 4 5 6 7
-
- Very Poorly Very Well

9. **How confident are you in the practice of transdisciplinary teaching at your school? ***

Mark only one oval.

- 1 2 3 4 5 6 7
-
- Not at all confident Very confident

10. **What has helped you to understand transdisciplinary teaching? Check as many as apply. ***

Check all that apply.

- PYP Workshops
- Mentoring by another teacher
- Mentoring by the PYP coordinator or Curriculum coordinator
- Staff Professional Development
- Personal study
- Other: _____

11. **If other, please describe. / Jelaskan pilihan lain - lain anda. ***

12. **Do you meet with classroom teachers to plan units of inquiry? ***

Mark only one oval.

- I never meet with classroom teachers to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.

13. **Do you meet with other specialist to plan units of inquiry? ***

Mark only one oval.

- I never meet with other specialists to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.

14. **How often do you meet with your PYP Coordinator or Curriculum director when preparing and teaching Units of Inquiry? ***

Check all that apply.

- We never meet.
- We meet once for every unit, just to plan.
- We meet once a year to set out the POI, then I choose the units I will integrate with and plan by myself.
- We meet regularly during a unit.

15. **What specialist classes in your school integrate with your Program of Inquiry? ***

Check all that apply.

- Art
- Music
- PE
- Other

16. **How well do you feel the units of inquiry are represented in your class? ***

Mark only one oval.

	1	2	3	4	5	
POI units are never considered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	POI units are a part of teaching and learning in specialist classes

17. **How often does Music integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

18. **How often does Art integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

19. **How often does PE integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

20. **How is the initial planning handled? ***

Mark only one oval.

- The classroom teacher plans the unit with or without the PYP coordinator, then specialists add their part.
- Classroom teachers, specialists, and PYP coordinator come together to plan out the units.
- PYP coordinator meets with classroom teachers and specialists separately to plan.
- Classroom teachers and specialists each add to the planner, then the PYP coordinator reviews it.

21. **How often do you work together with a specialist and students? ***

Mark only one oval.

	1	2	3	4	5	
Never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very regularly

22. **In your opinion, does your curriculum fit with the PYP elements? ***

Mark only one oval.

	1	2	3	4	5	6	7	
No. I think our curriculum does not fit the PYP framework.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very well. I think the curriculum fits inside the PYP framework easily and naturally.

23. In your opinion, does the idea of key concepts (form, function, causation, change, connection, perspective, responsibility, and reflection) of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

24. In your opinion, does the Knowledge element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

25. In your opinion, does the Learner Profile element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

26. In your opinion, do the Approaches to Learning in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

27. In your opinion, does the Action element in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

28. In your opinion, does the Agency element in the PYP align with your school's mission and vision statements? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

29. **In your opinion, does your curriculum align with your school's mission and vision statement?** *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

30. **Which aspects of the PYP, as evidenced in your school, do you feel are valuable? (Check as many as apply) ***

Check all that apply.

- Learner Profile
- Teaching conceptually
- Approaches to Learning (ATL's)
- Agency
- Action
- Exhibition
- Holistic Assessment
- International-Mindedness
- Community of Learners
- Units of Inquiry
- PYP Planner
- Transdisciplinary Teaching and Learning
- Planning meetings

31. **Students in grade 3 are working on multiplication facts in their home classroom. The teacher asks you to teach them a song to help them remember the facts. What are the students learning? ***

Mark only one oval.

- Mathematics
- Music
- Mathematics and Music

32. **The students are reading a book they enjoy. To encourage further understanding, their teacher gives them a script and has them act it out. They do a wonderful job and when assessed, demonstrate that they comprehend nuances in the book. Is this a good transdisciplinary integration with drama? ***

Mark only one oval.

- Yes
- No

33. **Why or why not? ***

34. **What professional development courses would be beneficial to you? (check as many as apply)**

*

Mark only one oval.

- PYP Introduction
- PYP Inquiry
- Planning for Integration
- Course content (i.e, Art, Music, Drama, Etc.
- Using the PYP planner
- Other

35. **Is there anything else you would like to mention regarding your opinion of the PYP and how it works in your school?**

PYP/CURRICULUM COORDINATOR SURVEY

PYP Coordinator/Curriculum Coordinator Survey

This survey is one section of a study into the question of transdisciplinary education in remote schools. Your answers will only be seen by the primary researcher. Please answer completely and to the best of your ability. / Survei ini adalah salah satu bagian dari penelitian tentang pendidikan transdisipliner di sekolah - sekolah terpencil. Jawaban anda hanya akan dilihat oleh peneliti. Mohon menjawab dengan lengkap dan sesuai pemahaman anda.

* Required

1. Do you work at YPJ or MZS?

Mark only one oval.

- YPJ
 MZS

2. How many years have you been an educator? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

3. What is your highest level of formal education? *

Mark only one oval.

- High School Diploma
 Bachelor's Degree
 Master's Degree
 Doctoral Degree

4. What field are your degrees in? *

5. How many years have you worked in PYP schools? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

6. **How many years have you worked at your current school? ***

Mark only one oval.

- 0-3
- 3-6
- 7-10
- More than 10

7. **What best describes your job responsibilities? (Check all that apply.) ***

Check all that apply.

- Classroom teacher
- Creative Arts Specialist teacher (Music, Visual Arts, Dance, Drama)
- Other Specialist teacher
- PYP Coordinator
- Curriculum Coordinator
- Administrator

8. **Please describe what transdisciplinary education means to you. ***

9. **How well do you think transdisciplinary education works in your school? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

10. **How confident are you in the practice of transdisciplinary teaching at your school? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Not at all confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very confident

11. What has helped you to understand transdisciplinary teaching? Check as many as apply. *

Check all that apply.

- PYP Workshops
- Mentoring by another teacher
- Mentoring by the PYP coordinator or Curriculum coordinator
- Staff Professional Development
- Personal study
- Other: _____

12. If other, please describe. *

13. Do you meet with Art or Music specialists to plan units of inquiry? *

Mark only one oval.

- I never meet with Art or Music specialists to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.
- Other: _____

14. If others, please explain.

15. Do you meet with PE or Bahasa Indonesia specialists to plan units of inquiry? *

Mark only one oval.

- I never meet with PE or Bahasa Indonesia specialists to plan units.
- We meet at least once for every unit.
- We meet several times throughout the course of the unit.
- We have one formal planning unit, then we informally check throughout the unit.
- Other: _____

16. If others, please explain.

17. How often do you meet with classroom teachers when preparing and teaching Units of Inquiry? (Select as many as necessary to best answer.) *

Check all that apply.

- We never meet.
- We meet once for every unit, just to plan.
- We meet once a year to set out the POI, then I plan the UOI's myself.
- We meet regularly during a unit.
- I plan the unit, then present it to the classroom teachers.
- Other: _____

18. If other, please explain.

19. What specialist classes in your school integrate with your Program of Inquiry? *

Check all that apply.

- Art
- Music
- PE
- Other

20. How well do you feel the units of inquiry are represented in specialist classes? *

Mark only one oval.

	1	2	3	4	5	
POI units are never considered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	POI units are a part of teaching and learning in specialist classes.

21. **How often does Music integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

22. **How often does Art integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

23. **How often does PE integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

24. **How is the planning handled? ***

Mark only one oval.

- I meet with the classroom teacher to plan the unit, then the specialists contribute their part.
- Myself, the classroom teachers, and specialists all meet together to plan the unit.
- The classroom teacher plans the units, then the specialist teachers put their parts in, then I review them all.
- I meet separately with the classroom teachers and specialists to plan.

25. **How often do you work together with a specialist and students? ***

Mark only one oval.

	1	2	3	4	5	
Never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very regularly

26. **In your opinion, does your curriculum fit with the PYP elements? ***

Mark only one oval.

	1	2	3	4	5	6	7	
No. Our curriculum does not fit with PYP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very well. I think the curriculum fits inside the PYP framework easily and naturally.

27. In your opinion, does the Key Concept element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

28. In your opinion, does the Knowledge element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

29. In your opinion, does the Learner Profile element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

30. In your opinion, do the Approaches to Learning in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

31. In your opinion, does the Action element in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

32. In your opinion, does the Agency element in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No / Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes / Ya

33. In your opinion, does your curriculum align with your school's mission and vision statement?

*

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

34. Which aspects of the PYP, as evidenced in your school, do you feel are valuable? (Check as many as apply) *

Check all that apply.

- Learner Profiles
- Teaching conceptually
- Approaches to Learning (ATL's)
- Agency
- Action
- Exhibition
- Holistic Assessment
- International-Mindedness
- Community of Learners
- Units of Inquiry
- PYP Planner
- Transdisciplinary Teaching and Learning
- Planning Meetings

35. The students are reading a book they enjoy. To encourage further understanding, their teacher gives them a script and has them act it out. They do a wonderful job and when assessed, demonstrated that they comprehend nuances in the book. Is this a good transdisciplinary integration with drama? *

Mark only one oval.

- Yes
- No

36. Why or why not?

ADMINISTRATOR SURVEY

Administrator Survey

This survey is one section of a study into the question of transdisciplinary education in remote schools. Your answers will only be seen by the primary researcher. Please answer completely and to the best of your ability.

* Required

1. Do you work at YPJ or MZS?

Mark only one oval.

YPJ

MZS

2. How many years have you been an educator? *

Mark only one oval.

0-3

3-6

7-10

More than 10

3. What is your highest level of formal education? *

Mark only one oval.

High School Diploma

Bachelor's Degree

Master's Degree

Doctoral Degree

4. What field are your degrees in? *

5. How many years have you worked in PYP schools? *

Mark only one oval.

0-3

3-6

7-10

More than 10

6. How many years have you worked at your current school? *

Mark only one oval.

- 0-3
- 3-6
- 7-10
- More than 10

7. What best describes your job responsibilities? (Check all that apply.) *

Check all that apply.

- Classroom teacher
- Creative Arts Specialist teacher (Music, Visual Arts, Dance, Drama)
- Other Specialist teacher
- PYP Coordinator
- Curriculum Coordinator
- Administrator

8. Please describe what transdisciplinary education means to you. *

9. How well do you think transdisciplinary education works in your school? *

Mark only one oval.

	1	2	3	4	5	6	7	
Very Poorly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Well

10. How confident are you in the practice of transdisciplinary teaching at your school? *

Mark only one oval.

	1	2	3	4	5	6	7	
Not at all confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very confident

11. **What has helped you to understand transdisciplinary teaching? Check as many as apply. ***

Check all that apply.

- PYP Workshops
- Mentoring by another teacher
- Mentoring by the PYP coordinator or Curriculum coordinator
- Staff Professional Development
- Other

12. **If other, please describe. ***

13. **Do you believe your teachers are comfortable with the idea of transdisciplinary teaching? ***

Mark only one oval.

1 2 3 4 5 6 7

Not at all. It's a difficult idea to communicate.

Completely comfortable with it. Teachers regularly work across disciplines to develop a concept.

14. **To what level are you involved with the planning of units? ***

Mark only one oval.

1 2 3 4 5

Not at all involved

Very involved

15. **How often do you review the POI and Units of Inquiry? ***

Mark only one oval.

1 2 3 4 5 6 7

Never. That is not a part of my job.

Regularly. I need to stay aware of what is happening in the units. /

16. **Do you ever meet with teachers about their units of inquiry? ***

Check all that apply.

- We never meet.
- We meet once for every unit, just to touch base.
- Occasionally
- Quite often

17. **What specialist classes in your school integrate with your Program of Inquiry? ***

Check all that apply.

- Art
- Music
- PE
- Bahasa Indonesia

18. **How well do you feel the units of inquiry are represented in specialist classes? ***

Mark only one oval.

	1	2	3	4	5	
POI units are never considered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	POI units are a part of teaching and learning in specialist classes.

19. **To the best of your knowledge, how often does Music integrate with POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

20. **To the best of your knowledge, how often does Art integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

21. **To the best of your knowledge, how often does PE integrate with the POI units? ***

Mark only one oval.

- 0 units are integrated
- 1 unit each year is fully integrated
- 2 units each year are fully integrated
- 3 or more units each year are fully integrated

22. **In your opinion, does your curriculum fit with the PYP elements (Learner Profiles, Key concepts, Knowledge, Approaches to Learning, Action, Agency, and International-Mindedness)? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very well. I think the curriculum fits inside the PYP framework easily and naturally.

23. Please expand on your answer.

24. In your opinion, does the idea of key concepts (form, function, causation, change, connection, perspective, responsibility, and reflection) of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

25. In your opinion, does the Knowledge element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

26. In your opinion, does the Learner Profile element of the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

27. In your opinion, do the Approaches to Learning in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

28. In your opinion, does the Action element in the PYP align with your school's mission and vision statement? *

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

29. **In your opinion, does the Agency element in the PYP align with your school's mission and vision statement? ***

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

30. **In your opinion, does your curriculum align with your school's mission and vision statement? ***

Mark only one oval.

	1	2	3	4	5	6	7	
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes

31. **Which aspects of the PYP, as evidenced in your school, do you feel are valuable? ***

Check all that apply.

