

High School Peer Tutoring: An In-Depth Look at What Constitutes
an Ideal Peer Tutor and an Ideal Peer Tutoring Session

by

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ABSTRACT

Peer learning is one of the longest established and most intensively researched forms of learning. As a form of peer learning, peer tutoring is characterized by specific role-taking as tutor or tutee with high focus on curriculum content. In the late 18th century, Andrew Bell undoubtedly became the first person in the world to use peer tutoring in a systematic fashion within a school setting. Due to its miraculous success, Bell affirmed that peer tutoring was the new method of practical education and was essential to every academic institution. Early in American education, teachers relied on certain students to teach others (i.e., peer tutoring) but this occurred on an informal, impromptu, as needed basis. This type of peer tutoring lasted well into the 20th century. A recent change in the traditional face of peer tutoring arrangements for U.S. schools has occurred due to more than 30 years of research at four major tutoring centers. Peer tutoring has moved away from an informal and casual approach to a more formal and robust method of teaching and learning. However, at the researcher's high school, peer tutoring was still very casual, informal, and practically non-existent. Consequently, the researcher created a peer tutoring club, and developed, and implemented a peer tutoring program. The researcher conducted a mixed-methods study with design-based research (DBR) as the preferred research design in order to discover what constitutes an ideal peer tutor and an ideal peer tutoring session. The researcher utilized qualitative means to analyze the following data: 1) field notes, 2) impromptu interviews, 3) questionnaires, 4) focus group interviews, and 5) a semi-structured interview. The researcher utilized quantitative means to analyze the following data:

1) sessions tutored survey and 2) archival data (e.g., daily attendance, school records).

Analysis of qualitative and quantitative data suggested that the ideal peer tutor was qualified (e.g., desire, character traits, content mastery), trained (e.g., responsibilities, methodologies, procedures), and experienced. Likewise, in addition to having an ideal peer tutor, an ideal peer tutoring session took place in an environment conducive to learning and tutees were prepared and actively participated.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	xv
LIST OF FIGURES	xviii
CHAPTER	
1 INTRODUCTION AND CONTEXT	1
Introduction.....	1
Situated Context.....	3
Prior Research.....	3
Background.....	3
Setting.....	4
Problem.....	7
Innovation.	7
Role of Researcher	7
Purpose of Study and Research Questions.....	8
2 LITERATURE REVIEW	9
History of Peer Tutoring	9
Introduction.....	9
History.....	9
Peer Tutoring Used for the First Time in a Systematic Fashion.....	10
Peer Tutoring’s Influence in the 18 th and 19 th Century	12
First Challenge – Management	12
Second Challenge – Education	13

CHAPTER	Page
Third Challenge – Funding	15
Definitions	16
Peer Learning	16
Cooperative Learning.....	17
Peer Tutoring	17
Peer Tutoring Today	19
Early Beginnings.....	19
From Informal and Casual to Formal and Robust	19
Many Students need Tutoring	21
Peer Tutoring’s Power and Potential in the 21 st Century.....	23
Introduction.....	23
First Challenge – Academic Achievement	23
Second Challenge – Lack of Time.....	26
Third Challenge – Funding	28
Similar Research Studies	29
Introduction.....	29
Peer Tutor.....	30
Peer Tutoring Session	31
3 METHODS.....	33
Introduction	33
Theory.....	33
Research Design.....	34

CHAPTER	Page
Design-Based Research	34
Mixed-Methods Research	35
Setting	37
Participants/Sampling	37
Role of Researcher	40
Innovation	42
Location and Procedures	43
PMPT Club	43
Members	43
Coordinator	44
Teacher-Supervisors	45
Data Sources and Collection	46
Action Plan	46
Qualitative Data	47
Field Notes	47
Impromptu Interviews	48
Questionnaires	48
Focus Group Interviews	49
Semi-Structured Interview – Exemplar Tutor	49
Quantitative Data	50
Sessions Tutored Survey	50

CHAPTER	Page
Archival Data (Daily Attendance)	51
Archival Data (School Records)	51
Data Analysis	51
Qualitative.....	51
Quantitative.....	54
Threats to Validity	54
Internal	55
External.....	56
4 RESULTS.....	58
Qualitative.....	58
Field Notes	58
DEP (Dependency)	60
EMOTUTE (Emotions – Tutee)	60
EMOTUTO (Emotions – Tutor).....	61
LAYCE (Layout – Center).....	62
PAI (Pairing).....	62
PRE (Preparation – Tutee).....	63
QUA (Qualification – Tutor)	64
RES (Resources)	65
RESP (Responsibilities – Tutor).....	66
TRA (Training – Tutor)	67
Impromptu Interviews.....	68

CHAPTER	Page
BENTUTE (Benefits – Tutee)	69
BENTUTO (Benefits – Tutor).....	71
DEP (Dependency)	73
DIF (Different Pairing)	75
GRO (Group Tutoring)	76
IDES (Ideal Session).....	77
IDET (Ideal Tutor).....	79
LAC (Lacking Fundamentals)	81
OVE (Overall Experience).....	83
PRE (Preference – Peer Tutor)	84
SAM (Same Pairing).....	86
Questionnaires	88
Tutor Questionnaire	88
Question #1 - Why Did You Decide to be a Tutor?	88
Question #2 – Do You Believe Your Tutoring Has Helped Those You Have Tutored?.....	89
Question #3 – When Should Students Seek Tutoring From a Peer, and When Should They Seek Tutoring From a Teacher?.....	90
Question #4 – What are Some Challenges of Being a Tutor?	91
Question #5 – What Does it Take to be a Good Tutor?	92
Question #6 – What Does it Take to Have a Good Tutoring Session?.....	93

CHAPTER	Page
Tutee Questionnaire	94
Question #1 – Why Have You Needed Peer Tutoring?	94
Question #2 – Why Did You Decide to Receive Tutoring From a Peer Instead of a Teacher?	95
Question #3 – Has Peer Tutoring Helped You?.....	96
Question #4 – What Did Your Tutor(s) do That Helped You The Most?.....	97
Question #5 – What Did Your Tutor(s) do That Helped You The Least?	98
Question #6 – What Advice Would You Give a Brand New Tutor on How to be a Good Tutor?.....	99
Focus Group Interviews	100
CHATUTE (Challenges – Tutee)	101
CHATUTO (Challenges – Tutor)	102
EXP (Experience – Tutee)	104
IDETUTE (Ideal Tutee)	106
IDETUTO (Ideal Tutor).....	107
IMP (Improvements – Program).....	108
STE (Stewardship)	108
TEA (Teacher – Best Option)	110
Semi-Structured Interview – Exemplar Tutor (Vignette)	111

CHAPTER	Page
Quantitative.....	113
Archival Data – Tutees (Daily Attendance).....	113
Sessions Tutored Survey - Tutors.....	115
Archival Data – Tutors (School Records).....	116
Archival Data – Tutees (School Records)	118
5 DISCUSSIONS.....	121
Assertions.....	122
Research Question 1: What Constitutes an Ideal Peer Tutor at PMHS?	123
Assertion 1: A Tutor Possessed Certain Qualities and Character Traits.	123
Possessing Certain Qualities and Character Traits Came First.....	123
The Most Important Quality Possessed was Patience.....	124
Assertion 2: A Tutor Needed to Receive Extensive Training.....	125
It was Not Easy Being a Tutor	125
Regardless of the Formal Training Received, Tutors Were Still	
Underprepared	126
Assertion 3: Content Knowledge was Not Enough; a Tutor Possessed Content	
Mastery.....	127
Content Knowledge was a Given.....	127
A Tutor Had No Choice But to Relearn Material on the Spot.....	128
Tutoring Could Not Take Place if a Tutor Did Not Possess Content	
Mastery.....	129

CHAPTER	Page
Research Question 2: What Constitutes an Ideal Peer Tutoring Session at PMHS?.....	130
Assertion 4: A Tutor Assumed Stewardship of a Tutee’s Learning.	130
A Tutor Was Not be Able to Answer a Tutee’s Every Question.....	130
A Tutor Discovered the Answer to a Tutee’s Every Question	131
A Tutor Knew When to Refer a Tutee to His/Her Teacher	131
Assertion 5: A Tutee was Willing to Learn	132
A Tutee Generally was Unmotivated.....	133
A Tutee Came Prepared to Learn.....	133
A Tutee was More Willing to Learn When Attendance was Not Mandatory.....	134
Assertion 6: A Tutor and a Tutee Engaged in Open and Ongoing Communication	135
Tutors and Tutees Assumed the Responsibility to Communicate	136
Communication was a Challenge for Both Tutors and Tutees	136
Tutors and Tutees Benefited From Open and Ongoing Communication.....	137
Research Question 3: What Model Depicts an Ideal Peer Tutor and Peer Tutoring Session at PMHS?.....	138
Model 1: An Ideal Peer Tutor	138
An Ideal Peer Tutor was Qualified	139
An Ideal Peer Tutor was Trained.....	139