- Learner Profiles
- Teaching conceptually
- Approaches to Learning (ATL's)
- Agency
- Action
- Exhibition
- Holistic Assessment
- International-Mindedness
- Community of Learners
- Units of Inquiry
- PYP Planner
- Transdisciplinary Teaching and Learning
- Planning Meetings

32. **A classroom teacher is teaching the multiplication tables to the students. She/He finds a wonderful song that helps them memorize the facts. What are the students learning? ***

Mark only one oval.

- Mathematics
- Music
- Mathematics and Music

33. **Students are reading a book they enjoy. To encourage further understanding, their teacher gives them a script and have them act it out. They do a wonderful job and when assessed, demonstrated that they comprehend nuances in the book. Is this a good transdisciplinary integration with drama? ***

Mark only one oval.

- Yes
- No

34. Is there anything else you would like to mention regarding your opinion of the PYP and how it works in your school?

Powered by
 Google Forms

SURVEI GURU KELAS

Survei Guru Kelas

Survei ini adalah salah satu bagian dari penelitian tentang pendidikan transdisipliner di sekolah - sekolah terpencil. Jawaban anda hanya akan dilihat oleh peneliti. Mohon menjawab dengan lengkap dan sesuai pemahaman anda.

* Required

1. Anda bekerja di YPJ atau MZS?

Mark only one oval.

- YPJ
 MZS

2. Berapa tahun anda bekerja sebagai pendidik? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

3. Apa pendidikan formal terakhir anda? *

Mark only one oval.

- SMA
 S1
 S2
 S3

4. Apa jurusan pendidikan terakhir anda? *

5. Berapa tahun anda bekerja di sekolah PYP? *

Mark only one oval.

- 0-3
 3-6
 7-10
 More than 10

6. **Berapa tahun anda bekerja di sekolah anda sekarang? ***

Mark only one oval.

- 0-3
- 3-6
- 7-10
- More than 10

7. **Apa saja jabatan tanggung jawab pekerjaan anda? (Pilih yang sesuai dengan anda) ***

Check all that apply.

- Guru kelas
- Guru kesenian (Musik, Desain Visual, Tari, Drama)
- Guru spesialis yang lain
- Koodinator PYP
- Koordinator Kurikulum
- Staf Administrasi

8. **Gambarkan arti pendidikan transdisipliner menurut anda. ***

9. **Seberapa baik praktek pendidikan transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat Tidak Baik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat Baik Sekali

10. **Seberapa percaya diri anda dalam praktek pengajaran transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat tidak percaya diri	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat percaya diri

11. **Apa yang membantu anda mengerti pengajaran transdisipliner? Pilih yang sesuai dengan anda. ***

Check all that apply.

- Lokakarya PYP
- Mentoring dari guru lain
- Mentoring dari Koordinator PYP dan Koordinator Kurikulum
- Pengembangan Profesional
- Belajar Pribadi
- Other: _____

12. **Jelaskan pilihan lain - lain anda.**

13. **Apakah anda bertemu dengan guru Kesenian atau guru Musik untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- Saya tidak pernah bertemu guru Kesenian atau Musik untuk merencanakan unit.
- Kita bertemu setidaknya satu kali untuk setiap unit
- Kita bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.

14. **Apakah anda bertemu dengan guru Pendidikan Jasmani dan Kesehatan atau Bahasa Inggris untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- Saya tidak pernah bertemu guru Pendidikan Jasmani dan Kesehatan atau guru Bahasa Inggris untuk merencanakan unit.
- Kita bertemu setidaknya satu kali untuk setiap unit
- Kita bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.

15. **How often do you meet with other classroom teachers when preparing and teaching Units of Inquiry? (Select as many as necessary to best answer.) / Seberapa sering anda bertemu dengan guru kelas yang lain ketika mempersiapkan dan mengajar Satuan Inkuiri? ***

Check all that apply.

- Kita tidak pernah bertemu
- Kita bertemu sekali setiap unit untuk perencanaan.
- Kita bertemu sekali setahun untuk membuat Program Inkuiri, lalu saya merencanakan satuan inkuiri sendiri
- Kami bertemu secara reguler selama unit berlangsung.

16. **Kelas spesialis apa di sekolah anda yang berintegrasi dengan Program Inkuiri anda? ***

Check all that apply.

- Kesenian
- Musik
- Pendidikan Jasmani dan Kesehatan
- Lain - lain

17. **Seberapa baik satuan inkuiri dipraktekkan di kelas spesialis? ***

Mark only one oval.

	1	2	3	4	5	
Unit POI tidak pernah diikutsertakan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unit - unit POI adalah bagian dari proses belajar dan mengajar di kelas spesialis.

18. **Seberapa sering kelas Musik berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

19. **Seberapa sering kelas Kesenian berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

20. **Seberapa sering kelas Pendidikan Jasmani dan Kesehatan berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

21. **Bagaimana pembuatan lembar perencanaan pembelajaran? ***

Mark only one oval.

- Saya bertemu dengan koordinator PYP untuk perencanaan unit, kemudian guru spesialis berkontribusi di bagian mereka.
- Saya melakukan perencanaan unit, guru spesialis mengisi bagian mereka, dan koordinator PYP meninjau semuanya.
- Koordinator PYP bertemu secara terpisah dengan guru kelas dan guru spesialis untuk membuat perencanaan unit.

22. **Seberapa sering anda bekerja bersama guru spesialis dan siswa - siswi? ***

Mark only one oval.

	1	2	3	4	5	
Tidak pernah	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Secara reguler

23. **Menurut pendapat anda, apakah kurikulum sekolah anda cocok dengan elemen PYP? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak. Kurikulum kami tidak cocok dengan kurikulum PYP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik. Kurikulum kami cocok dengan kurikulum PYP.

24. **Menurut pendapat anda, apakah kurikulum anda cocok dengan elemen PYP (Profil Pembelajar, Konsep - Konsep Kunci, Pengetahuan, Pendekatan Pembelajaran, Tindakan, Agensi, dan Berwawasan Internasional) ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

25. **Berdasarkan pendapat anda, apakah elemen Pengetahuan dari PYP sejalan dengan visi misi sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

26. Berdasarkan pendapat anda, apakah elemen Profil Pembelajar dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

27. Berdasarkan pendapat anda, apakah elemen Pendekatan Pengajaran dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

28. Berdasarkan pendapat anda, apakah elemen Tindakan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

29. Berdasarkan pendapat anda, apakah elemen TAgensi dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
No / Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes / Ya

30. Berdasarkan pendapat anda, apakah elemen Agensi dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

31. **Apa saja aspek PYP yang bermakna bagi anda? (Pilihan dapat lebih dari satu) ***

Check all that apply.

- Profil Pembelajar
- Konsep Pengajaran
- Pendekatan Pembelajaran
- Agensi
- Tindakan
- Eksibisi
- Penilaian Holistik
- Wawasan Internasional
- Komunitas Pembelajar
- Satuan Inkuiri
- Lembar Perencanaan PYP
- Pengajaran dan Pembelajaran Transdisipliner
- Pertemuan Perencanaan

32. **Anda sedang mengajarkan tabel perkalian kepada siswa siswi anda. Anda menemukan lagu yang cocok untuk membantu mereka mengingat konsep perkalian. Siswa - siswa anda belajar apa? ***

Mark only one oval.

- Matematika
- Musik
- Matematika dan Musik
- Lain - lain

33. **Siswa - siswi anda sedang membaca buku yang mereka suka. Untuk meningkatkan pemahaman, anda memberi mereka naskah untuk didramatisasikan. Mereka menunjukkan hasil yang baik ketika penilaian karena menunjukkan pemahaman nuansa dalam buku. Apakah ini integrasi antar disiplin yang baik dengan drama? ***

Mark only one oval.

- Ya
- Tidak

34. **Jelaskan kenapa alasan anda iya dan kenapa tidak? ***

SURVEI GURU SPESIALIS

Survei Guru Spesialis

Survei ini adalah salah satu bagian dari penelitian tentang pendidikan transdisipliner di sekolah - sekolah terpencil. Jawaban anda hanya akan dilihat oleh peneliti. Mohon menjawab dengan lengkap dan sesuai pemahaman anda.

* Required

1. Anda bekerja di YPJ atau MZS?

Mark only one oval.

- YPJ
 MZS

2. Berapa tahun anda bekerja sebagai pendidik? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 Tahun

3. Apa pendidikan formal terakhir anda? *

Mark only one oval.

- SMA
 S1
 S2
 S3

4. Apa jurusan pendidikan terakhir anda? *

5. Berapa tahun anda bekerja di sekolah PYP? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 Tahun

6. **Berapa tahun anda bekerja di sekolah anda sekarang? ***

Mark only one oval.

- 0-3
- 3-6
- 7-10
- Lebih dari 10 Tahun

7. **Gambarkan arti pendidikan transdisipliner menurut anda. ***

8. **Seberapa baik praktek pendidikan transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat tidak baik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik sekali

9. **Seberapa percaya diri anda dalam praktek pengajaran transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat tidak percaya diri	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat percaya diri

10. **Apa yang membantu anda mengerti pengajaran transdisipliner? Pilih yang sesuai dengan anda. ***

Check all that apply.

- Lokakarya PYP
- Mentoring dari guru lain
- Mentoring dari Koordinator PYP dan Koordinator Kurikulum
- Pengembangan Profesional
- Belajar Pribadi
- Other: _____

11. **Jelaskan pilihan lain - lain anda. ***

12. **Apakah anda bertemu dengan guru kelas untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- Saya tidak pernah bertemu dengan guru kelas untuk membuat perencanaan unit.
- Kami bertemu sekali setiap unit.
- Kami bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.

13. **Apakah anda bertemu dengan guru spesialis lain untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- Saya tidak pernah bertemu guru spesialis untuk merencanakan unit.
- Kita bertemu setidaknya satu kali untuk setiap unit
- Kita bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.

14. **Seberapa sering anda bertemu dengan Koordinator PYP atau Koordinator Kurikulum ketika mempersiapkan pembelajaran Satuan Inkuiri? ***

Check all that apply.

- Kita tidak pernah bertemu
- Kita bertemu sekali setiap unit untuk perencanaan.
- Kita bertemu sekali setahun untuk membuat Program Inkuiri, lalu saya merencanakan satuan inkuiri sendiri
- Kami bertemu secara reguler selama unit berlangsung.

15. **Kelas spesialis apa yang berintegrasi dengan Program Inkuiri di sekolah anda? ***

Check all that apply.

- Kesenian
- Musik
- Pendidikan Jasmani dan Kesehatan
- Lain - lain

16. **Seberapa baik unit di satuan inkuiri dipraktekkan di kelas anda? ***

Mark only one oval.

1 2 3 4 5

Unit POI tidak pernah
diikutsertakan.

Unit - unit POI adalah bagian dari
proses belajar dan mengajar di
kelas spesialis.

17. **Seberapa sering kelas Musik berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

18. **Seberapa sering kelas Kesenian berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

19. **Seberapa sering kelas Pendidikan Jasmani dan Kesehatan berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

20. **Bagaimana perencanaan awal dilakukan? ***

Mark only one oval.

- Guru kelas dengan atau tanpa koordinator PYP untuk perencanaan unit, kemudian guru spesialis berkontribusi di bagian mereka.
- Guru kelas, guru spesialis dan Koordinator PYP bersama - sama membuat perencanaan unit.
- Koordinator PYP secara terpisah bertemu guru kelas dan guru spesialis untuk membuat perencanaan.
- Guru kelas dan guru spesialis masing - masing melengkapi lembar perencanaan, lalu Koordinator PYP meninjau semuanya.

21. **Seberapa sering anda bekerja bersama guru spesialis dan siswa - siswi? ***

Mark only one oval.

	1	2	3	4	5	
Tidak pernah	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Secara reguler

22. Menurut pendapat anda, apakah kurikulum sekolah anda cocok dengan elemen PYP? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak. Kurikulum kami tidak cocok dengan kurikulum PYP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik. Kurikulum kami cocok dengan kurikulum PYP.

23. Menurut pendapat anda, apakah ide dari konsep - konsep kunci PYP (bentuk, fungsi, sebab-akibat, perubahan, hubungan, perspektif, tanggung jawab dan kajian diri) sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

24. Berdasarkan pendapat anda, apakah elemen Pengetahuan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

25. Berdasarkan pendapat anda, apakah elemen Profil Pembelajar dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

26. Berdasarkan pendapat anda, apakah elemen Pendekatan Pengajaran dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

27. Berdasarkan pendapat anda, apakah elemen Tindakan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

28. Berdasarkan pendapat anda, apakah elemen Agensi dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

29. Berdasarkan pendapat anda, apakah kurikulum sekolah sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

30. Apa saja aspek PYP yang bermakna bagi anda? (Pilihan dapat lebih dari satu) *

Check all that apply.

- Profil Pembelajar
- Konsep Pengajaran
- Pendekatan Pembelajaran
- Agensi
- Tindakan
- Eksibisi
- Penilaian Holistik
- IWawasan Internasional
- Komunitas Pembelajar
- Satuan Inkuiri
- Lembar Perencanaan PYP
- Pengajaran dan Pembelajaran Transdisipliner
- Pertemuan Perencanaan

31. **Siswa - siswi di kelas 3 sedang belajar tentang perkalian di kelas mereka. Guru meminta anda untuk mengajarkan mereka sebuah lagu untuk membantu mereka mengingat materi perkalian. Apa yang dipelajari oleh siswa – siswi? ***

Mark only one oval.

- Matematika
 Musik
 Matematika dan Musik

32. **Siswa – siswi sedang membaca buku yang mereka suka. Untuk meningkatkan pemahaman, guru mereka memberikan naskah dan mereka mendramatisasikannya. Mereka menampilkan yang terbaik dan ketika penilaian, mereka menunjukkan bahwa mereka mengerti nuansa di dalam buku. Apakah ini contoh integrasi transdisipliner yang baik dengan drama? ***

Mark only one oval.

- Ya
 Tidak

33. **Jelaskan kenapa alasan anda iya dan kenapa tidak? ***

34. **Pelatihan pengembangan professional apa yang bermanfaat bagi anda? ***

Mark only one oval.

- Pengantar PYP
 Inkuiri PYP
 Perencanaan untuk Integrasi
 Mata pelajaran (Matematika, Bahasa, dll)
 Penggunaan Lembar Perencanaan PYP
 Option 6

35. **Apakah ada pendapat anda yang lain tentang praktek PYP di sekolah anda?**

36. **Saya ingin mewawancarai beberapa responden survei ini untuk mendapat informasi lebih lanjut. Apakah anda bersedia untuk diwawancarai? Jika anda bersedia, mohon untuk mengisi informasi kontak anda di bawah ini. Terima kasih banyak atas bantuan anda. ***

Powered by
 Google Forms

SURVEI KOORDINATOR PYP/KURIKULUM

Survei - Koordinator PYP/Koordinator Kurikulum

Survei ini adalah salah satu bagian dari penelitian tentang pendidikan transdisipliner di sekolah - sekolah terpencil. Jawaban anda hanya akan dilihat oleh peneliti. Mohon menjawab dengan lengkap dan sesuai pemahaman anda.

* Required

1. Anda bekerja di YPJ atau MZS?

Mark only one oval.

- YPJ
 MZS

2. Berapa tahun anda bekerja sebagai pendidik? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 Tahun

3. What is your highest level of formal education? / Apa pendidikan formal terakhir anda? *

Mark only one oval.

- SMA
 S1
 S2
 S3

4. Apa jurusan pendidikan terakhir anda? *

5. Berapa tahun anda bekerja di sekolah PYP? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 Tahun

6. **Berapa tahun anda bekerja di sekolah anda sekarang? ***

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 Tahun

7. **Apa saja jabatan tanggung jawab pekerjaan anda? (Pilih yang sesuai dengan anda) ***

Check all that apply.

- Guru kelas
 Guru kesenian (Musik, Desain Visual, Tari, Drama)
 Guru spesialis yang lain
 Koordinator PYP
 Koordinator Kurikulum
 Staff Administrasi

8. **Gambarkan arti pendidikan transdisipliner menurut anda. ***

9. **Seberapa baik praktek pendidikan transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat tidak baik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik sekali

10. **Seberapa percaya diri anda dalam praktek pengajaran transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat tidak percaya diri	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat percaya diri

11. **Apa yang membantu anda mengerti pengajaran transdisipliner? Pilih yang sesuai dengan anda. ***

Check all that apply.

- Lokakarya PYP
- Mentoring dari guru lain
- Mentoring dari Koordinator PYP dan Koordinator Kurikulum
- Pengembangan Profesional
- Belajar Pribadi
- Other: _____

12. **If other, please describe. / Jelaskan pilihan lain - lain anda. ***

13. **Apakah anda bertemu dengan guru Kesenian atau guru Musik untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- Saya tidak pernah bertemu guru Kesenian atau Musik untuk merencanakan unit.
- Kita bertemu setidaknya satu kali untuk setiap unit
- Kita bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.
- Other: _____

14. **Jelaskan jika anda memilih lain - lain.**

15. **Apakah anda bertemu dengan guru Pendidikan Jasmani dan Kesehatan atau Bahasa Inggris untuk merencanakan satuan inkuiri anda? ***

Mark only one oval.

- tidak pernah bertemu guru Pendidikan Jasmani dan Kesehatan atau guru Bahasa Inggris untuk merencanakan unit.
- Kita bertemu setidaknya satu kali untuk setiap unit
- Kita bertemu beberapa kali selama pembelajaran unit berlangsung.
- Kita memiliki satu perencanaan unit formal, lalu mengecek selama unit berlangsung secara informal.
- Other: _____

16. **Jelaskan jika anda memilih lain - lain.**

17. **Seberapa sering anda bertemu dengan guru kelas ketika mempersiapkan dan mengajar Satuan Inkuiri? ***

Check all that apply.

- Kita tidak pernah bertemu
- Kita bertemu sekali setiap unit untuk perencanaan.
- Kita bertemu sekali setahun untuk membuat Program Inkuiri, lalu saya merencanakan satuan inkuiri sendiri
- Kami bertemu secara reguler selama unit berlangsung.
- Saya membuat perencanaan unit, lalu menyampaikannya kepada guru kelas.
- Other: _____

18. **Jelaskan jika anda memilih lain - lain.**

19. **Kelas spesialis apa di sekolah anda yang berintegrasi dengan Program Inkuiri anda? ***

Check all that apply.

- Kesenian
- Musik
- Pendidikan Jasmani dan Kesehatan
- Lain - lain

20. **Seberapa baik satuan inkuiri ini dipraktekkan di kelas spesialis? ***

Mark only one oval.

1 2 3 4 5

Unit POI tidak pernah
diikutsertakan.

Unit - unit POI adalah bagian dari
proses belajar dan mengajar di
kelas spesialis.

21. **Seberapa sering kelas Musik berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

22. **Seberapa sering kelas Kesenian berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

23. **Seberapa sering kelas Pendidikan Jasmani dan Kesehatan berintegrasi dengan unit Program Inkuiri? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

24. **Bagaimana pembuatan lembar perencanaan pembelajaran? ***

Mark only one oval.

- Saya bertemu dengan guru kelas untuk perencanaan unit, kemudian guru spesialis berkontribusi pada bagian mereka.
- Saya, guru kelas dan guru spesialis bertemu bersama untuk merencanakan unit.
- Guru kelas melakukan perencanaan unit, guru spesialis menambah bagian mereka, dan saya meninjau semuanya.
- Saya secara terpisah bertemu dengan guru kelas dan guru spesialis untuk merencanakan unit pembelajaran.
- Other: _____

25. **Seberapa sering anda bekerja bersama guru spesialis dan siswa - siswi? ***

Mark only one oval.

- 1 2 3 4 5
-
- Tidak Pernah Sangat sering, secara reguler
-

26. Menurut pendapat anda, apakah kurikulum sekolah anda cocok dengan elemen PYP? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak. Kurikulum kami tidak cocok dengan kurikulum PYP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik. Kurikulum kami cocok dengan kurikulum PYP.
<hr/>								

27. Berdasarkan pendapat anda, apakah elemen Konsep - konsep Kunci dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya
<hr/>								

28. Berdasarkan pendapat anda, apakah elemen Pengetahuan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya
<hr/>								

29. Berdasarkan pendapat anda, apakah elemen Profil Pembelajar dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya
<hr/>								

30. Berdasarkan pendapat anda, apakah elemen Pendekatan Pembelajaran dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya
<hr/>								

31. Berdasarkan pendapat anda, apakah elemen Tindakan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
<hr/>								
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya
<hr/>								

32. Berdasarkan pendapat anda, apakah elemen Agensi dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

33. Berdasarkan pendapat anda, apakah kurikulum sekolah sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

34. Apa saja aspek PYP yang bermakna bagi anda? (Pilihan dapat lebih dari satu) *

Check all that apply.

- Profil Pembelajar
- Konsep Pengajaran
- Pendekatan Pembelajaran
- Agensi
- Tindakan
- Eksibisi
- Penilaian Holistik
- Wawasan Internasional
- Komunitas Pembelajar
- Satuan Inkuiri
- Lembar Perencanaan PYP
- Pengajaran dan Pembelajaran Transdisipliner
- Pertemuan Perencanaan

35. Siswa siswi sedang membaca buku yang mereka sukai. Untuk meningkatkan pemahaman, guru mereka memberikan naskah yang akan didramatisasikan. Mereka menunjukkan hasil yang baik ketika penilaian karena menunjukkan pemahaman nuansa dalam buku. Apakah ini integrasi antar disiplin yang baik dengan drama? *

Mark only one oval.

- Ya
- Tidak

36. **Jelaskan kenapa iya dan kenapa tidak?**

37. **Apakah ada pendapat anda yang lain tentang praktek PYP di sekolah anda?**

38. **Saya ingin mewawancarai beberapa responden survei ini untuk mendapat informasi lebih lanjut. Apakah anda bersedia untuk diwawancara? Jika anda bersedia, mohon untuk mengisi informasi kontak anda di bawah ini. Terima kasih banyak atas bantuan anda. ***

SURVEI STAF ADMINISTRASI

Survei Staf Administrasi

Survei ini adalah salah satu bagian dari penelitian tentang pendidikan transdisipliner di sekolah - sekolah terpencil. Jawaban anda hanya akan dilihat oleh peneliti. Mohon menjawab dengan lengkap dan sesuai pemahaman anda.

*Required

1. Anda bekerja di YPJ atau MZS?

Mark only one oval.

- YPJ
 MZS

2. Berapa tahun anda bekerja sebagai pendidik? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 tahun

3. Apa pendidikan formal terakhir anda? *

Mark only one oval.

- SMA
 S1
 S2
 S3

4. Apa jurusan pendidikan terakhir anda? *

5. Berapa tahun anda bekerja di sekolah PYP? *

Mark only one oval.

- 0-3
 3-6
 7-10
 Lebih dari 10 tahun

6. **Berapa tahun anda bekerja di sekolah anda sekarang? ***

Mark only one oval.

- 0-3
- 3-6
- 7-10
- Lebih dari 10 tahun

7. **Apa saja jabatan tanggung jawab pekerjaan anda? (Pilih yang sesuai dengan anda) ***

Check all that apply.

- Guru kelas
- Guru kesenian (Musik, Desain Visual, Tari, Drama)
- Guru spesialis yang lain
- Koordinator PYP
- Koordinator Kurikulum
- Staf Administrasi

8. **Gambarkan arti pendidikan transdisipliner bagi diri anda. ***

9. **Seberapa baik praktek pendidikan transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sangat Tidak Baik	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat Baik Sekali

10. **Seberapa percaya diri anda dalam praktek pengajaran transdisipliner di sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Sama sekali tidak percaya diri	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat percaya diri

11. **Apa yang membantu anda mengerti pengajaran transdisipliner? Pilih yang sesuai dengan anda. ***

Check all that apply.

- Lokakarya PYP
- Mentoring dari guru lain
- Mentoring dari Koordinator PYP dan Koordinator Kurikulum
- Pengembangan Profesional
- Lain - lain

12. **Jelaskan pilihan lain - lain anda. ***

13. **Apakah anda yakin bahwa guru - guru anda berkembang dengan pendekatan pengajaran transdisipliner? ***

Mark only one oval.

1 2 3 4 5 6 7

Tidak sama sekali.
Pendekatan ini sangat
sulit untuk di
sampaikan.

Sangat yakin
dengan
pendekatan ini.
Guru - guru
secara regular
berkolaborasi
lintas disiplin
untuk
mengembangkan
konsep.

14. **Berapa level keterlibatan anda dalam perencanaan unit? ***

Mark only one oval.

1 2 3 4 5

Sangat tidak terlibat Sangat terlibat

15. **Seberapa sering anda meninjau Program Inkuiri dan Satuan Inkuiri? ***

Mark only one oval.

1 2 3 4 5 6 7

Tidak pernah. Ini bukan
bagian dari pekerjaan
saya.

Secara
regular. Saya
harus tahu
perkembangan
yang ada
dalam unit.

16. **Apakah anda pernah membahas dengan guru - guru lain tentang satuan inkuiri mereka? ***

Check all that apply.

- Kami tidak pernah bertemu.
- Kita bertemu sekali setiap unit baru.
- kadang - kadang.
- Sangat sering.

17. **Apa saja kelas spesialis di sekolah anda yang berintegrasi dengan Program Inkuiri anda? ***

Check all that apply.

- Kesenian
- Musik
- Pendidikan Jasmani dan Kesehatan

18. **Seberapa baik satuan inkuiri ini ditunjukkan dalam kelas spesialis? ***

Mark only one oval.

	1	2	3	4	5	
Unit POI tidak pernah diikutsertakan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unit - unit POI adalah bagian dari proses belajar dan mengajar di kelas spesialis.

19. **Sejauh yang anda tahu, seberapa sering kelas Musik berintegrasi dengan unit - unit Program Inkuiri ? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

20. **Sejauh yang anda tahu, seberapa sering kelas Kesenian berintegrasi dengan unit - unit Program Inkuiri ? ***

Mark only one oval.

- 0 unit berintegrasi
- 1 unit yang berintegrasi penuh setiap tahun
- 2 unit yang berintegrasi penuh setiap tahun
- 3 unit atau lebih yang berintegrasi penuh setiap tahun

21. **Sejauh yang anda tahu, seberapa sering kelas Pendidikan Jasmani dan Kesehatan berintegrasi dengan unit - unit Program Inkuiri ? ***

Mark only one oval.