CHAPTER	Page
An Ideal Peer Tutor was Experienced.	140
Model 2: An Ideal Peer Tutoring Session.....	141
The Peer Tutoring Center was Conducive for Tutoring and Learning.	142
A Tutee was Prepared	142
A Tutee Actively Participated.....	144
Limitations	146
Strengths.....	148
Methodology.....	148
Extensive Data Analysis	149
Implications for Teaching Practice and Policy	150
REFERENCES.....	154
 APPENDIX	
A SESSIONS TUTORED SURVEY	161
B TUTOR QUESTIONNAIRE	163
C TUTEE QUESTIONNAIRE	166
D TUTOR FOCUS GROUP PROTOCOL.....	169
E TUTEE FOCUS GROUP PROTOCOL	171
F CODEBOOK – FIELD NOTES	173
G CODE SHEET – FIELD NOTES	178
H CODEBOOK – IMPROMPTU INTERVIEWS	216
I CODE SHEET – IMPROMPTU INTERVIEWS.....	222

APPENDIX	Page
J CODEBOOK – TUTOR QUESTIONNAIRE.....	261
K CODE SHEET – TUTOR QUESTIONNAIRE.....	266
L CODEBOOK – TUTEE QUESTIONNAIRE	278
M CODE SHEET – TUTEE QUESTIONNARIE	281
N CODEBOOK – FOCUS GROUP INTERVIEWS	285
O CODE SHEET – FOCUS GROUP INTERVIEWS	291
P SEMI-STRUCTURED INTERVIEW TRANSCRIPTION.....	305
Q INSTITUTIONAL REVIEW BOARD APPROVAL	317

LIST OF TABLES

Table		Page
1	Ethnicity Composition of Phoenix Metropolitan High School 2012-2013	4
2	Research Methods, Data Collection Instruments, and Sampling.....	39
3	Range of Tutoring Sessions, Quantity of Tutors, Rounded Percentage, and Quantity of Participants	39
4	Quantity/Range of Tutoring Sessions Received, Quantity of Tutees, Rounded Percentage, and Quantity of Participants	40
5	Action Plan Timeline	46
6	List, Description, and Detailed Inventory of all Qualitative Data Collection Instruments.....	47
7	List, Description, and Detailed Inventory of all Quantitative Data Collection Instruments.....	50
8	Field Notes: Description and Examples of Themes/Codes.....	59
9	Impromptu Interviews: Description of Benefits for Tutees	70
10	Impromptu Interviews: Description of Benefits for Tutors	72
11	Impromptu Interviews: Description of the Reasons for Dependency	74
12	Impromptu Interviews: Description of the Advantages of Different Pairings.....	75
13	Impromptu Interviews: Description of the Benefits and Challenges of Group Tutoring.....	76
14	Impromptu Interviews: Description of the Facets of an Ideal Session	78
15	Impromptu Interviews: Description of the Qualifiers and Character Traits	80

Table	Page
16	Impromptu Interviews: Description of the Concepts of Lacking Fundamentals 82
17	Impromptu Interviews: Description of Tutees' Overall Experience 83
18	Impromptu Interviews: Description of Reasons to Seek a Peer vs. a Teacher 85
19	Impromptu Interviews: Description of the Advantages of Same Pairing 86
20	Tutor Questionnaire: Reasons to be a Tutor 89
21	Tutor Questionnaire: Responses Why or Why Not Tutoring Has Helped 90
22	Tutor Questionnaire: When to Seek Help from a Peer vs. a Teacher 91
23	Tutor Questionnaire: Challenges of Being a Tutor..... 92
24	Tutor Questionnaire: Characteristics of a Good Tutor 93
25	Tutor Questionnaire: Characteristics of a Good Tutoring Session 94
26	Tutee Questionnaire: Reasons for Seeking Peer Tutoring..... 95
27	Tutee Questionnaire: Reasons for Seeking a Peer vs. a Teacher..... 96
28	Tutee Questionnaire: Responses if Peer Tutoring Has Helped..... 97
29	Tutee Questionnaire: What Tutors Did that Helped the Most 98
30	Tutee Questionnaire: What Tutors Did that Helped the Least..... 98
31	Tutee Questionnaire: Advice for New Tutors..... 99
32	Focus Group Interviews: Description of Tutees' Challenges 101
33	Focus Group Interviews: Description of Tutors' Challenges 103
34	Focus Group Interviews: Description of Tutees' Experience..... 104
35	Focus Group Interviews: Description of an Ideal Tutee 106
36	Focus Group Interviews: Description of an Ideal Tutor 107

Table	Page
37 Focus Group Interviews: Description of Suggested Improvements	108
38 Focus Group Interviews: Description of the Concept of Stewardship	109
39 Focus Group Interviews: Description of When Teachers Would be the Best Option	110
40 Research Questions and Assertions	122

LIST OF FIGURES

Figure		Page
1	Archival Data: Session Received.....	114
2	Archival Data: Content Area.	115
3	Sessions Tutored.....	116
4	Archival Data: Ethnicity of Tutors	117
5	Archival Data: Gender of Tutors	117
6	Archival Data: Grade Level of Tutors	118
7	Archival Data: Ethnicity of Tutees	119
8	Archival Data: Gender of Tutees	119
9	Archival Data: Grade Level of Tutees.	120
10	Model of an Ideal Peer Tutor	141
11	Model of an Ideal Peer Tutoring Session.....	145

Chapter 1: Introduction and Context

Introduction

Since 2005, I have been teaching high school Spanish, and during this time, I have taught an estimated 1200 students. I have discovered that many of my struggling students need additional, and oftentimes, individualized academic assistance. It would be safe to say that the majority of them struggle, in one form or another, to learn the Spanish language – after all, it is foreign to them. On occasion, during office hours, students come to me for additional help. All many of them need is a little specific and individualized assistance to better understand a given concept. I am amazed and find it quite miraculous that many of them “get it” in a matter of a few minutes. Many times these students will spend weeks in class listening to me teach the very concept that took them just minutes to understand. I have noticed this to be a pattern throughout the years; therefore, I believe that some students need additional, and oftentimes, individualized help to be able to learn effectively. Offering students additional and individualized assistance is one way, I believe, the quality of instruction can be improved, which has been the focus of education for more than 20 years (Gallucci, DeVoogt, Yoon, & Boatright, 2010). On the other hand, I believe that additional and individualized assistance, offered by the teacher alone, is not enough for all students to learn - I am one of those students.

While I was attending Eastern Arizona College (EAC), I remember at times not fully grasping the subject matter so I would schedule a meeting with one of my professors during office hours. I do not recall the details, but I do remember that after my visits I seemed to be just as confused as before. I never really could grasp what it was

they were saying because it was practically identical to how they taught it in class. After graduating from EAC, I transferred to Arizona State University (ASU) where I had been accepted into the College of Education. It was during my time at ASU that I distinctly remember the frustration of meeting with multiple professors for additional help and/or clarification and leaving, yet again, just as confused, if not even more so. These professors were unable to explain things to me in a way that made sense. Many times, it felt as if they were speaking to me in a different language other than English or Spanish. After failed attempts to receive the additional help I was looking for, out of desperation I reached out to my fellow classmates. It was not long until I discovered that they were able to help me more than my professors were for we spoke the “same language” and they were able to explain things in a way that made sense to me. It was this discovery that saved me and helped me not only graduate but to graduate with distinction. Through the help of my peers, three years later, I graduated, with distinction yet again, with a Master’s degree from Northern Arizona State University (NAU). Even today, it is my peers and their tutoring, that gives me the added explanation, clarification, assistance, direction, and support I need to be successful in my doctoral studies. I believe peer tutoring is an indispensable resource, and for some students, it may be more beneficial than any improvement to instruction and/or pedagogy that a teacher may make. My own research opened my eyes, even more, to the power and potential of peer tutoring for all students, including the tutor.