- 0 unit berintegrasi
 1 unit yang berintegrasi penuh setiap tahun
 2 unit yang berintegrasi penuh setiap tahun
 3 unit atau lebih yang berintegrasi penuh setiap tahun

22. **Menurut pendapat anda, apakah kurikulum anda cocok dengan elemen PYP (Profil Pembelajar, Konsep - Konsep Kunci, Pengetahuan, Pendekatan Pembelajaran, Tindakan, Agensi, dan Berwawasan Internasional) ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak sama sekali.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sangat baik. Kurikulum kami cocok dengan kurikulum PYP.

23. **Please expand on your answer./ Jelaskan jawaban anda. ***

24. **Menurut pendapat anda, apakah ide dari konsep - konsep kunci PYP (bentuk, fungsi, sebab-akibat, perubahan, hubungan, perspektif, tanggung jawab dan kajian diri) sejalan dengan visi misi sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

25. **Berdasarkan pendapat anda, apakah elemen Pengetahuan dari PYP sejalan dengan visi misi sekolah anda? ***

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

26. Berdasarkan pendapat anda, apakah elemen Profil Pembelajar dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

27. Berdasarkan pendapat anda, apakah elemen Pendekatan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

28. Berdasarkan pendapat anda, apakah elemen Tindakan dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

29. Berdasarkan pendapat anda, apakah elemen Agensi dari PYP sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

30. Berdasarkan pendapat anda, apakah kurikulum sekolah anda sejalan dengan visi misi sekolah anda? *

Mark only one oval.

	1	2	3	4	5	6	7	
Tidak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ya

31. **Apa saja aspek PYP yang bermakna bagi anda?(Pilihan dapat lebih dari 1) ***

Check all that apply.

- Profil Pembelajar
- Pengajaran
- Pendekatan Pembelajaran
- Agensi
- Tindakan
- Eksibisi
- Penilaian Holistik
- Wawasan Internasional
- Komunitas Pembelajar
- Satuan Inkuiri
- Lembar Perencanaan PYP
- Pengajaran dan Pembelajaran Transdisipliner
- Pertemuan Perencanaan

32. **Seorang guru kelas sedang mengajarkan tabel perkalian kepada siswa siswi nya. Dia menggunakan lagu yang cocok untuk membantu siswa - siswi nya mengingat konsep perkalian. Apa yang dipelajari oleh siswa siswi nya? ***

Mark only one oval.

- Matematika
- Musik
- Matematika dan Musik

33. **Siswa siswi sedang membaca buku yang mereka suka. Untuk meningkatkan pemahaman, guru mereka memberikan naskah yang akan didramatisasikan. Mereka menunjukkan hasil yang baik ketika penilaian karena menunjukkan pemahaman nuansa dalam buku. Apakah ini integrasi antar disiplin yang baik dengan drama? ***

Mark only one oval.

- ya
- Tidak
- No / Tidak

34. **Apakah ada pendapat anda yang lain tentang praktek PYP di sekolah anda?**

35. **Saya ingin mewawancarai beberapa responden survei ini untuk mendapat informasi lebih lanjut. Apakah anda bersedia untuk diwawancara? Jika anda bersedia, mohon untuk mengisi informasi kontak anda di bawah ini. Terima kasih banyak atas bantuan anda.***

APPENDIX B
SAMPLE INTERVIEW QUESTIONS

SAMPLE INTERVIEW QUESTIONS

- 1 How do you develop a planner?
 - a. Who is involved?
 - b. How is the central idea determined?
 - c. How are the lines of inquiry determined?
- 2 Where do you get your outcomes?
- 3 How would you explain transdisciplinary teaching and learning?
 - a. Do you feel comfortable teaching in this way? Why or why not?
 - b. Do you feel it is good for student learning? Why or why not?
- 4 Can you describe a time when you collaborated with another teacher?
- 5 Can you describe a unit that you worked on with another teacher?
 - a. Was it successful? If so, what made it successful? Why do you think it was successful?
 - b. If not, what would you do to change it?
- 6 Do you like using the PYP as a framework?
 - a. Why or why not?
 - b. What would you do instead?
- 7 What elements of the PYP do you like? Why?
- 8 What elements of the PYP do you struggle with? Is it understanding or application?
- 9 Do you feel that the PYP works well in your school? Why or why not?

APPENDIX C

PRIMARY YEARS PROGRAMME UNIT PLANNER



PYP Unit Planner

<p>1. What is our purpose? To inquire into the following: Transdisciplinary Theme: Where We Are in Place and Time; an inquiry into</p> <p>Central Idea:</p> <p>Summative assessment task[s]: What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?</p> <p>Task/s:</p> <p>Strategy: Tool:</p> <p>Learning outcomes: Students will...</p>	<p>Grade/s: Age/s:</p> <p>School: Mount Zaagkam School School code: 002801</p> <p>Teacher[s]: Including specialists and PYPC</p> <p>Date:</p> <p>Proposed duration: X hours a week over 6 weeks</p> <hr/> <p>2. What do we want to learn? What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?</p> <p>What lines of inquiry will define the scope of the inquiry into the central idea? *By grade and based on students questions.</p> <p>What teacher/ students, questions/provocations will drive these inquiries? What resources, classroom layouts or contexts will 'hook' the students?</p> <p>KEY VOCABULARY:</p> <p>QUESTIONS:</p> <p>PROVOCATIONS:</p>
---	---



<p>3. How might we know what we have learned? This column should be used in conjunction with “How best might we learn?” What are the possible ways of assessing students’ prior knowledge and skills? What evidence will we look for?</p> <p>PRE-ASSESSMENTS</p> <p>Task:</p> <p>Strategy/ Tool:</p> <p><i>What are the possible ways of assessing students learning in the context on the lines of inquiry? What evidence will we look for? FORMATIVES</i></p> <p>Formative 1:</p> <p>Strategy/Tool:</p> <p>Evidence: Students will ...</p>	<p>4. How best might we learn? What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?</p> <ul style="list-style-type: none"> • • <p>What opportunities will occur for ATLs development and for the development of the attributes of the learner profile? List the skills and dispositions as well as the learning experiences that will be used to support their development.</p> <table border="1"> <thead> <tr> <th></th> <th>Focus</th> <th>Learning experiences to support...</th> </tr> </thead> <tbody> <tr> <td>SLOs (PYP ATL)</td> <td></td> <td></td> </tr> <tr> <td>Learner Profile</td> <td></td> <td></td> </tr> </tbody> </table>		Focus	Learning experiences to support...	SLOs (PYP ATL)			Learner Profile		
	Focus	Learning experiences to support...								
SLOs (PYP ATL)										
Learner Profile										
<p>5. What resources need to be gathered? What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available? How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?</p>										

<p>6. To what extent did we achieve our purpose? Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included. How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.</p> <p>What was the evidence that connections were made between the central idea and the transdisciplinary theme?</p>	<p>7. To what extent did we include the elements of the PYP? What were the learning experiences that enabled students to:</p> <ul style="list-style-type: none"> · Develop an understanding of the concepts identified in "What do we want to learn?" · Demonstrate the learning and application of particular transdisciplinary skills? · Develop particular attributes of the learner profile and/or attitudes?
---	--

8. What student-initiated inquiries arose from the learning? Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning. At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

9. Teacher notes

****Please list the general outcomes for the unit here**

APPENDIX D
PERMISSIONS

TABLE OF CONTENTS

LETTER TO DIRECTOR OF SCHOOLS	323
DIRECTOR'S RESPONSE	324
REQUEST FOR PARTICIPATION (ENGLISH).....	326
REQUEST FOR PARTICIPATION (<i>BAHASA</i> INDONESIA)	328
CONSENT FORM (ENGLISH).....	330
CONSENT FORM (BAHASA INDONESIA).....	332

LETTER TO DIRECTOR OF SCHOOLS

From: Erikson, Anita
Sent: Thursday, September 27, 2018 6:23 PM
To: Jenkins, Mark <mjenkins@fmi.com>
Subject: Formal Request for Dissertation Research

Dear Mark,

I am following up on a conversation we recently had regarding the subjects of my study for my doctoral dissertation. My research focuses on how the transdisciplinary nature of the PYP is reflected in two remote schools in Indonesia, one national and one expatriate school. I would like to study YPJ (Yayasan Pendidikan Jayawijaya) and MZS (Mt. Zaagkam School), Kuala Kencana campuses only. As these two schools have much in common, but also some significant differences, I feel that information gathered would be relevant and useful for my study.

My intention is to ask specialist teachers, elementary classroom teachers, PYP coordinators, and elementary administrators at both campuses to fill out a survey. In addition, I would like to interview a selection of them in person. The survey will be offered in Bahasa Indonesia as well as English. Translation of the answers to the Bahasa Indonesia survey will be done by myself, with any questions to be reviewed in confidence by a translator not affiliated with the schools either as an employee or a parent. For the interview, I will try to have an interpreter present, again, not affiliated with the schools, or will audio record, for clarification purposes only. While it is difficult in a small community to completely guarantee anonymity, all efforts will be made to do so. No real names of people will be used in the drafts or in the final paper. As this study focuses on educators' opinions and experiences, no students or parents will be approached.

I would also like to review pertinent documents such as curriculum documents, staff meeting notes, workshop notes, and PYP meeting notes. It is my intention to complete the survey, all interviews, and the review of documents between October and December, 2018.

The survey, interview questions, and research will be reviewed by the Arizona State University Institutional Review Board prior to any contact being made. This is to ensure that my study aligns with international standards for ethical research. Please let me know by return email if you have any questions, and if there is anything else I need to do to receive approval for my project. If everything is satisfactory, please respond with approval for me to begin. Thank you very much for your assistance and support.

Regards,
Anita Erikson
Ph.D. Candidate, Music Education
Arizona State University
aerikson@fmi.com

Creative Arts Coordinator/Guru Musik

Associate Dean
Mt. Zaagkam School
Papua, Indonesia

Desk: 546-7110
HP: +62 852 44856466

DIRECTOR'S RESPONSE

From: "Jenkins, Mark" <mjenkins@fmi.com>
Date: September 27, 2018 at 22:09:29 GMT+9
To: "Erikson, Anita" <aerikson@fmi.com>
Subject: RE: Formal Request for Dissertation Research

Dear Anita,
As Head of both YPJ and MZS, I acknowledge and give permission to conduct the research, noting confidentiality and that the research would be available for use by the Yayasans after publication.

A key consideration in granting permission is that the research and the sourcing of documentation be conducted with regard to maintaining the continuity of educational provision in both Yayasans.

Yours sincerely,

Mark Jenkins
Head of Freeport Schools Education

REQUEST FOR PARTICIPATION (ENGLISH)

Dear _____,

I am a graduate student working under the direction of Professor Sandra Stauffer in the Herberger Institute of Design and the Arts at Arizona State University. I am conducting a research study to investigate how transdisciplinary education in the PYP works in two remote schools in Indonesia, Mt. Zaagkam School and Yayasan Pendidikan Jayawijaya. I am very interested in any experiences or stories you may have that can help show instances of the PYP in action. Your opinion and your feelings about how you practice the PYP are important to me.

I am recruiting individuals to complete a survey, which should not take any longer than fifteen minutes, and to allow me to interview you after you have completed the survey. A follow-up interview will also be done to confirm any questions, at your convenience. You will have the opportunity to read the transcript of the interviews and edit them before I use them in my report.

The survey and the interview will be in English and Bahasa Indonesia. I will audiotape the interview so that I can refer to it if I have questions after the interview is complete. The recordings will be kept on a hard drive in my home in Papua for a period of five years. The information I collect will be confidential. No real names will be used in the final report or in any other written documents. All information will be seen only by me. In the case of Bahasa Indonesia interviews, I may have a translator who is not affiliated with either of the schools help me with transcription.

Your participation in this study is voluntary. Please let me know if you are available to participate in this research. If you have any questions concerning the research study, please call me at +62 852 44856466 or email me at anitaerikson2@gmail.com.

Sincerely,

Anita Erikson

REQUEST FOR PARTICIPATION (BAHASA (INDONESIA))

Kepada Yth. Bapak / Ibu,

Saya sedang melakukan fase penelitian disertasi untuk program Doktorat di Pendidikan Musik di Arizona State University. Saya menginvestigasi praktek pendidikan transdisipliner yang menggunakan kerangka PYP di dua sekolah terpencil di Indonesia, Sekolah Mt. Zaagkam dan Sekolah Yayasan Pendidikan Jayawijaya. Saya sangat tertarik dengan pengalaman atau cerita anda yang dapat membantu menunjukkan contoh tindakan pendidikan PYP. Pendapat dan pengalaman anda tentang praktek PYP sangat penting bagi saya.

Saya sangat berterima kasih atas bantuan anda. Saya meminta anda untuk mengisi survei, yang diisi tidak lebih dari lima belas menit. Kemudian, saya akan mewawancarai anda. Wawancara ini akan berlangsung selama satu jam. Wawancara lanjutan dapat dilakukan untuk memastikan beberapa pertanyaan, jika anda memiliki waktu. Anda memiliki kesempatan untuk membaca transkrip wawancara dan mengubahnya sebelum saya gunakan dalam disertasi saya.