Situated Context

Prior Research

The idea that all students can benefit from peer tutoring, manifested itself in my first cycle of action research (AR) during the Spring Semester of 2012. My innovation, and therefore my research, was on cooperative learning with an emphasis on peer teaching. My participants came from my most struggling class where the average individual grade ranged from 54.9% to 97.7%. Students were strategically paired into groups based on grade percentage and my own best judgment. Each pair was divided into a Group 1 and a Group 2. Group 1 was taught a completely new Spanish grammar construct while Group 2 was likewise taught a completely new and different Spanish grammar construct. Once students mastered the construct, they in turn taught their peer in the other group what they had learned and vice versa. The results, which stemmed from questionnaires and field notes, suggested that peer teaching positively increased students' fulfillment, motivation, engagement, achievement, and confidence. Additionally, peer teaching helped give all students, both the tutor and tutee, a strong sense of empowerment. In particular, those students who struggled the most academically now had a voice in the classroom, an identity or presence that was not there before. I realized then that I had just witnessed something truly amazing and powerful. I realized that peer teaching/tutoring offers indispensable and matchless benefits to both the tutor and the tutee.

Background

In addition to being a Spanish teacher, I am the coordinator for Phoenix Metropolitan Peer Tutoring (PMPT; pseudonym) and sponsor of the PMPT club. I have

been teaching at Phoenix Metropolitan high school (PMHS; pseudonym) for nine years and during this time I have taught summer school five times, served three years as the curriculum committee chair, two years as level leader, and one year as co-sponsor of the National Honor Society (NHS). During the 2007-2008 school year I had the opportunity to work closely with the principal and assistant principals while I completed my internship as a school administrator.

Setting

PMHS, an urban high school situated in Phoenix, AZ, has been in existence since 1996 (Tempe Union High School District, 2012). Total enrollment is 2966 with 1444 female and 1522 male (Arizona Department of Education, 2012a). The ethnic distribution of the student body is demonstrated in Table 1.

Table 1

Ethnicity Composition of Phoenix Metropolitan High School 2012-2013

Ethnic Group	Percentage Composition
American Indian	0.90%
Asian	10.50%
African American	6.20%
Hispanic	12.00%
Multi-Racial	1.40%
Native American	0.84%
White	69.80%

Note: source Arizona Department of Education, 2012b

Of the entire student population, 6.5% receive special education services and 6 % receive free and reduced lunch (Arizona Department of Education, 2012b). The graduation rate is 98% while the drop-out rate is .5% (Tempe Union High School District, 2012). PMHS scored the following on Arizona's Instrument to Measure Standards (AIMS) for the 2011-2012 school year: Math (50% exceeds, 87% passing), Reading (28% exceeds, 95% passing), Writing (9% exceeds, 89% passing), and Science (55% exceeds, 80% passing); Arizona Department of Education, 2012c). Consequently, PMHS received an "A" rating from the Department of Education (Arizona Department of Education, 2012d). In comparing AIMS data, PMHS is one of the top performing high schools in Arizona (Arizona Department of Education, 2012c). In fact, PMHS was named one of the Best High Schools In The Nation by US News & World Report in 2012 (US News & World Report, 2012).

The culture of PMHS is one in which administrators, faculty, and staff pride themselves on the high academic achievement of students. Since its inception, PMHS has established, and consistently maintained, a tradition of academic success. In comparison with the district and state, PMHS has always found itself at the top. Much value is placed on achievement scores, especially those from standardized tests such as AIMS as well as Advance Placement (AP) results. However, recently the school has seen a decline in student academic achievement and as a result decided to create the Phoenix Metropolitan Success Academy (PMSA; pseudonym). PMSA is an online credit-recovery program for students who have either failed freshman and/or sophomore English or Algebra 1-2 and/or Geometry 1-2. One content area teacher per discipline, and occasionally, student volunteers, tutor these students as they work through the credit

recovery program. PMSA successfully helps students meet the state graduation requirement of completing four years of English and four years of mathematics. However, at the time PMHS started, there were no specific school-wide programs which offered students ongoing remedial academic support. There existed a need for additional school resources that would offer students additional, individualized, and ongoing remedial academic support.

The only school resource available to all students for academic support was what the school's 100+ teachers were willing and able to offer. Teachers have always been encouraged to make themselves available to meet with students before and/or after school to offer additional academic support. However, there are potentially two reasons why teachers may not be as available as needed: 1) mandatory meetings and 2) additional responsibilities. First, mandatory meetings such as staff, department, student, and/or parent meetings take place before/after school. There is no other alternative, as meetings cannot take place during regular school hours because teachers are in class teaching. Second, teachers are encouraged to assume additional responsibilities as coaches, committee members, and/or club sponsors. PMHS needs coaches and assistant coaches for approximately 30 athletic teams (which accounts for boys and girls teams) and more than 50 clubs/organizations, in addition to its multiple school-wide committees. These coaches/committee members/club sponsors often have practices, games, meetings, and/or activities that severely limit their ability to offer additional academic support to their students before/after school. In summary, teachers may lack sufficient time to offer their struggling students adequate, additional, and individualized academic support before/after school.

Problem

The primary problem is that PMHS offers additional academic support that is inadequate, undependable, and may not meet the learning needs of all students. First, PMSA is inadequate because it does not offer any academic assistance other than credit-recovery, which is only for a select number of students. Second, teachers offer undependable and limited academic assistance due to added responsibilities, which demand much of their time. Third, when teachers are available to offer academic assistance, this type of remediation may not reach those students who may learn best from their peers.

Innovation

The innovation needed was a school-wide peer tutoring program. This innovation plans to address the problem by offering additional academic support that is adequate, dependable, and attempts to meet the learning needs of all students. The peer tutoring program adequately offers peer tutoring services to all students in all subject areas. It dependably offers eight, weekly, one-hour sessions before and after school. It also attempts to meet the learning needs of all students, especially those who may benefit from peer-led as opposed to teacher-led instruction.

Role of Researcher

My first goal as researcher is to reach the positionality of insider to be able to collaborate with other insiders (Herr & Anderson, 2005). This will be a challenge to attain since I may be initially viewed more as an outsider. I plan to reach this ideal positionality by making myself known to and seen by as many stakeholders as possible. This initial step is critical in promoting collaboration with all and especially those with

whom I will work closely (i.e., tutors and tutees). My role as researcher will be relatively new to most, as the majority will view me first as a teacher and next as the program coordinator. To better promote recognition and acceptability as a researcher, I plan to be forthcoming and transparent with all stakeholders as to this newly acquired role. My role will be to collaborate with participants (i.e., tutors and tutees) throughout the entire process of the study from data collection to data analysis. My role is to establish and maintain a shared and inclusive vision of the study and to promote participatory interdependence.

Purpose of Study and Research Questions

The purpose in sharing professional and personal experiences, previous research findings, the background, context, problem, and innovation is to set the stage for the focus of this study. In general, this study attempted to better understand the ideals of peer tutoring. The research questions were as follows:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

Chapter 2: Literature Review

History of Peer Tutoring

Introduction

In general, this chapter argues in the affirmative that the implementation of peer tutoring is the best educational practice to address challenges and to alleviate, and solve a myriad of problems facing schools, in particular high schools, in the 21st century. In order to give credence to the assertion that peer tutoring is the most important educational practice needed in high schools today, this chapter will first give a brief history of peer tutoring and a detailed explanation of why Bell's system of tuition (i.e. peer tutoring), experienced unprecedented success and popularity and how it helped to address, alleviate, and solve three major challenges of its time. Second, this chapter will define peer learning (e.g., cooperative learning, peer tutoring) and particularly, will give an in-depth description of peer tutoring. Third, this chapter will take a close look at peer tutoring today, its evolution and current state. Fourth, this chapter will discuss peer tutoring's power and potential in the 21st century; in particular, three major challenges that high schools face today that could be mitigated and/or solved through the implementation of a school-wide peer tutoring program. Lastly, this chapter will discuss this study's purpose and two similar research studies that will give insight into what the researcher might expect to see in this study.

History

The concept of students teaching other students, (i.e., peer tutoring), has been around for thousands of years (Bell, 1808; Gardner, Nobel, Hessler, Yawn, & Heron, 2007; Topping, 1998; Wagner, 1990) and is possibly "as old as any form of collaborative

or community action” (Topping, 2005, p.631). In fact, this practice dates back to the ancient Greeks (Topping, 1998; Wagner, 1990) where, at the Athenian Academy, select students, including Aristotle, were tutored (Gardner et al., 2007). Throughout the centuries and in a myriad of contexts, peer tutoring, in one form or another, has manifested itself. However, it was not until the late 1800s that peer tutoring emerged as a systematic approach for schools to educate its students (Topping, 1988).

Peer Tutoring Used for the First Time in a Systematic Fashion

According to Topping (1988), Dr. Andrew Bell is undoubtedly the first person in the world to use peer tutoring in a systematic fashion within a school setting. Consequently, Bell is considered the innovator of peer tutoring as we know it today. As previously stated, the concept of tutoring has been around for thousands of years (Bell, 1808; Gardner et al., 2007; Topping, 1998; Wagner, 1990) and in fact, Bell himself, was a tutor while attending St. Andrews University (Blackie, 2004). Perhaps it was here that Bell had his first real experience with tutoring. He also spent some time as a private tutor after graduating in 1774 (Blackie, 2004).

On July 13, 1787 near Fort St. George, East Indies, the governor and members of council, which included both religious and military leaders, drafted a plan to care for and educate 100 distressed male orphans of the European military (Bell, 1797, 1808). A description of the orphans was as follows:

The boys were, in general, stubborn, perverse, and obstinate; much given to lying, and addicted to trick and duplicity. And those, who were somewhat advance in age, or had made any progress in reading or writing, were, for the most part, trained in customs and habits incompatible with method and order. (Bell, 1797, p. 9)

Furthermore, these “half-cast children” (Bell, 1797, p. 7) were considered inferior in the “talents of the head, the qualities of the mind, and the virtues of the heart.” (Bell, 1797, p. 7) In the year 1789, at the request of the committee, a Male Asylum was formed, which was similar to other charitable schools already in existence, and the Reverend Dr. Andrew Bell was asked to become its superintendent (Bell, 1797; Topping, 1988). The asylum’s directors had as their expectations the management and education of the orphans (Bell, 1797). These expectations influenced Bell’s goal as superintendent, which was to “make good scholars, good men, and good Christians” and to make them good members of society (Bell, 1797, p. v). When Bell assumed his position in the school, he had some new educational ideas he wanted to implement; but he quickly found that the school’s teachers were resistant (Topping, 1988). As a result, Bell tried to have the students experiment with his new ideas. He quickly noticed something else happening, which was of greater significance and power than the new ideas themselves, it was the power and potential of students teaching each other (Bell, 1808; Topping, 1988). This “experiment of Education” (Bell, 1808, p. v), rests on the simple principle (Bell, 1808) that the students or “scholars” (Bell, 1808, p. 2) were responsible to “instruct themselves and one another”, (Bell, 1808, p. v) all under the guidance of a single headmaster (Bell, 1808). This method of teaching or instruction became known as the “System of Tuition” (Bell, 1808, p. ix) which Bell referred to as “the new method of practical Education” (p. 1). Through its ability to manage and educate (Bell, 1797) its students, Bell’s system of tuition, in the short span of seven years (Bell, 1808) found great success. According to Bell (1797), this system, due to its extraordinary success, surpassed every expectation and hope he and the directors had ever imagined. Consequently, Bell (1797) stated that

this system should be “essential to every institution” (p. 9). In fact, at one point “over 12,000 schools and over 346,000 children in England, Wales, Ireland, and British colonies worldwide” (Blackie, 2004) were using this system. With this immense success, it is no wonder why Bell (1808) stated, “...if you and I live a thousand years, we shall see this System of Tuition spread over the world” (p. ix). The affirmation that peer tutoring is “the new method of practical Education” (Bell, 1808, p.1), “essential to every institution” (Bell, 1797, p. 9), and is needed throughout the entire world (Bell, 1808) is the underlining message and purpose of this chapter. First, Bell’s peer tutoring system will be looked at in great detail with the purpose of exposing the challenges his asylum faced and how peer tutoring helped to mitigate and even solve them.

Peer Tutoring’s Influence in the 18th and 19th Century

First Challenge – Management

The management of the orphans was one of two directives given to Bell as the school’s superintendent (Bell, 1797). In order to achieve this particular expectation, Bell created an organized a system of tuition based on the division of labor (Bell, 1808). The system’s organization consisted of students who ranged in age from 7 to 14 years with each class organized by academic achievement rather than chronological age (Bell, 1808; Topping, 1988). Students were paired into tutors and tutees and the “most trusty and best boy tutor[ed] the worst; next best next worst, and so on” (Bell, 1808, p 41). An assistant teacher (i.e., a senior tutor), assigned to each class, (Topping, 1988) had the duty to instruct and help all tutors in learning the material as well as in teaching it to the tutees (Bell, 1808). The assistant teacher in turn reported to a teacher (i.e., senior tutor; Topping, 1988) whose responsibility was to direct and guide the assistant and to ensure

the order, behavior, and improvement of the class (Bell, 1808). The teacher then reported to an usher (i.e., senior tutor; Topping, 1988) who inspected and watched over the school and gave instructions and assistance when needed (Bell, 1808). The assistant teachers, teachers, and ushers were selected from the most senior and brightest students of the school. The usher in turn reported to the headmaster who oversaw the entire school and ensured that the ushers, teachers, assistants, tutors, and tutees all performed their functions. Lastly, the schoolmaster would report to the superintendent, whose primary responsibility was to oversee the school and maintain order and harmony. Likened to a machine, this division of labor made the directing, regulating, and maintenance of the students much more manageable (Bell, 1808) as “they [did] not require looking after, as they of themselves habitually performed their daily tasks” (Bell, 1797, p. 17). According to Bell (1808), this system’s most valuable contribution was its ability to improve subordination, conduct, and the general behavior of the students. Bell (1808) believed that to “attain any good end in education, the institution must fix the attention of its students and prevent them from wasting any time” (p. 10) which this system was able to do through the division of labor. It was through this division of labor, which promoted the maintenance of the students, that education was able to take place.

Second Challenge - Education

The task of educating the orphans was the other directive given to Bell as the school’s superintendent (Bell, 1797). To instill principles of morality and religion (Bell, 1808), and to instruct them in useful knowledge, were the educational goals of the school (Bell, 1797). For example, academic studies for a beginning student consisted of spelling, reading, writing, and basic arithmetic (Bell, 1797). A twelve-year-old student’s

studies consisted of astronomy, arithmetic, bookkeeping, geography, geometry, grammar, mensuration (i.e., measuring), and navigation (Bell, 1797). Under Bell's system of tuition, each student was paired with one other student, with one acting as a tutor and the other acting as a tutee (Bell, 1808). Interestingly, as students progressed within a class or advanced from one class to the next, tutees became tutors, etc. Therefore, afforded to all students was the experience of tutoring and being tutored. Under Bell's system, tutors experienced many benefits. The first benefit to tutors was that the title of tutor exalted them in their own eyes and in the eyes of others, thus giving them a sense of character. Second, tutors became more social (Bell, 1808). Third, because tutees were dependent on tutors, tutors instinctively assumed responsibility to diligently look after and teach the tutees. Fourth, because tutors could be demoted to tutees at any time, tutors had added measure of intrinsic motivation to do their level best. Lastly, Bell stated, "by teaching he is best taught" (p. 23). Tutors learned the material much better through the teaching of it.

Similarly, the tutees experienced many benefits as well. The first benefit was tutees were less likely to fall behind (Bell, 1808) due to the one-on-one instruction given by the tutors. Second, just as with tutors, the tutees learned important social skills. Lastly, tutees' attention was more easily fixed on the task at hand (Bell, 1808) which resulted in increased motivation (Topping, 1988) and learning. To illustrate the extent of how well tutees were able to learn, four, five, and six year olds were taught how to read, write, spell, and do arithmetic in the short span of eight months (Bell, 1808). Perhaps more impressive was the fact that eight months prior, students were introduced to the alphabet for the first time (Bell, 1808). Clear and tangible benefits of peer tutoring for both the tutor and the tutee surfaced during Bell's experiment of education at the Madras

school. Furthermore, an unanticipated and incidental benefit (Bell, 1797) of his system of tuition was the impressive reduction in expenditures due to the employing of tutors and student teachers rather than adult teachers (Bell, 1797).

Third Challenge - Funding

During this time in history, educational institutions did not have much money to hire many adult teachers (Ehly & Larsen, 1980). When Bell became superintendent in 1789, the school had only three adults: a schoolmaster and two ushers (Bell, 1797). By 1795, the students assumed the responsibility for all teaching (Bell, 1797) and only one adult remained, the headmaster (Bell, 1797). In general, the salary of a capable teacher at that time was 30 – 100 pagodas (East Indian currency) a month (Bell, 1797). In comparison, assistant teachers, teachers, and ushers only earned 1 – 15 pagodas a month (Bell, 1797). By using Bell's system of tuition the school's directors saved a striking £1440 British Pounds Sterling per year in teacher salaries (Blackie, 2004) which is equivalent to \$112,000 U.S dollars today (Nye, n.d.). In fact, Bell (1797) would boast of the school's "flourishing condition of its funds" (p. 43). In addition to this system's ability to greatly reduce expenses, was its enabling power of efficiency (Bell, 1797). For example, it was not uncommon for a class of 34 to have one teacher, age 14 and one assistant, age 11 in charge of all teaching (Bell, 1797). Bell (1808) had such confidence in the tuition by the scholars themselves that he stated:

It is its distinguishing characteristic that the school, how numerous soever, is taught solely by the pupils of the institution under a single master, who, if able and diligent, could, without difficulty, conduct ten contiguous schools, each consisting of a thousand scholars. (p. 2)

The efficiency in both cost and teaching were added bonuses to a system, which already was addressing the paramount tasks of maintaining strict discipline (Bell, 1797) and order of its students as well as educating them.