Survei dan wawancara ini akan menggunakan Bahasa Inggris dan Bahasa Indonesia. Saya akan merekam wawancara, sehingga saya dapat mendengarkan kembali jika saya memiliki pertanyaan setelah wawancara berlangsung. Rekaman wawancara akan disimpan di dalam hard drive di dalam rumah saya di Papua selama lima tahun. Informasi yang saya dapat bersifat rahasia. Tidak ada nama asli yang akan saya gunakan pada laporan akhir atau dokumen tertulis lainnya. Semua informasi hanya akan dilihat oleh saya. Sehubungan dengan wawancara dalam Bahasa Indonesia, saya akan menggunakan penerjemah, yang tidak berhubungan dengan kedua sekolah, untuk membantu saya dengan transkrip wawancara.

Partisipasi anda dalam penelitian ini bersifat sukarela. Mohon memberi tahu saya jika anda bersedia untuk berpartisipasi dalam penelitian ini. Jika anda memiliki pertanyaan sehubungan

dengan penelitian ini, anda dapat menghubungi saya di nomor +62 852 44856466 atau mengirim email kepada saya di anitaerikson2@gmail.com.

Salam,

Anita Erikson

CONSENT FORM (ENGLISH)

AN INQUIRY INTO PYP TRANSDISCIPLINARY UNDERSTANDING IN REMOTE SCHOOLS IN INDONESIA

I am a graduate student working under the direction of Professor Sandra Stauffer in the Herberger Institute of Design and the Arts at Arizona State University. I am conducting a research study to investigate how transdisciplinary education in the PYP works in two remote schools in Indonesia, Mt. Zaagkam School and Yayasan Pendidikan Jayawijaya.

I am inviting your participation, which will involve completing a survey, which should not take any longer than fifteen minutes, and an interview, which could take up to an hour, after you have completed the survey. A follow-up interview will also be done to confirm any questions, at your convenience. You will have the opportunity to read the transcript of the interviews and edit them before I use them in my report. You have the right not to answer any question, and to stop participation at any time.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. There are no foreseeable risks or discomforts to your participation.

Your responses will be confidential. The results of this study may be used in reports, presentations, or publications but your name will not be used.

I would like to audio record this interview. The interview will not be recorded without your permission. Please let me know if you do not want the interview to be recorded; you can also change your mind after the interview starts; just let me know.

If you have any questions concerning the research study, please contact the research team at Sandra.stauffer@asu.edu or anitaerikson2@gmail.com. If you have any questions

about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance at +1(480)965-6788. Please let me know if you wish to be a part of the study.

By signing below you are agreeing to be part of the study.

Name:

Signature:

Date:

CONSENT FORM (BAHASA INDONESIA)

SEBUAH INKUIRI DALAM PEMAHAMAN PENDIDIKAN TRANSDISIPLINER PYP DI SEKOLAH TERPENCIL DI INDONESIA

Saya seorang mahasiswa program doktoral yang bekerja dibawah bimbingan Professor Sandra Stauffer di Institute Desain dan Kesenian Herberger di Arizona State University. Saya sedang melakukan penelitian untuk menginvestigasi praktek pendidikan transdisipliner yang menggunakan kerangka Primary Years Program (PYP) di dua sekolah terpencil di Indonesia, Sekolah Mt. Zaagkam dan Sekolah Yayasan Pendidikan Jayawijaya.

Saya mengundang partisipasi anda, yang dapat dilakukan dengan mengisi sebuah survei yang diisi tidak lebih dari lima belas menit, dan sebuah wawancara, yang akan berlangsung selama satu jam setelah anda mengisi survei. Wawancara lanjutan juga akan saya lakukan untuk memastikan beberapa pertanyaan, jika anda memiliki waktu. Anda memiliki kesempatan untuk membaca transkrip wawancara dan mengubahnya sebelum saya gunakan di laporan saya. Anda memiliki hak untuk tidak menjawab dan tidak berpartisipasi untuk menjadi narasumber sewaktu - waktu.

Partisipasi anda dalam penelitian ini bersifat sukarela. Jika anda memilih untuk tidak berpartisipasi atau meninggalkan penelitian sewaktu – waktu, tidak akan ada pinalti. Tidak akan ada risiko atau ketidaknyamanan atas partisipasi anda.

Jawaban anda bersifat rahasia. Hasil dari penelitian ini akan digunakan di dalam laporan, presentasi atau publikasi tetapi nama anda tidak akan digunakan.

Saya akan merekam wawancara ini. Wawancara tidak akan direkam tanpa persetujuan anda. Anda dapat memberi tahu saya jika anda tidak mau wawancara ini direkam; anda juga dapat berubah pikiran setelah wawancara dimulai.

Jika anda memiliki pertanyaan sehubungan dengan penelitian ini, anda dapat menghubungi tim penelitian di alamat email Sandra.stauffer@asu.edu atau anitaerikson2@gmail.com. Jika anda memiliki pertanyaan tentang hak anda sebagai subyek/partisipan dalam penelitian ini, atau jika anda merasa terancam, anda dalam menghubungi ketua **Human Subjects Institutional Review Board**, melalui kantor **Research Integrity and Assurance**, Arizona State University di nomor +1(480)965-6788. Mohon memberi tahu saya jika anda ingin berpartisipasi dalam penelitian ini.

Yang bertanda tangan dibawah ini, setuju untuk berpartisipasi dalam penelitian.

Nama:

Tanda tangan:

Tanggal:

APPENDIX E

MT. ZAAGKAM SCHOOL DOCUMENTS

TABLE OF CONTENTS

PROGRAMME OF INQUIRY: EARLY YEARS AND ELEMENTARY	335
PROGRAMME OF INQUIRY: MIDDLE SCHOOL SOCIAL STUDIES	336
SAMPLE UNIT OF INQUIRY	337
SAMPLE SPECIALIST ADDENDUM TO UNIT OF INQUIRY	342

PROGRAMME OF INQUIRY: EARLY YEARS AND ELEMENTARY



MZS PROGRAM OF INQUIRY EARLY YEARS & ELEMENTARY

	Who We Are An inquiry into the nature of the self, beliefs and values; mental, emotional, and spiritual health; human relationships and communities, including families, friends, communities and cultures; rights and responsibilities; what it means to be human.	Where We Are in Place and Time An inquiry into orientation in place and time; the discoveries, explorations and migrations of humankind; the relationships between the interconnectedness of individuals and civilizations, from local and global perspectives.	How We Express Ourselves An inquiry into the ways in which we display and create culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.	How the World Works An inquiry into the natural world and its systems; the physical and biological and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.	How We Organize Ourselves An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations, societal decision-making; economic activities and their impact on humankind and the environment.	Sharing the Planet An inquiry into the rights and responsibilities of the individual, the community, and the planet; the distribution and use of the earth's resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.
	Relationships and culture help individuals and communities define who we are.	Past, present and future events shape the world and our perception of place and time.	Different forms of expression help us extend our understanding of the world.	Scientific discoveries impact societies and the environment.	Societal systems and organizations influence our world.	Limited resources create opportunities and challenges.
PK3	IDENTITY (SELF) Self and Group, Comparing and Contrasting		COMMUNICATION Culture, Forms, Connection	INTERACTION Observation, Forces and Motion,		RESPONSIBILITY Needs, Growth, Form and functions, Sharing Natural Resources
PK4						
K						
G1	RELATIONSHIPS Interactions, Choices, Group, Cooperation and Conflict	CHANGE Compare and contrast past/present, factors	DISCOVERY Features, Behaviour, Causation	PATTERNS Connection, Weather and Climate, Prediction	CITIZENSHIP Roles and responsibilities, Impact	PROCESSES Form and Function, Cycles, Interconnection
G2	ROLES Responsibility, Choices, Influence, Specialization	ADAPTATION Physical environment, location, patterns,	APPRECIATION Aesthetics, Opinion, Interpretation, Responding	CHANGES Matter, Properties and Uses Reflection	DECISION MAKING & PROBLEM SOLVING Leadership and agencies, cooperation & conflict	HUMAN INFLUENCE Impact, Choices, Sustainability
G3	DIVERSITY Regions and People, History and Traditions	CAUSATION Changes Over Time (historical), Explorations, Views and Perceptions of the World	EXPRESSION Creating, Relationship (artist/ audience), Purpose	INTERACTIONS Forces, Motion and Response Implications of Discoveries	GOVERNANCE Leadership and Service, Power, Impact Representation	RESOURCE SUSTAINABILITY Renewable and non-Renewable, Processes, Wants and Needs, Implications
G4	COMMUNITIES Cultural Expectations, Codes, Perceptions and Reactions	SYSTEMS Earth and Solar system, Chronology, Transformation	REPRESENTATION Signs, Symbols, Features, Design, Influences	TRANSFER & CONSERVATION Energy, Function & Use, Implications of Discoveries	POLITICAL SYSTEMS Organization, Impact, Effects of Conflict & Cooperation	DEPENDENCE & INTERDEPENDENCE Ecosystems, Energy and Dynamics, Responsibility, Competition
G5	BELIEFS Culture, Systems, Diversity, Diffusion	PLACE Population and Migration, Human & Physical Characteristics	CREATIVITY Interaction, Innovation, Impact	REACTIONS Structure and Properties, Matter	EXCHANGE Trade, Cultural, & Organizations, Progression, Cause and Implication	ADAPTATION Biodiversity, Heredity



MZS PROGRAM OF INQUIRY MS SOCIAL STUDIES

	CONFLICT	INNOVATION	POLITICAL & ECONOMIC SYSTEMS	CULTURE & IDENTITY
	Solutions to global issues vary depending on perspective, power, influence, culture, and needs.	Scientific and technological developments transform people's lives and the environment.	Humans develop systems to manage societies and create order.	Global societies are diverse, creating varied perspectives, contributions, and challenges.
G6	CAUSALITY Chronology, Historical Patterns, Effects, Connections to Present (current events)	IMPACT Motivation, influence, Historical Antecedent/Patterns	GOVERNANCE Strengths and Weaknesses, Power, Citizenship, General Welfare	CULTURAL ATTITUDES Connection, Major Religions & Beliefs/Rituals, Taboos/Norms, Stereotypes, Traditions, Identity
G7	PERCEPTION Context, Public Agenda, Distortion, Bias, Propaganda	CONNECTION Pace of Change, Laws and Policy on Technology, Benefits/Consequences	ECONOMY Systems, Efficiency/Evaluation, Impact	EXTERNAL CHALLENGES Resistance, Wars, Generation Gaps, Migration, Globalization
G8	AGENCY Tensions, interests, Human Rights	IDENTITY & PROGRESS Globalization, Cultural Influence (values, beliefs, attitudes), Diffusion of Ideas	DISTRIBUTION Global Patterns, Trade, Allocation, Competition Supply and Demand	MOVEMENTS Change, Socialization and Personal Identity, Groups



PYP Unit Planner (G1 to G4)

1. What is our purpose? To inquire into the following:

Transdisciplinary Theme: How We Express Ourselves: An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.

Central Idea: Different forms of expression help us extend our understanding of the world.

Summative assessment task(s): *What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?*

Task/s:

Strategy: **Tool:**

Learning outcomes: **Students will...**

Initial idea:

After studying the many facets that make up culture (dance, artworks, music etc) students create an imaginary culture of their own and explains how that culture expresses itself through each facet they choose.

Considerations:

Work in partners to create the whole, however take responsibility for different facets (opportunity for individual feedback).

Stayed true to initial idea.

[Link](#) to assessment task brief.

We were looking for students to make connections to the different aspects of culture they had learnt about.

"You are an National Geographic explorer who encountered a new culture of

Grade/s: KK 1-4 Age/s: 7 - 10

School: Mount Zaagkam School

School code: 002801

Teacher(s): Karl Hillhorst, Nancy Benedicta, Maureen Ienuso, Timothy Brooks, Anita Erikson

Date: Nov 12th - Dec 13th 2018

Proposed duration: 6 hours a week over 4 weeks

2. What do we want to learn? What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

G1- DISCOVERY: Features, Behaviour, Causation

G2- APPRECIATION: Aesthetics, Opinion, Interpretation, Responding

G4- REPRESENTATION: Signs, Symbols, Features, Design, Influences

Key Concepts: **Perspective, Form, Connection**

What lines of inquiry will define the scope of the inquiry into the central idea? *By grade and based on students wondering.

Grade 1:

1.1 Artwork differs between cultures.

1.2 Our own interests are how we express ourselves.

Grade 2:

2.1 Symbols, tools, and colour have purpose.

2.2 Our own interests are how we express ourselves.

Grade 4:

4.1 Cultures' different forms of expression make them unique.

4.2 Cultures express themselves through celebrations.

What teacher/ students' questions/provocations will drive these inquiries? What resources, classroom layouts or contexts will 'hook' the students?