Bell discovered the power and potential of peer tutoring from his experiment of Education at the Madras asylum over two centuries ago. This discovery was a great benefit as it helped to address and solve three undeniable problems at that time, the maintenance of the orphans, their education, and the general lack of funding. Due to its unprecedented success at the asylum and its widespread popularity (Blackie, 2004), again Bell (1808) stated that "... if you and I live a thousand years, we shall see this System of Tuition will spread over the world" (p. ix). The fact is, peer tutoring does exist and it has spread over the world. Next, peer learning (e.g., cooperative learning, peer tutoring) will be discussed with particular attention given to peer tutoring.

Definitions

Peer Learning

There are two types of peer learning, which are "the longest established and most intensively researched forms" (Topping, 2005, p. 632) of learning. These are cooperative learning and peer tutoring (Topping, 2005). Both cooperative learning and peer tutoring have been researched more in the context of schools than in any other setting. With its long history, peer learning has probably always taken place explicitly, implicitly, and/or vicariously. According to Topping (2005) peer learning is the "acquisition of knowledge and skill" (p. 631) through the help and support of peers rather than professional teachers. Erroneously, many schools believe they are implementing cooperative learning or peer tutoring solely by organizing students into pairs and/or small groups (Topping, 2005). In

one study, students placed in groups mostly worked as individuals; in fact, only one-sixth of the time were peers interacting with one another, and this interaction was unrelated to the task (Bennett, Desforges, Cockburn, & Wilkinson, 1984). Consequently, the delivery of peer learning has become an area of greater importance and has resulted in an increased awareness of implementation and organization (Topping, 2005). Since both cooperative learning and peer tutoring are types of peer learning and are so widely used in school settings (Topping, 2005), it is important for educators to understand that each has specific processes and purposes.

Cooperative Learning

Cooperative learning is the instructional use of small groups where students work together in an effort to maximize learning (Johnson et al., 1998a, 1998b). Small groups typically consist of six heterogeneous learners (Topping, 2005) and the essence of a group is the shared interdependence of each group member (Lewin, 1935, 1948) – the same is true for cooperative learning. In fact, according to Johnson and Johnson (2009), the first variable of effective cooperative learning is positive interdependence, which occurs when each group/student has a common outcome or goal, a specific role or task, and a well-defined boundary or identity. Simultaneous interaction, equal participation, and synergy are ideal outcomes of cooperative learning, which require specific training to achieve (Topping, 2005). Both cooperative learning and peer tutoring can be used as a form of peer learning which, if used correctly, promotes knowledge and skill acquisition.

Peer Tutoring

Peer tutoring is “characterized by specific role-taking as tutor or tutee, with high focus on curriculum content and usually also on clear procedures for interaction, in which

participants receive generic and/or specific training” (Topping, 2005, p. 631). Peer tutoring typically occurs on a one-to-one basis (Roscoe & Chi, 2007; Ehly & Larsen, 1980). According to Robinson, Scholfield, and Steers-Wentzell (2005), the concept of tutoring can be generalized and categorized into either peer or cross-age tutoring. For example, peer tutoring occurs when both the tutor and the tutee are of the same age/grade level whereas cross-age tutoring occurs when the tutor is older and is in a higher grade level than the tutee (Robinson et al., 2005). That the tutor and the tutee can be around the same age/grade level is a relatively novel idea, which dispels the assumption that peer tutors should be selected from the best students and should be most like the professional teacher (Topping, 2005). In cross-age tutoring, tutors find this configuration to be cognitively under-stimulating as their levels of ability and interest are dissimilar to that of the tutees (Topping, 2005). Consequently, this equates to a tutoring session, which becomes less advantageous for the tutees. Today there is more emphasis on ensuring that the tutor and the tutee have similar cognitive abilities, with the tutor being slightly ahead. Due to this type of configuration, the tutor finds the experience to be more cognitively challenging while the tutee finds a more credible and proximate model to follow.

Due to some similarities, peer tutoring and peer mentoring can be perceived as being one and the same. According to Topping (2005), there exists confusion in the literature between “tutoring” and “mentoring.” Peer mentoring is typically cross-age and mentors spend time encouraging, supporting, offering counsel, and in short, being a role model. Peer mentoring does not focus on curriculum content nor does it offer training as does peer tutoring. Therefore, there exists a clear distinction between peer tutoring and peer mentoring.

Peer Tutoring Today

Early Beginnings

Early in American education, one teacher alone would attempt to teach the children of a town or settlement (Ehly & Larsen, 1980) in a one-room schoolhouse with the children being of various ages, abilities, and grade levels (Gardner et al., 2007). Out of necessity, teachers relied on certain students to teach others (Johnson, 1970) in an impromptu, as needed basis (Gardner et al., 2007). Consequently, peer tutoring arrangements were very informal (Gardner et al., 2007). This lasted well into the 20th century (Gardner et al., 2007). Furthermore, past peer tutoring systems predating 1970 offered temporary assistance to tutees, were not monitored by the teacher, and did not allow for real-time analyses needed to correct students' performance (Gardner et al., 2007). Regardless of these shortcomings, studies have reported an improvement in students' academic performance (Hawryluk & Smallwood, 1989).

From Informal and Casual to Formal and Robust

A recent change in the traditional face of peer tutoring arrangements for U.S. schools has occurred due more than 30 years of systematic, sustained, and replicated research at four major tutoring centers (i.e., State University of New York at Fredonia, Ohio State University, Vanderbilt University, and Juniper Gardens Children's Project; Gardner et al., 2007). Moving away from informal and incidental peer tutoring arrangements, these four tutoring centers have adopted a systems model approach to tutoring (Gardner et al., 2007). According to Heron and Harris (2001) a tutoring systems model is "any formal and comprehensive approach to teaching [peer tutors] to prompt, praise, test, and chart the academic, social, or non-traditional skills of their partners on a

daily basis” (p. 452). Key elements of a tutoring system are based on the premise of direct instruction, which includes assessment, planning, implementation, and evaluation (Gardner et al., 2007). Peer tutoring systems/approaches differ from incidental approaches because they promote active student response (ASR; Heward, 1994), opportunity to respond (OTR; Greenwood, Delquadri, & Hall, 1984), feedback (Van Houten, 1980), and reinforcement (Cooper, Heron, & Heward, 2007). Further principles of a systems approach include the importance of role identity for both the tutor and tutee, explicit formal training, continuous teacher involvement, frequent testing and formal maintenance checks, and the use of evaluative data for improvement (Heron, Villareal, Yao, Christianson, & Heron, 2006). According to Gardner et al. (2007), peer tutoring systems have “transformed tutoring from an informal and casual approach to a robust, systematic, and an instructionally effective methodology” (p. 73). In fact, because peer tutoring systems have effectively been used to teach and improve skills in multiple subject areas in a variety of settings, and have provided replicated effectiveness data, (Heron et al., 2006) peer tutoring is deemed a best-practice methodology (Peters & Heron, 1993). A best practice has a “theoretical base, employs instructional and error-correction methodologies that are convincing and compelling, has a consensus with existing literature, produces desired outcomes consistently, and shows evidence of social validity” (Heron et al., 2006, p. 30). Future goals of peer tutoring systems are to improve its training through technology, reach students with disabilities, especially autism, which is an emerging population, and make it possible for teachers to receive daily tutoring results from online experts (Gardner et al., 2007).