[KEY VOCABULARY:](#)



<p><i>people living isolated from the rest of the world! You must present your findings with your explorer-buddy about what makes that culture different so that a special article can be published about them in the next issue of Nat Geo.</i></p>	<p>Form, expression, extend, culture, understanding,</p> <p>QUESTIONS: What is culture? What does extend mean</p> <p>PROVOCATION: Pictures of different forms of expression</p> <p>Anita and Tim's presentation of their own passions/ways of expression.</p>
<p>3. How might we know what we have learned? This column should be used in conjunction with "How best might we learn?" What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?</p> <p>PRE-ASSESSMENTS</p> <p>Task:</p> <ul style="list-style-type: none"> Understanding of the key vocabulary shown in CI (form, expression, extend, understanding). <p>Strategy/ Tool:</p> <p><i>What are the possible ways of assessing students learning in the context on the lines of inquiry? What evidence will we look for?</i></p> <p>FORMATIVES</p> <p>Students' personal reflection on how they express themselves. Students chose one form of expression and reflected on themselves how they express themselves.</p> <p>Moko Design: Students considered significant symbols (family, country etc) for them they could depict on their own moko design.</p>	<p>4. How best might we learn? What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?</p> <p>Activities:</p> <p>Tuning In</p> <ul style="list-style-type: none"> What is Culture? Scavenger Hunt <p>Activities</p> <ul style="list-style-type: none"> Why is Wayang important to Indonesian culture? What does it 'express'? Famous story of Sita, Hanuman, and Rama shared (Ramayana). Students might get a chance to create their own character from the story. Link (4.1) What are our own interests, and how do we express ourselves? Students brainstorm the different forms of presenting (eg. lyrics, dance, comic life, skit, artwork, etc). Student present about themselves to an audience. (2.2) Celebrations. Symbols DOT: Students guess the celebration. Students research a celebration to teach a partner about (4.2) Flag colours and symbol meanings Slideshow. Nancy to share Indonesian flag color meanings. Students are given examples of flags to go away and research. Research in cooperative partners. Possibly teach their flag designs to their peers. (2.1) Artwork differs between cultures. Rangoli Designs. Hindu legend. Cultures express stories through art. Link. This is an Indian artform. 1.1 Intro Slideshow Maori Art Expression. Different way the Maori culture express themselves. Slideshare Focus on MOKO significance (tribe, family, place etc). Brainstorms identity images. Creates a pattern based from them. Students go away and copy, then transfer to face template. Music and Art - investigate Australian Aboriginal and Native American art, music, and dance. Compare/contrast with others that are more familiar to them.

<p>What opportunities will occur for ATLs development and for the development of the attributes of the learner profile? List the skills and dispositions as well as the learning experiences that will be used to support their development.</p>	<p>5. What resources need to be gathered? What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available? How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?</p> <ul style="list-style-type: none"> - https://drive.google.com/open?id=1hTIOgK6dQzoTM-PmtW-0zImKxLx9scfo - https://www.dltk-kids.com/world/india/mrangoli.htm - Imovie - Art and music teachers - Art and music room - Variety of music from different cultures 						
<table border="1"> <thead> <tr> <th></th> <th>Focus</th> <th>Learning experiences to support...</th> </tr> </thead> <tbody> <tr> <td>SLOs (PYP ATL)</td> <td> <ul style="list-style-type: none"> - Thinking skill (creativity) - Social skill (cooperation) </td> <td> Creating their imaginary culture. Sharing it with an audience. Putting all the pieces (features) together to create something new. Working with their groups effectively. Respecting others ideas. Resolving conflicts IF they occur. </td> </tr> </tbody> </table>		Focus	Learning experiences to support...	SLOs (PYP ATL)	<ul style="list-style-type: none"> - Thinking skill (creativity) - Social skill (cooperation) 	Creating their imaginary culture. Sharing it with an audience. Putting all the pieces (features) together to create something new. Working with their groups effectively. Respecting others ideas. Resolving conflicts IF they occur.	
	Focus	Learning experiences to support...					
SLOs (PYP ATL)	<ul style="list-style-type: none"> - Thinking skill (creativity) - Social skill (cooperation) 	Creating their imaginary culture. Sharing it with an audience. Putting all the pieces (features) together to create something new. Working with their groups effectively. Respecting others ideas. Resolving conflicts IF they occur.					

<p>6. To what extent did we achieve our purpose? Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included. How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.</p> <ul style="list-style-type: none"> - I thought the students acknowledgement of their ROLE in the assessment task was particularly weak. Explicitly teaching HOW to take-on a role and give examples would have added to the success of the assessment task. - Exposure to a larger variety of imaginary PLACES might have meant groups differed more in their presentations. <p>What was the evidence that connections were made between the central idea and the transdisciplinary theme?</p> <p>Theme: "...the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic."</p> <p>C/I: Different forms of expression help us extend our understanding of the world.</p> <ol style="list-style-type: none"> 1. Students engaged in activities that had them exploring cultural significance. Eg Moko Face Tattoos, meaning behind Indian Rangola patterns, meaning behind Wayang, meaning behind flag designs and symbols. Evidenced in the work produced after each session, culminating in their 'summative' piece where they had to incorporate all these together to inform their choices. 	<p>7. To what extent did we include the elements of the PYP? What were the learning experiences that enabled students to:</p> <ul style="list-style-type: none"> - Develop an understanding of the concepts identified in "What do we want to learn?" <p>Perspective: Maori Art Expression (Haka, Moko). What might look scary or silly, can hold special significance to others.</p> <p>Form: Wayang Puppet Show. Students learnt how wayang puppets are made and the materials needed to make the puppets. They got to make their own puppet with given template.</p> <p>Connection: Exploring our own personal ways we express ourselves. Provocation: listening to how Mrs. Anita and Mr Tim express themselves and seeing the connection.</p> <ul style="list-style-type: none"> - Demonstrate the learning and application of particular transdisciplinary skills? <p>Thinking skill: Students were able to create their imaginary culture with at least 3 features and explain why they chose those features to express themselves.</p> <ul style="list-style-type: none"> - Develop particular attributes of the learner profile and/or attitudes? <p>Through the activities students will have extended themselves as:</p> <p>Thinkers: creatively designing new cultural form</p> <p>Risk Takers: participating in a presentation that was potentially high-focus (dancing etc), participating in the Holiday program, song soloists.</p> <p>Open Minded: to accept and respect other cultures' perspectives.</p> <p>Students connected the idea of musical symbols with other symbols, ex. Aboriginal art</p>
--	--

<p>8. What student-initiated inquiries arose from the learning? Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning. At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.</p> <p>Music: Reference to Balinese gamelan and comparing the music.</p> <p>Student - requested to learn Gamelan technique (1st grade student) after seeing the middle schoolers play.</p> <p>What student-initiated actions arose from the learning? What did the student apply without the teacher's initiation (based on their own interest).</p> <ul style="list-style-type: none"> A student made paper snowflakes patterns to support her understanding of a celebration symbol. <p>Interesting:</p> <p>Could easily have reached-out to other classrooms/schools to question them about that culture's forms of expression.</p>	<p>9. Teacher notes</p> <p>AERO</p> <table border="1"> <thead> <tr> <th>GRADE 1</th> <th>GRADE 2</th> <th>GRADE 4</th> </tr> </thead> <tbody> <tr> <td> 5.2.d Recognize culturally and contextually appropriate and inappropriate social behavior and the impact of making choices about behavior. </td> <td> 5.2.g Identify opportunities for choice in personal identity. 8.2.c Identify reasons and requirements for making tools and developing techniques. </td> <td> 4.5.d Describe how cultural contributions from various groups have formed a national identity. 5.5.e Identify and describe ways that ethnicity and cultures influence people's daily lives. (<i>celebrations</i>) </td> </tr> </tbody> </table> <p>Reflection</p> <p><i>For lines of Inquiry 2.1 teachers struggle to find activities to teach tools and their purpose.</i></p> <p><i>Nice opportunity made to the End-of-Year Christmas concert.</i></p> <p><i>Guest speakers helped to provide students with the necessary understanding of the topic, which was absent from the initial unpacking lesson.</i></p> <p><i>Reference to birthdays WOULD have been an opportunity to explore significance of songs / gifts etc.</i></p> <p><i>Celebrations that could have been referenced: Indonesian Remembrance Day, Thanksgiving.</i></p> <p>Integration</p> <p>Further connection with Creative Arts:</p> <p>https://docs.google.com/document/d/1clazDZVnc59oY0owvl2a-DkmlWYrNUwFFLRmlLUoA/edit</p>	GRADE 1	GRADE 2	GRADE 4	5.2.d Recognize culturally and contextually appropriate and inappropriate social behavior and the impact of making choices about behavior.	5.2.g Identify opportunities for choice in personal identity. 8.2.c Identify reasons and requirements for making tools and developing techniques.	4.5.d Describe how cultural contributions from various groups have formed a national identity. 5.5.e Identify and describe ways that ethnicity and cultures influence people's daily lives. (<i>celebrations</i>)
GRADE 1	GRADE 2	GRADE 4					
5.2.d Recognize culturally and contextually appropriate and inappropriate social behavior and the impact of making choices about behavior.	5.2.g Identify opportunities for choice in personal identity. 8.2.c Identify reasons and requirements for making tools and developing techniques.	4.5.d Describe how cultural contributions from various groups have formed a national identity. 5.5.e Identify and describe ways that ethnicity and cultures influence people's daily lives. (<i>celebrations</i>)					

SAMPLE SPECIALIST ADDENDUM TO UNIT OF INQUIRY



MZS MUSIC INTEGRATION PLANNER ATTACHMENT G1

Date: 6th August - 4th October	Integration: Full
<p>Central Idea: Relationships and culture help individuals and communities define who we are.</p> <p>Concepts: RELATIONSHIP, REFLECTION, INTERACTION,</p>	<p>Lines of Inquiry:</p> <ul style="list-style-type: none"> • Different types of music from the world (Form; Relationship) • How particular music expresses culture and community (Reflection, Interaction)
Summative Assessment	Formative Assessments
<p>Task/s: Students will, in a group, create a themed performance from a particular country that should include world music, and may also include dance, and/or visual art. Groups must work together to make the performance cohesive and relevant to the theme of their performance. Guidelines will be given.</p> <p>Strategy/Tool: Rubric</p>	<p>Task/s: Thoughtful participation in class discussion by comparing songs from different countries and languages.</p> <p>Strategy/Tool: Anecdotal and videos.</p>
Learner Profile	SLO'S (PYP ATL)
Cooperation, Open-Mindedness	Communicators, Thinkers
Learning Outcomes	
<ul style="list-style-type: none"> • Reflect and communicate personal reactions to music using music vocabulary (PYP R2.6) 	

- Listen attentively while others perform and show appropriate audience behavior for the context and style of the music performed.
- Share performances with each other and give constructive criticism (PYP R2.8)
- Sing alone and with others (PYP R2.1)
- Play instruments alone and with others (PYP C.1.7)
- Perform age-appropriate folk dances, folk songs, and singing games from a variety of cultures

Learning engagements (activities)

- Moving with a variety of multicultural music and articulating the feelings/movements/ideas it evokes.
- Discuss and act out appropriate audience behavior for different styles of music, i.e. opera, African, Rock, Caribbean
- Sing folk songs of different countries, play song games from a variety of cultures, perform dances from different countries. Discuss how they are similar and how they are different, and brainstorm possible reasons for those similarities and differences.
- Students will work together to create a soundscape for the book, "Stand Tall, Mollie Lou Melon"
- Explore how sounds from the mosque and church; explore meaning and purpose; echo,...
- Open-Mindedness; videos from songs in different languages and from different countries,
- Cooperation; dance routines, participating and being part of the group, behaving as part of a team, ..
- Communicators: Singing songs in different languages; watching videos and answering questions about cultural elements; listening to prayer songs from the mosque and chimes from the church.
- Thinkers: Identifying cultural elements in the songs, reflecting on connections to own experience,...