Many Students Need Tutoring

Over 300 books and 7,000 research articles clearly indicate that there are benefits of tutoring (Gordon, Morgan, Ponticell, & O'Malley, 2004). Tutors and tutees benefit positively (Annis, 1983) from tutoring; in fact, positive effects on achievement, self-esteem, and intrinsic motivation have consistently been found in research summaries on tutoring (Cohen, Kulik, & Kulik, 1982; Gage & Berliner, 1992). According to Topping (2005), "Social and emotional gains now attract as much interest as cognitive gains" (p. 631). For one reason or another, 42% of Americans believe there is a "great need" for children to receive private, outside tutoring services, according to a 2000 *Newsweek* poll (as cited by Gordon et al., 2004). Consequently, tutoring is a \$5 billion to \$8 billion professional service industry (Gordon, 2002). Private tutoring practices are the most common type of tutoring options in the United States (Gordon et al., 2004). Each year, millions pay for private tutoring from hundreds of thousands of teachers who tutor after school, on weekends, and/or in the summer (Gordon et al., 2004). The marketing analysts at Bear-Stearns estimate that parents are likely to seek tutoring if their son/daughter is in the bottom 16% of his/her classes (Gordon et al., 2004). In an average-sized high school, this equates to around 300 students who ideally receive, at some point, private tutoring services. However, this number does not take into account those students who need tutoring yet whose parents cannot afford to pay for it. The fact that more students need additional remediation is apparent; the graduation rate for high school students nationwide is 78.2% with a range of 57.8% - 91.4% (NCES, n.d.). According to the Association for Career and Technical Education (2006), these numbers suggest in part that students do not have adequate remedial academic programs. The variance in the

graduation rate confirms the speculation that current academic programs are failing to help low achieving students; therefore, there is the need for additional remedial programs to help more students achieve academic success and eventually graduate from high school. There is another reason for additional remedial programs at the high school level; too many high school graduates are entering college underprepared (McCabe, 2000). According to McCabe, every year over one million students entering higher education are not prepared. In fact, 41% of students are underprepared in at least one of the basic skills areas of mathematics, reading, and writing, which therefore requires students to take developmental education courses. Unfortunately, high attrition rates exist among students in developmental education courses. For example, according to the National Community College Benchmark Project (n.d.), 33% - 43% of students dropped out of their developmental education course in 2009.

In summary, the fact is, many students need (McCabe, 2000; NCES, n.d.) and seek out tutoring (Gordon et al., 2004). Due to the nationwide graduation rate for high school students, with the range as low as 57.8% (NCES, n.d.) and the over one million high school graduates entering college underprepared (McCabe, 2000), it seems fair to conclude that, in general, high school students do not have access to adequate remedial academic programs. Because of its replicated and sustained success over many years (Gardner et al., 2007), today, peer tutoring is an adequate remedial academic program (Peters & Heron, 1993). In fact, when properly implemented, peer tutoring is considered a best-practice methodology (Peters & Heron, 1993). Next, this chapter will discuss three current challenges facing 21st century high schools and how, if implemented, a peer tutoring program could help.

Peer Tutoring's Power and Potential in the 21st Century

Introduction

Historically, the primary function of an educational institution has been the educating of its pupils, which remains in full force today. Academic achievement ideally becomes the anticipated byproduct of most school programs and energies. Academic achievement is basically the bottom line. As a school's primary goal, academic achievement naturally becomes a school's greatest challenge. The second challenge is the lack of time. This is due to an increase in seat time, teacher commitments, class size, and added expectations and mandates. Third is funding, which is another major challenge facing all educational institutions, not just high schools. Funding, in large measure, dictates teacher quality and therefore, academic achievement. The balance of this chapter will discuss, in detail, the challenges of academic achievement, lack of time, and funding in 21st century high schools and how peer tutoring, when implemented, has and would help to address, alleviate, and solve these challenges. In closing, this chapter will discuss two research studies on peer tutoring and the implications for the study at hand.

First Challenge – Academic Achievement

As previously mentioned, the graduation rate for high school students nationwide is 78.2% with a range of 57.8% - 91.4% (NCES, n.d.). These numbers suggest students lack engagement, do not find relevance in the curriculum, and too often, do not have adequate remedial academic programs (Association for Career and Technical Education, 2006). The variance in the graduation rate confirms the speculation that current academic programs are failing to help low achieving students; therefore, there is a need for

additional remedial programs to help more students achieve academic success and eventually graduate from high school. There is another reason for additional remedial programs at the high school level; also, as was mentioned previously, too many high school graduates are entering college underprepared (McCabe, 2000). Every year over one million students entering higher education are not prepared and 41% of students are underprepared in at least one of the basic skills areas of mathematics, reading, and writing (McCabe, 2000) which therefore requires students to take developmental education courses. In fact, nationally, at the community college level, a high percentage of students drop out of their developmental education courses (National Community College Benchmark Project, n.d.). Based on a high percentage of both high school dropouts nationwide and high school graduates entering higher education underprepared, there is an increasing need for remedial programs that will effectively improve academic achievement. As mentioned earlier, peer tutoring systems offer methodology for effective instruction (Gardner et al., 2007) which in fact has effectively been used to teach and improve skills in multiple subject areas under a variety of settings (Heron et al., 2006) not to mention, peer tutoring is considered a best-practice methodology (Peters & Heron, 1993). As a result, peer tutoring can improve the academic achievement (Topping, 2005) of both the tutees and the tutors (Topping, 1988, 2005). Peer tutoring's power to help tutees attain academic achievement often originates from Benjamin Bloom's research and findings (Topping, 1988). The reason being is he and his colleagues at the University of Chicago (Topping, 1998) discovered that the "average student under tutoring was about two standard deviations above the average of the control class", which means the average tutored student scored better than 98% of students in the

control class (Bloom, 1984, p. 4). The control or conventional class consisted of around 30 students per teacher (today's typical class setting) whereas the tutored class primarily consisted of a one-to-one tutor/tutee ratio (Bloom, 1984) and included expert tutors (Roscoe & Chi, 2008). Bloom (1984) suggests that the main reason why tutored students did so well is because they received constant support and attention compared to students in the conventional setting. In a conventional class, teachers oftentimes give attention and support to only the top third of the class – the brightest and highest achieving students, leaving the remaining students, especially the bottom third, to receive the least amount of attention and support. Furthermore, peer tutoring settings promote active participation, immediate feedback (Bloom, 1984) and provide greater encouragement and opportunity for learning (Brophy & Good, 1970). From a realistic perspective, Bloom (1984) named the potential of peer tutoring the “2 sigma problem” because it is too costly, and therefore unrealistic, to afford students constant one-to-one tutoring. However, he did state that it is “an important task of research and instruction to seek ways of accomplishing this [achievement] under more practical and realistic conditions” (Bloom, 1984, p. 4). Due to a limited availability of tutors and high financial costs, it is unrealistic for every student to receive tutoring (Saulny, 2005), but it is realistic to offer peer tutoring to every student.

Not only can peer tutoring improve the academic achievement of tutees, it can also improve the academic achievement of the tutors as well (Topping, 1988, 2005). According to Warren (1989), through the teaching of others, 90% of the material taught is retained. Fundamental to the teaching of others, and therefore tutor learning, is reflective knowledge-building (Roscoe & Chi, 2008) – a tutor's ability to explain and respond to

questions (Graesser & Person, 1995; King, 1998). Reflective knowledge-building occurs as a tutor's shared ideas "become available for self-evaluation and reflection" which if lacking, through the monitoring of their own understanding, may be "revised or reconstructed" (Roscoe & Chi, 2008, p. 322). It is through these processes of knowledge construction and metacognition that reflective knowledge-building occurs (Roscoe & Chi, 2008) and therefore learning can occur (Graesser & Person, 1995; King, 1998). An important component of reflective knowledge-building is tutor-tutee discourse, which as mentioned previously, is important for tutors' learning as well (Roscoe & Chi, 2007; Thomas, 1994). Through discourse, as tutors scaffold tutees' learning, their own individual learning may also be scaffolded (Topping, 1996). However, evidence is limited (Roscoe & Chi, 2007) as to the benefits of tutors' learning (Allen & Feldman, 1972; Goldschmid & Goldschmid, 1976; Griffin & Griffin, 1997, 1998; Robinson, Schofield, & Steers-Wentzell, 2005; Ginsburg-Block, Rohrback, & Fantuzzo, 2006).

Second Challenge – Lack of Time

High school teachers in the United States, on average, spend a total of 36 weeks on instruction, which equals 180 days (OECD, 2011). Net teaching time in hours equals 1,051 with 1,378 hours as working time hours required at school (OECD, 2011). Teachers in the United States spend on average, strictly on net teaching time, 395 hours more than 34 other countries that are part of Organization for Economic Co-operation and Development (OECD; OECD, 2011). Compared to most countries, U.S. teachers spend a far greater percentage of work time specifically on instruction (Darling-Hammond, 2010). In fact, U.S. teachers spend on average, 80% of their day teaching compared to only 60% of OECD countries (Darling-Hammond, 2010). After a three-

year, in-depth study on the challenges of beginning teachers, which included a total of 34 interviews, nine major categories emerged (McCann, Johannessen, & Ricca, 2005).