Resources

Multi-cultural instrumental music, www.mamalisa.com, www.folkways.si.edu, Funwa Alafia, Quackadilioso, Burung-Burung, Yi Shang (Twinkle - Twinkle), Jump-rope chants/songs, Book and song: Abiyoyo, Anansi the Spider

APPENDIX F

YAYASAN PENDIDIKAN JAYAWIJAYA DOCUMENTS

TABLE OF CONTENTS

PROGRAMME OF INQUIRY: GRADE 1	346
SAMPLE UNIT OF INQUIRY	350
SAMPLE SPECIALIST ADDENDUM TO UNIT OF INQUIRY	353

PROGRAMME OF INQUIRY – GRADE 1

FUJIL GRADE LEVEL POI KELAS 1 201819 YPJ KK

<p>Kelas 1</p>	<p>Siapa Kita</p> <p>Suatu inkuiri sifat diri sendiri; keyakinan dan nilai-nilai; kesehatan pribadi; jasmani, mental social dan spiritual; hubungan kemanusiaan termasuk dengan keluarga, teman-teman, masyarakat, dan kebudayaan; hak dan tanggung jawab; apa artinya menjadi manusia.</p>	<p>Tempat dan Waktu di mana Kita Berada</p> <p>Suatu inkuiri tentang orientasi dalam tempat dan waktu; kisah pribadi; rumah tangga dan perjalanan; temuan, eksplorasi dan migrasi umat manusia; hubungan antara perseorangan dan peradaban serta saling keterkaitannya, dari sudut pandang local dan global.</p>	<p>Bagaimana Kita Mengekspresikan Diri</p> <p>Suatu inkuiri ke dalam cara-cara kita menemukan dan mengungkapkan gagasan, perasaan, budaya, keyakinan dan nilai-nilai; cara-cara kita merenungkan, memperluas dan menikmati kreativitas kita; penghargaan kita terhadap estetika.</p>
<p>Unit of Inquiry Homeroom Kelas</p> <p>Gagasan Utama Cakupan inkuiri Profil Sikap Atol - Keterampilan</p>	<p>Manusia belajar untuk mengenal dan menjaga dirinya dengan berbagai macam cara.</p> <p>1. Ciri-ciri fisik manusia (fungsi) MH1.1.1.1, MH1.1.6, MH1.1.7, MH1.1.9, MH1.1.11, K1.1.7 / R1.1.7</p> <p>2. Kesehatan kita dipengaruhi oleh keadaan lingkungan (hubungan) P1.1.1.1, P1.1.2, P1.1.7</p> <p>3. Bagaimana menjaga kesehatan kita (tanggung jawab) MH 1.1.5, P1.1.1, P1.1.2, P1.1.3, P1.1.4, P1.1.5, P1.1.6, P1.1.8</p> <p>Profil Pembelajaran: Berpengetahuan, Berimbang, Peduli</p> <p>Sikap: Komitmen, Antusiasme,</p> <p>Keterampilan: Mengatur diri sendiri; Gaya hidup sehat</p> <p>Berpikir: Memperoleh Pengetahuan, Penerapan</p>	<p>Sejarah pribadi dipengaruhi oleh waktu, perubahan dan interaksi</p> <p>1. Sejarah pribadi (bentuk) K1.1.1, K1.1.7, K1.1.8, K1.1.9, K1.1.10</p> <p>2. Perubahan mengikuti waktu (sebab akibat) K1.1.4, K1.1.5, K1.1.6, G1.1.1, G1.1.2</p> <p>3. Interaksi dan pengalaman (hubungan) K1.1.2, K1.1.3, G1.1.3, G1.1.4, G1.1.5, G1.1.6, K1.1 / R1.1.1, K1.2 / R1.1.2, K1.3 / R1.1.3</p> <p>Profil pembelajaran: Berpendangan terbuka, Komunikator</p> <p>Sikap: Rasa hormat, Empati</p> <p>Keterampilan: Sosial – bekerjasama, menghormati orang lain</p> <p>Melakukan penelitian – pertanyaan, mengamati, merencanakan, kumpulkan data</p>	<p>Manusia menggunakan tanda dan simbol untuk mengekspresikan dan mengkomunikasikan ide-ide dan informasi.</p> <p>1. Tanda dan simbol di sekitar (Fungsi) P1.1.3, P1.1.5, K1.1.5 / R1.1.5</p> <p>2. Bagaimana simbol dan tanda mempengaruhi kehidupan kita (Sebab akibat) P1.1.1, P1.1.2, P1.1.4</p> <p>3. Bagaimana mengekspresikan dan menyampaikan ide dan informasi dengan tepat (Refleksi) BS1.1.9, MH1.1.10</p> <p>Profil pembelajaran: Pemikir, Komunikator, Peduli</p> <p>Sikap: Kreatifitas, Toleransi</p> <p>Keterampilan: Berkomunikasi – Meninjau, Menyampaikan, Non-verbal</p> <p>Berpikir – Penerapan, Sintesis, Evaluasi</p>
<p>Kurikulum PKN IPA IPS Kesehatan</p>	<p>K1.1.7 / R1.1.7 Menyebutkan cara-cara menunjukkan kebaikan kepada orang lain</p> <p>MH 1.1.1 Mengidentifikasi nama dan fungsi dari bagian-bagian utama tubuh manusia, termasuk organ indera</p> <p>MH 1.1.5 Mengetahui cara merawat tubuh</p> <p>MH 1.1.6. Mengetahui akibat jika tidak merawat tubuh</p> <p>MH 1.1.7 Menginvestigasi ciri-ciri dari bagian-bagian tubuh manusia, termasuk organ lima</p>	<p>K1.1.1 Menjelaskan menggunakan istilah yang sederhana apa arti dari "hubungan", "keluarga" dan "identitas" (contoh ide: menggunakan matrix kata)</p> <p>K1.1.2 Mengidentifikasi hubungan-hubungan penting di dalam hidup mereka</p> <p>K1.1.3 Mendeskripsikan orang-orang dan tempat-tempat yang signifikan di dalam hidup mereka</p> <p>K1.1.4 Mengidentifikasi kejadian-kejadian signifikan di dalam hidup mereka</p>	<p>P1.1.1 Menggambar sederhana tentang perilaku yang menunjukkan perwujudan sila-sila Pancasila</p> <p>P1.1.2 Mengetahui sila-sila dalam Pancasila</p> <p>P1.1.3 Mampu memasangkan sila dan simbolnya</p> <p>P1.1.4 Membuat data perbandingan perilaku yang sesuai/tidak sesuai dengan sila Pancasila baik perilaku disekitar rumah, sekolah.</p> <p>P1.1.5 Mengidentifikasi tanda larangan dan aturan dalam bentuk gambar ataupun tulisan di sekitar sekolah</p>

<p>Karya Seni</p>	<p>B1.8 Memperagakan, menggunakan benda konkret, konsep korespondensi one-to-one di antara bilangan dan benda saat berhitung.</p>	<p>3.1 Mengetahui cara dan hasil karya seni ekspresi 1.3.1.1 Menginvestigasi teknik-teknik pemotongan 1.3.1.2 Menginvestigasi teknik-teknik pemotongan, pengukiran, penggoresan, pembuatan model menggunakan tanah liat dan bahan pahat-ukir lainnya 1.3.1.3 Menjelajahi penggunaan kuas dan peralatan lainnya untuk menggunakan cat di atas permukaan-permukaan yang berbeda untuk menciptakan tekstur, pola dan area-area warna.</p>	<p>P 1.8 Memeragakan contoh keseimbangan, melalui investigasi, menggunakan model "balance". P1.9 Menentukan, melalui investigasi menggunakan model "balance" dan bilangan bulat sampai dengan 10, jumlah benda yang sama yang harus ditambahkan atau dikurangi untuk mencapai keseimbangan;</p>
		<p>1.5 Mengetahui karya seni budaya benda dan bahasa daerah setempat 1.3.5.1 Membicarakan tentang beberapa simbol dan teknik yang digunakan di dalam karya seni Indonesia 1.3.5.2 Mengidentifikasi kualitas-kualitas tertentu di karya seni lokal <ul style="list-style-type: none"> • Cara dimana subyek yang dipelajari diwujudkan • Penggunaan teknik-teknik tertentu atau unsur-unsur dari seni • Efek karya seni pada pengamat – apa yang Anda pikirkan atau rasakan tentang karya seni tersebut, apa yang membuat Anda berpikir atau merasa seperti itu? 4.17 Menceritakan karya seni budaya benda dan bahasa daerah setempat 1.4.17.1 Membicarakan tentang beberapa simbol, unsur dan teknik yang digunakan oleh seniman 1.4.17.2 Membicarakan tentang gambar dan karya seni lainnya yang mereka pernah lihat, dan mengingat tentang apa karya seni tersebut dan siapa yang membuatnya 1.4.17.3 Menggambar dan memberikan tanggapan mengenai tentang apa karya seni itu 1.4.17.4 Membedakan tentang karya seni pribadi</p>	<p>4.1 Membuat karya seni ekspresi dengan memanfaatkan berbagai teknik cetak sederhana menggunakan bahan alam 1.4.1.1 Menjelajahi peran dari garis, bentuk dan warna dalam pembuatan cetakan 1.4.1.2 Menjelajahi berbagai teknik cetak untuk menciptakan cetakan tunggal atau cetakan multipel <ul style="list-style-type: none"> • Cetak mono – menggunakan bahan alami • Stensil kertas • Cetak layar sederhana 4.3 Menggambar dengan memanfaatkan beragam media kering 1.4.3.1 Bereksperimen dengan sifat dari peralatan menggambar yang berbeda <ul style="list-style-type: none"> • Pensil grafit dan pensil warna • Krayon • Kapur 1.4.3.2 Menjelajahi unsur dari garis, nilai, tekstur menggunakan peralatan ini 1.4.3.3 Menginvestigasi rincian tentang benda, tempat, ruang, orang dan benda hidup lainnya 1.4.3.4 Mulai bereksperimen dengan ukuran, skala dan proporsi</p>

<p>Karya Seni</p>	<p>B1.8 Mempragakan, menggunakan benda konkret, konsep korespondensi one-to-one di antara bilangan dan benda saat berhitung;</p>	<p>1.5 Mengenal karya seni budaya benda dan bahasa daerah setempat</p> <p>1.3.5.1 Membicarakan tentang beberapa simbol dan teknik yang digunakan di dalam karya seni Indonesia</p> <p>1.3.5.2 Mengidentifikasi kualitas-kualitas tertentu di karya seni lokal</p> <ul style="list-style-type: none"> • Cara dimana subyek yang dipelajari diwujudkan • Penggunaan teknik-teknik tertentu atau unsur-unsur dari seni • Efek karya seni pada pengamat – apa yang Anda pikirkan atau rasakan tentang karya seni tersebut, apa yang membuat Anda berpikir atau merasa seperti itu? <p>4.17 Menceritakan karya seni budaya benda dan Bahasa daerah setempat</p> <p>1.4.17.1 Membicarakan tentang beberapa simbol, unsur dan teknik yang digunakan oleh seniman</p> <p>1.4.17.2 Membicarakan tentang gambar dan karya seni lainnya yang mereka pernah lihat, dan mengingat tentang apa karya seni tersebut dan siapa yang membuatnya</p> <p>1.4.17.3 Menggambarkan dan memberikan tanggapan mengenai tentang apakah karya seni itu</p> <p>1.4.17.4 Membicarakan tentang karya seni pribadi</p>	<p>P 1.8 Mempragakan contoh keseimbangan, melalui investigasi, menggunakan model “balance”</p> <p>P1.9 Menentukan, melalui investigasi menggunakan model “balance”, dan bilangan bulat sampai dengan 10, jumlah benda yang sama yang harus ditambahkan atau dikurangi untuk mencapai keseimbangan;</p>
<p>Karya Seni</p>	<p>3.1 Mengenal cara dan hasil karya seni ekspresi</p> <p>1.3.1.1 Menginvestigasi teknik-teknik pemotongan</p> <p>1.3.1.2 Menginvestigasi teknik-teknik pemotongan, pengukiran, penggoresan, pembuatan model menggunakan tanah liat dan bahan pahat-ukir lainnya</p> <p>1.3.1.3 Menjelajahi penggunaan kuas dan peralatan lainnya untuk menggunakan cat di atas permukaan-permukaan yang berbeda untuk menciptakan tekstur, pola dan area-area warna.</p>	<p>4.1 Membuat karya seni ekspresi dengan memanfaatkan berbagai teknik cetak sederhana menggunakan bahan alam</p> <p>1.4.1.1 Menjelajahi peran dari garis, bentuk dan warna dalam pembuatan cetakan</p> <p>1.4.1.2 Menjelajahi berbagai teknik cetak untuk menciptakan cetakan tunggal atau cetakan multipel</p> <ul style="list-style-type: none"> • Cetak mono – menggunakan bahan alami • Stensil kertas • Cetak laya sederhana 	<p>4.1 Membuat karya seni ekspresi dengan memanfaatkan berbagai teknik cetak sederhana menggunakan bahan alam</p> <p>1.4.1.1 Menjelajahi peran dari garis, bentuk dan warna dalam pembuatan cetakan</p> <p>1.4.1.2 Menjelajahi berbagai teknik cetak untuk menciptakan cetakan tunggal atau cetakan multipel</p> <ul style="list-style-type: none"> • Cetak mono – menggunakan bahan alami • Stensil kertas • Cetak laya sederhana
<p>Karya Seni</p>	<p>4.17 Menceritakan karya seni budaya benda dan Bahasa daerah setempat</p> <p>1.4.17.1 Membicarakan tentang beberapa simbol, unsur dan teknik yang digunakan oleh seniman</p> <p>1.4.17.2 Membicarakan tentang gambar dan karya seni lainnya yang mereka pernah lihat, dan mengingat tentang apa karya seni tersebut dan siapa yang membuatnya</p> <p>1.4.17.3 Menggambarkan dan memberikan tanggapan mengenai tentang apakah karya seni itu</p> <p>1.4.17.4 Membicarakan tentang karya seni pribadi</p>	<p>4.3 Menggambar dengan memanfaatkan beragam media kering</p> <p>1.4.3.1 Bereksperimen dengan sifat dari peralatan menggambar yang berbeda</p> <ul style="list-style-type: none"> • Pensil grafit dan pensil warna • Krayon • Kapur <p>1.4.3.2 Menjelajahi unsur dari garis, nilai, tekstur menggunakan peralatan ini</p> <p>1.4.3.3 Menginvestigasi rincian tentang benda, tempat, ruang, orang dan benda hidup lainnya</p> <p>1.4.3.4 Mulai bereksperimen dengan ukuran, skala dan proporsi</p>	<p>4.3 Menggambar dengan memanfaatkan beragam media kering</p> <p>1.4.3.1 Bereksperimen dengan sifat dari peralatan menggambar yang berbeda</p> <ul style="list-style-type: none"> • Pensil grafit dan pensil warna • Krayon • Kapur <p>1.4.3.2 Menjelajahi unsur dari garis, nilai, tekstur menggunakan peralatan ini</p> <p>1.4.3.3 Menginvestigasi rincian tentang benda, tempat, ruang, orang dan benda hidup lainnya</p> <p>1.4.3.4 Mulai bereksperimen dengan ukuran, skala dan proporsi</p>