Workload/time management/fatigue was one category of concern (McCann et al., 2005).

For example, one teacher recounted, “I’ve had a high level of stress the whole year just in terms of worrying about planning, grading, and things like that. There have been a lot of

12-, 13-, and 14-hour workdays.” (McCann et al., 2005, p. 31) According to Darling-

Hammond (1998), 30% of teachers in the U.S. leave the profession in the first 3-5 years

and according to Ingersoll (2003), the attrition rate is 45% during the first 5 years.

With teachers spending, on average, 80% of their day teaching (Darling-Hammond, 2010), this leaves around two hours a day for lesson planning, making copies,

grading, keeping up on important emails, not to mention taking time for lunch. When do

teachers have time to help students who need additional academic assistance? It appears

that teachers will have to choose between helping students before or after school or

taking their work home with them. A peer tutoring program, when implemented

correctly, would be able to free teachers from much routine work (e.g., checking

homework, providing clarification and explanation) which would allow them to focus on

more technical and professional tasks (e.g., curriculum development, professional

learning community (PLC) time, teaching foundational concepts to select students due to

absenteeism etc.; Goodlad, 1979). Perhaps if teachers fully understood peer tutoring, its

fundamental principles, purposes, and benefits, more teachers would utilize it. As a

result, teachers would free up even more time in their busy schedule. For example,

students need time to be able to participate in independent learning, initiate as opposed to

react, scaffold learning, and receive individualized feedback (Topping, 1988). In short,

peer tutoring would allow teachers to free up their schedule even more by helping them to make the most of their instructional influence in the classroom (Miller, Kohler, Ezell, Hoel & Strain, 1993) and is confirmed by the Association for Career and Technical Education. In order to reinvent the American high school for the 21st century, improvements need to be made on how and where academic content is taught and that “‘academic’ skills can be acquired in a variety of settings, not just the traditional classroom setting.” (Association for Career and Technical Education, 2006, p. 2)

Third Challenge – Funding

Public schools in the United States are unequally funded (Biddle & Berliner, 2002) because nearly half of school funds come from local property taxes which generate large funding differences between impoverished and wealthy communities (National Center for Education Statistics, 2000). In fact, total annual funding can range from \$4,000 to \$15,000 per student (Biddle & Berliner, 2002). Funding is instrumental in student achievement; “better-funded schools generate higher levels of achievement...” (Biddle & Berliner, 2002, p. 55). Furthermore, when schools are underfunded, students are adversely affected by a lack of academic resources (Biddle & Berliner, 2002).

Lack of funding can also equate to low wages, which can in turn cause teacher shortages (Rumberger, 1987). The largest expenditure in education budgets, across nations, is teacher remuneration (Nir & Naphcha, 2007). According to the National Center for Educational Statistics, the total expenditures for elementary/secondary schools in 2008-09 in the United States were \$518,997,430 with \$316,345,253 spent on instruction (teacher salaries; NCES, 2011). Similarly, Arizona’s total expenditures for elementary/secondary schools in 2008-09 were \$8,625,276 with 5,205,607 spent on

instruction (NCES, 2011). With well over half of expenditures going toward instruction and therefore teachers' salaries, school districts are limited in funds, especially funds that could be used for academic resources (Biddle & Berliner, 2002).

It is important to note that peer tutoring originated out of economic necessity, as there was a limited supply of teachers to go around (Topping, 1988). Peer tutoring, if implemented wisely, does not have to be a financial burden to high schools. In fact, peer tutoring is very cost-effective (Topping, 1988). Peer tutoring is a perfect solution to unequal and limited funding. In comparison to credit recovery programs, as was mentioned in chapter one, peer tutoring, is much more cost-effective and focuses more on the preventative side of learning.

In summary, three major challenges that face all educational institutions, especially high schools, are 1) the academic underachievement of students, 2) the limited non-instructional time of teachers, and 3) the unequal and inadequate funding. Historically, peer tutoring has helped, to a degree, to mitigate and/or solve these three challenges. However, when implemented with greater resolve, peer tutoring has the potential to address, alleviate, and solve these challenges to an even greater degree than has yet to be seen.

Similar Research Studies

Introduction

As will be explained in greater detail in chapter 3, the researcher developed and implemented a peer tutoring program at Phoenix Metropolitan high school (PMHS). In general, the purpose of this study is to gain a better understanding of peer tutoring at PMHS. The following are similar research studies also conducted in high schools. The

first study sought to understand tutoring from a tutor's perspective while the second study examined tutor-tutee interactions during peer tutoring sessions. The methods and findings of both research studies provide valuable insight and understanding of peer tutoring, especially as it relates to the peer tutor and tutoring session. Consequently, the information gleaned from these two studies properly introduces this study's methods, results, and discussion sections.

Peer Tutor

First, researchers Galbraith and Winterbottom (2011) conducted a study to better understand tutoring from a tutor's perspective. Their study consisted of 10, 16-17 year-old high school tutors; 7 of which were male and 3 of which were female. Additionally, the study consisted of 21, 14-15 year old high school students; 11 of which were female and 10 of which were male. Each student, paired with a tutor, received one tutoring session of 15-20 minutes for 8 weeks. Prior to starting the tutoring process, students believed their primary role as tutors would be to be expert and authoritative in their content area (Galbraith & Winterbottom, 2011). They also believed their motivation in becoming expert and authoritative would stem from a strong desire to be able to answer tutees' questions and to avoid embarrassment. Through the use of questionnaires, semi-structured interviews, and video recordings, researchers discovered that based on the tutors' experiences, tutors began to look at their role and motivation to learn the material much differently. First, instead of automatically being expert and authoritative, tutors recognized gaps in their own learning. Consequently, tutors instinctively revisited the fundamental concepts of the content they were teaching, in order to better understand and teach it. Next and similarly, tutors' motivation to learn the material, over time, was much

more than wanting to answer tutees' questions and avoid embarrassment. Tutors genuinely tried to help tutees as much as possible. Tutors started to look at learning from tutees' perspectives and attempted to teach them by simplifying concepts, using diagrams/visualizations, and making it fun and interesting (Galbraith & Winterbottom, 2011). In short, in an instinctive way, tutors did whatever they could to help tutees learn. As stated previously, according to Topping (2005), tutors in peer tutoring, as is the case in this study, find this type of configuration to be cognitively stimulating as their levels of ability and interest are similar to that of the tutees - in this study, only one grade level separated tutor from tutee. This study seems to confirm Topping's assertion, which is still considered a relatively novel idea (Topping, 2005). As tutors are challenged cognitively, this equates to a more advantageous and ideal tutoring session (Topping, 2005).

Peer Tutoring Session

In a similar study, Walker (2007) researched tutor-tutee interactions during peer tutoring sessions. The researcher studied a high school peer tutoring program which solely provided tutoring in mathematics. The study consisted of 6 peer tutors, ages 14 – 18, and the total number of tutees seen was 10 to 20 tutees per week. Additionally, throughout the study, in general, one-on-one tutoring occurred. Initially, tutors explicitly told tutees how to solve problems, generally had one way of explaining things, and rarely posed questions to the tutees. It is important to note that as the semester progressed and tutors became more experienced, they began to use different strategies to solve tutees' questions. Tutors almost instinctively simplified and contextualized concepts and terms, which was very beneficial to tutees. Perhaps the greatest benefit to tutees came from the

tutor-tutee discourse. One advisor (graduate student or pre-service teacher candidate) described a particular tutoring session in this way, "...I could see why students would want to come to peer tutoring and not want to come to...teacher tutoring...what [the tutor] was saying...was just in a language that the students responded to." (Walker, 2007, p. 61) Tutors seemed to have been able to relate to tutees in a unique and powerful way. In short, a most important discovery of this study was that it "showed that expertise in doing, learning, and teaching...is not limited to adults who excel in the subject, but that these abilities can be developed in demonstrably powerful ways by high school students..." (Walker, 2007, p. 66). Furthermore, Walker suggests that a high school peer tutoring program can increase academic achievement at a school-wide level, reach students who teachers are unable to reach, and increase students' confidence and interest in academics.

In summary, the results and discussion of these two research studies offer valuable insight and provide important understanding of peer tutoring as it relates to the peer tutor and the tutoring session. If similar to these studies, will the tutors in this study recognize gaps in their own learning, instinctively want to help tutees, and find tutoring to be cognitively stimulating and challenging? Furthermore, will tutors, over time, teach less explicitly and pose more questions? Will tutors and tutees benefit from discourse? Will there be unique benefits related to receiving tutoring from a peer as opposed to a teacher? The answers to these questions will be manifest in chapter 4 and chapter 5. However, the next chapter will discuss the methods of the study.