<p>Karya Seni</p>	<p>B1.8 Mempragakan, menggunakan benda konkret, konsep korespondensi one-to-one di antara bilangan dan benda saat berhitung;</p>	<p>P 1.8 Mempragakan contoh keseimbangan, melalui investigasi, menggunakan model “balance”</p> <p>P1.9 Menentukan, melalui investigasi menggunakan model “balance” dan bilangan bulat sampai dengan 10, jumlah benda yang sama yang harus ditambahkan atau dikurangi untuk mencapai keseimbangan;</p>	<p>4.1 Membuat karya seni ekspresi dengan memanfaatkan berbagai teknik cetak sederhana menggunakan bahan alam</p> <p>1.4.1.1 Menjelajahi peran dari garis, bentuk dan warna dalam pembuatan cetakan</p> <p>1.4.1.2 Menjelajahi berbagai teknik cetak untuk menciptakan cetakan tunggal atau cetakan multi pel</p> <ul style="list-style-type: none"> • Cetak mono – menggunakan bahan alami • Stensil kertas • Cetak layar sederhana <p>4.3 Menggambar dengan memanfaatkan beragam media kering</p> <p>1.4.3.1 Bereksperimen dengan sifat dari peralatan menggambar yang berbeda</p> <ul style="list-style-type: none"> • Pensil grafit dan pensil warna • Krayon • Kapur <p>1.4.3.2 Menjelajahi unsur dari garis, nilai, tekstur menggunakan peralatan ini</p> <p>1.4.3.3 Menginvestigasi rincian tentang benda, tempat, ruang dan benda hidup lainnya</p> <p>1.4.3.4 Mulai bereksperimen dengan ukuran, skala dan proporsi</p>
<p>3.1 Mengenal cara dan hasil karya seni ekspresi</p> <p>1.3.1.1 Menginvestigasi teknik-teknik pemotongan</p> <p>1.3.1.2 Menginvestigasi teknik-teknik pemotongan, pengukiran, penggoresan, pembuatan model menggunakan tanah liat dan bahan pahat-ukir lainnya</p> <p>1.3.1.3 Menjelajahi penggunaan kuas dan peralatan lainnya untuk menggunakan cat di atas permukaan-permukaan yang berbeda untuk menciptakan tekstur, pola dan area-area warna..</p>	<p>1.5 Mengenal karya seni budaya benda dan bahasa daerah setempat</p> <p>1.3.5.1 Membicarakan tentang beberapa simbol dan teknik yang digunakan di dalam karya seni Indonesia</p> <p>1.3.5.2 Mengidentifikasi kualitas-kualitas tertentu di karya seni lokal</p> <ul style="list-style-type: none"> • Cara dimana subyek yang dipelajari diwakilkan • Penggunaan teknik-teknik tertentu atau unsur-unsur dari seni • Efek karya seni pada pengamat – apa yang Anda pikirkan atau rasakan tentang karya seni tersebut, apa yang membuat Anda berpikir atau merasa seperti itu? <p>4.17 Menceritakan karya seni budaya benda dan bahasa daerah setempat</p> <p>1.4.17.1 Membicarakan tentang beberapa simbol, unsur dan tekniknya yang digunakan oleh seniman</p> <p>1.4.17.2 Membicarakan tentang gambar dan karya seni lainnya yang mereka pernah lihat, dan mengingat tentang apa karya seni tersebut dan siapa yang membuatnya</p> <p>1.4.17.3 Menggambarkan dan memberikan tanggapan mengenai tentang apakah karya seni itu</p> <p>1.4.17.4 Membicarakan tentang karya seni pribadi</p>	<p>4.1 Membuat karya seni ekspresi dengan memanfaatkan berbagai teknik cetak sederhana menggunakan bahan alam</p> <p>1.4.1.1 Menjelajahi peran dari garis, bentuk dan warna dalam pembuatan cetakan</p> <p>1.4.1.2 Menjelajahi berbagai teknik cetak untuk menciptakan cetakan tunggal atau cetakan multi pel</p> <ul style="list-style-type: none"> • Cetak mono – menggunakan bahan alami • Stensil kertas • Cetak layar sederhana <p>4.3 Menggambar dengan memanfaatkan beragam media kering</p> <p>1.4.3.1 Bereksperimen dengan sifat dari peralatan menggambar yang berbeda</p> <ul style="list-style-type: none"> • Pensil grafit dan pensil warna • Krayon • Kapur <p>1.4.3.2 Menjelajahi unsur dari garis, nilai, tekstur menggunakan peralatan ini</p> <p>1.4.3.3 Menginvestigasi rincian tentang benda, tempat, ruang dan benda hidup lainnya</p> <p>1.4.3.4 Mulai bereksperimen dengan ukuran, skala dan proporsi</p>	<p>P 1.8 Mempragakan contoh keseimbangan, melalui investigasi, menggunakan model “balance”</p> <p>P1.9 Menentukan, melalui investigasi menggunakan model “balance” dan bilangan bulat sampai dengan 10, jumlah benda yang sama yang harus ditambahkan atau dikurangi untuk mencapai keseimbangan;</p>

SAMPLE UNIT OF INQUIRY

Planning the inquiry

1. What is our purpose?

To inquire into the following:

- **transdisciplinary theme**

HWEO

Suatu inkuiri ke dalam cara-cara kita menemukan dan mengungkapkan gagasan, perasaan, budaya, keyakinan dan nilai-nilai; cara-cara kita merenungkan, memperluas dan menikmati kreativitas kita; penghargaan kita terhadap estetika.

- **Central Idea:**

Keindahan dan keunikan budaya Indonesia menghasilkan berbagai ekspresi

The beauty and uniqueness of Indonesian culture produces various expressions

Summative assessment task(s):

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

Pentas Budaya Kelas 2 di Sport Hall

Class/grade: 2

Age group: 7 – 8 yrs

School: Sekolah YPJ Kuala Kencana

School code: 70437

Title:



PYP planner

Teacher(s): Syane, Mathilda, Herlina

Date: October 29 – December 14

Proposed duration: number of hours over number of weeks 6

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

What lines of inquiry will define the scope of the inquiry into the central idea?

- 1) Kita belajar budaya dari berbagai daerah (Perubahan)
 - 2) Hubungan antar budaya yang berbeda menimbulkan keindahan dan keunikan (Perspektif)
 - 3) Bagaimana saya mengekspresikan keindahan dan keunikan budaya saya (Hubungan)
- 1) We learn culture from various regions (Change)
 - 2) Relations between different cultures give rise to beauty and uniqueness (Perspective)
 - 3) How do I express the beauty and uniqueness of my culture (relationships)

What teacher questions/provocations will drive these inquiries?

- Mengapa budaya satu daerah berbeda? Mengapa budaya setiap daerah berbeda?
- Bagaimana cara yang tepat harus belajar budaya itu? Mengapa budaya itu penting bagi kita?
- Apakah penting kita belajar tentang budaya orang lain? Bagaimana kita melestarikan budaya kita?
- Apa yang dimaksud dengan budaya?
- Why do we have to learn about culture?
- Why are the cultures of each region different?
- How should you learn the culture right?
- Why is culture important to us?
- Is it important that we learn about other people's cultures?
- How do we preserve our culture?
- What is meant by culture?

Planning the inquiry

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

Provokasi: Guru menjadi model untuk menggunakan Bahasa dari daerahnya ketika masuk kelas, menyanyi lagu daerah, makanan dari mana kamu tahu tentang budaya

Pre-ass: Sorting out: Gambar makanan, pakaian, rumah adat, tarian, lagu daerah, ciri khas beberapa daerah. Dengan menggunakan peta Indonesia, siswa akan menempatkan gambar sesuai dengan pulau di Indonesia. Tambah gambar dari luar Indonesia.

Provocation: The teacher becomes a model for using language from his area when entering class, singing folk songs, food

Will students learn predictions on this theme on this theme?

Where do you know about culture.

Pre-ass: Sorting out: Pictures of food, clothing, traditional houses, dances, folk songs,

characteristics of several regions.

By using a map of Indonesia, students will paste pictures according to the island in Indonesia.

Add images from outside Indonesia.

What are the possible ways of assessing student learning in the context of the lines of inquiry?

What evidence will we look for?

Formative assessment 1: siswa memilih 1 suku/daerah yang akan di jelaskan dan

membandingkannya dengan suku asalnya. Double Bubble Map

Formative assessment 2: Berdasarkan kreasi anak tentang aksesorisnya maka siswa akan

menjelaskan sesuai dengan kata-katanya

Formative assessment 3: Refleksi bagaimana mengekspresikan keindahan dan keunikan budaya

masing-masing

(mengekspresikan, membandingkan, menghargai budaya diri sendiri dan orang lain dll)

Formative assessment 1: students choose 1 tribe / area that will be explained and

compare it with the original tribe. Double Bubble Map

Formative assessment 2: Based on children's creations about accessories, students

will explain it according to their words.

Formative assessment 3: Reflection on how to express the beauty and uniqueness

of each culture.

(express, compare, respect the culture of yourself and others etc.)

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Learner Profiles: Pengambil resiko, berpandangan terbuka

Attitudes: Apresiasi, kreativitas

Transdisciplinary skills: Berpikir – pemahaman, analisis, sintesis

Komunikasi – menyampaikan

Penelitian – merumuskan pertanyaan

Learner Profiles: Risk takers, open minded

Attitudes: Appreciation, creativity

Transdisciplinary skills: Thinking - understanding, analysis, synthesis

Communication - deliver

Research - formulate questions

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

Reflecting on the inquiry

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

9. Teacher notes

Konsep Perubahan pada LOI 1 tidak sesuai, usulan untuk tahun depan FORM

SAMPLE SPECIALIST ADDENDUM TO UNIT OF INQUIRY

Single Subject Planner - SD YPJ KUALA KENCANA		
Perencanaan Bidang Studi - Musik Nama Guru: Antonius Bari	Tanggal: September 10 – October 26 Kelas: 6 Tahun Ajaran: 2018-19	Unit 2 Semester: 1
Tema Transdisiplinar: Suatu inkuiri ke dalam saling keterkaitan sistem buatan manusia dan masyarakat; struktur dan fungsi organisasi; pengambilan keputusan berbasis kemasyarakatan; kegiatan ekonomis dan dampaknya pada manusia dan lingkungan hidup.		
Gagasan Utama: Organisasi musik yang baik menghasilkan harmonisasi yang indah		
Cakupan inkuiri Kord/Akord (fungsi) Bermain alat musik (hubungan)		
Profil Pembelajar : berpandangan terbuka Sikap Percaya diri, kerjasama Keterampilan Transdisiplinar Bekerjas sama		
Penilaian: Pre-assessment: Apa yang dipahami oleh siswa tentang kord atau akor dan hubungannya dalam dengan iringan lagu yang baik dan benar. serta Formatif : Siswa menunjukkan dan mendemonstrasikan pemahaman mereka terhadap setiap materi yang mereka dapatkan, serta mengimplementasikan pemahan itu dala bentuk pertunjukkan yang dapat dinikmati oleh teman-teman yang mendengarkan dan melihatnya. Sumatif . Menunjukkan kemampuan mereka dalam mengaplikasikan pelajaran yang mereka telah pelajari itu ketika memainkan pergerakan kord C sederhana serta mengiringi lagu sederhana dalam kelompok yang mereka telah bentuk.		
Sumber pembelajaran: Buku Teknik bermain Gitar-RE rangkuti Mahir bermain Gitar-Ahmad Faisal Al Kaustar		
Refleksi Unit Refleksi lengkap unit: termasuk profil pembelajar, sikap dan keterampilan. Dengan belajar unit 2 ini, siswa menunjukkan profil berpandangan terbuka , mereka akan terbiasa mengevaluasi setiap kemampuan mereka dan mereka terus bertumbuh dengan baik sesuai dengan pengalaman demi pengalaman yang mereka telah lalui. Siswa akan menunjukkan sikap percaya diri dan kerjasama yang baik saat mereka sedang bermain bersama-sama musik dengan teman-temannya maupun ketikan bermain secara individu. Siswa menunjukkan ketramampilan bekerjasama dengan teman-teman kelompoknya maupun dengan teman-teman yang bukan kelompoknya. Apa yang bekerja dengan baik dan perubahan apa yang bisa dilakukan untuk memperbaiki unit. (Gagasan Utama, Cakupan Inkuiri, Penilaian)		
Kompetensi Dasar/Indikator:		
Planner Kelas Komentar: Pada unit ini grade 6 belajar tentang teknik-tenik pengiringan lagu sederhana dengan menggunakan gitar dan kord-kord sederhana, siswa mampu menunjukkan kreativitas mereka baik ketikan bermain dalam kelompok maupun ketika bermain sendiri. Pada unit ini juga secara umum anak-anak sudah bisa menunjukkan kualitas musical mereka dengan baik sekalipun dengan teknik-teknik pengiringan yang sangat sederhana.		