Chapter 3: Methods

Introduction

This chapter offers a detailed outline of theory, explains the research design, revisits the research questions, describes the setting, presents participants/sampling, explains the role of researcher, describes the innovation, and expounds data sources/collection instruments.

Theory

The principal theory for this study was grounded theory. Grounded theory shares a commonality with this study's research design, design-based research (DBR), which is to "provide a thorough theoretical explanation of social phenomena" (Corbin & Strauss, 1990, p. 5). "Grounded in the views of participants" (Creswell, 2009, p. 13), researchers seek to develop a general, abstract theory (Creswell, 2009) or an explanation of an action, process, or interaction through the use of qualitative procedures (Plano Clark & Creswell, 2010). Its form has not changed since its introduction in 1967; however, its procedures have (Corbin & Strauss, 1990). Elaborated and more detailed, its procedures develop an integrated set of concepts that help explain and describe the phenomena under study (Corbin & Strauss, 1990). According to Plano Clark and Creswell (2010), grounded theory researchers typically develop theory to explain a process, collect data through interviews, analyze data systematically using multiple stages of coding, and in the end, produce "a visual model that depicts the theory" (p. 241). Corbin & Strauss (1990) suggest that researchers disclose all procedural operations and steps in order to promote transparency and possible replication. Therefore, this chapter will provide, in detail, all the processes taken in the study, which include research design, setting,

participants/sampling, role of researcher, innovation, location and procedures, and data collection and sources. Furthermore, the researcher strongly encourages the replication of the study.

Research Design

Design-Based Research

Design-based research (DBR) was the preferred research design. The focus of DBR is to “directly impact practice” (Barab & Squire, 2004, p. 8) and its purpose is to advance existing theories and/or generate theories about learning and teaching (Barab & Squire, 2004). Not only does DBR strive to produce new theories, it also attempts to produce artifacts and practices that will impact learning and teaching in naturalistic settings (Barab & Squire, 2004). Formative evaluation is a component of DBR (Barab & Squire, 2004; Design-Based Research Collective, 2003) because of its iterative nature in the development and implementation of an intervention (Design-Based Research Collective, 2003). Creating a model, rather than an artifact or program is the goal of DBR (Brown & Campione, 1996). Therefore, the value of the intervention lies in its design or model, as long as its design or model directly impacts practice in the local context (Barab & Squire, 2004). According to Barab and Squire (2004), to “lay open and problematize the completed design ... in a way that provides insight into the local dynamics” is the goal of DBR (p. 8).

Grounded theory and action research resemble DBR in their purposes and outcomes; however, there are important dissimilarities. To “provide a thorough theoretical explanation of social phenomena” (Corbin & Strauss, 1990, p. 5) is a commonality of both DBR and grounded theory; however, DBR focuses specifically on

impacting learning and teaching (Barab & Squire, 2004). Action research (AR) is similar to DBR (Järvinen, 2007; Wang & Hannafin, 2005) in that it is systematic inquiry (Stringer, 2007) that addresses a localized problem through the implementation of action (Herr & Anderson, 2005) which is therefore evaluated, revised and repeated in an iterative fashion (Stringer, 2007). However, the primary difference between the two methodologies is that the goal of DBR is not only to create a model or design (Brown & Campione, 1996) to directly impact local practice (Barab & Squire, 2004) but to create a generalizable one (Reeves, Herrington, & Oliver, 2005) to “further the theoretical knowledge of the field.” (Barab & Squire, 2004, p. 4) The end result is thick, rich descriptions of emerging theory in a local context, and the intervention’s design. Additionally, DBR uses mixed methods (Design-Based Research Collective, 2003), which draws from the “strengths and minimize the weaknesses” (Johnson & Onwuegbuzie, 2004, p. 15) of both qualitative and quantitative research techniques.

Mixed-Methods Research

This study utilized a concurrent mixed-methods approach with the purpose of complementarity. Concurrent mixed methods procedures are those in which the researcher collects both qualitative and quantitative data at the same time, analyzes each data source separately, and then “integrates the information in the interpretation of the overall results.” (Creswell, 2009, p.15) Mixed methods is a research method in which “the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (Johnson & Onwuegbuzie, 2004, p.17) with hopes of gaining a better understanding of the phenomena (Greene, 2007). Originally, one of the purposes for a mixed methodology,

identified by Rossman and Wilson (1985), was to elaborate or provide detail and richness, which was later relabeled complementarity (Greene, Caracelli, & Graham, 1989). Complementarity intentionally utilizes different methods, which "measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon" (Greene et al., 1989, p. 246). Results from the different methods help to deepen, elaborate, and broaden the inferences and overall interpretations of the study (Greene, 2007). This enriched understanding allows for the further development of a phenomenon. Similarly, in addition to and embedded with complementarity is triangulation, which also utilizes different methods to measure a phenomenon (Greene, 2007). This study will also seek convergence, in addition to elaboration, as it will measure the same phenomenon (Greene, 2007) and overlapping facets of the phenomenon (Greene et al., 1989) simultaneously. The mixing of both qualitative and quantitative methods is necessary to address the complexity of and give insight to the study (Creswell, 2009). Mixing occurred at the point of interpretation.

The focus of this study was to bring to light the experiences of both the tutor and the tutee as they related to the school-wide peer tutoring program. Research questions were as follows:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

In summary, this study utilized ground theory as the principal theory, DBR as the preferred research design along with a concurrent, mixed-methods approach focused on complementarity as the research method. The end result was to create a peer tutoring

model that will directly impact practice in the local setting (Barab & Squire, 2004). Next, details of setting, participants/sampling, role of researcher, and innovation will ensue.

Setting

The study took place during the 2013 Fall semester at PMHS, an urban high school located in the Phoenix metropolitan area. PMHS has been in existence since 1994 (Tempe Union High School District, 2012). Total enrollment is 2966 with 1444 female and 1522 male (Arizona Department of Education, 2012a). Of the 2966 students enrolled, 10.5% are Asian, .84% Native American, 6.2% African American, 12% Hispanic, 69.8% White, and 1.4% Multi Racial (Arizona Department of Education, 2012b). The percent of those who receive special education services is 6.5% and 6 % receive free and reduced lunch (Arizona Department of Education, 2012b). The graduation rate is 98% and the drop-out rate is .5% (Tempe Union High School District, 2012). Arizona's Instrument to Measure Standards (AIMS) showed the following for the 2011-2012 school year: Math (50% exceeds, 87% passing), Reading (28% exceeds, 95% passing), Writing (9% exceeds, 89% passing), and Science (55% exceeds, 80% passing; Arizona Department of Education, 2012c).

Participants/Sampling

The participants in the study included members of the Phoenix Metropolitan Peer Tutoring (PMPT) club (tutors) and the student population at large who received peer tutoring services. During the study, there were a total of 43 tutors. Tutors were required to tutor at minimum 32 hours (one session per week) for the entire school year. Similarly, during the study 108 students (tutees) received at least one peer tutoring

session. Tutees received peer tutoring services on a needs basis through a variety of methods such as walk-ins, online appointments, and teacher/administrator referrals.

Due to the varying nature of each data collection instrument, this study either collected data on all participants or utilized a stratified sample, which formed a group representative of tutors and tutees. In terms of qualitative inquiry, field notes and impromptu interviews focused on all participants; whereas, questionnaires, focus group interviews, and the semi-structured interview called for the use of a stratified sample. As for quantitative inquiry, archival data (i.e., daily attendance and school records) focused on all participants. In order to determine the stratified sample, which formed a group representative for tutors, the sessions tutored survey was administered. For quantitative inquiry, a stratified sample was not used; data was collected on all participants.

Quantitative inquiry consisted of 43 tutors and 108 tutees who were both male and female students from all grade levels (e.g. freshmen – seniors). Similarly, stratified samples varied slightly from tutors to tutees. The stratified sampling for tutors consisted of the number of tutoring sessions they had conducted. This was determined by conducting the sessions tutored survey (Appendix A). Total participants equaled 20, 10 participants for the questionnaire and 10 participants for the focus group interview.

Table 2

Research Methods, Data Collection Instruments, and Sampling

Method	Data Collection Instruments	Sampling
Qualitative	Field Notes Impromptu Interviews	N/A
Qualitative	Questionnaires Focus Group Interviews Semi-Structured Interview	Stratified
Quantitative	Archival Data	N/A

Table 3

Range of Tutoring Sessions, Quantity of Tutors, Rounded Percentage, and Quantity of Participants

Range of Tutoring Sessions	Tutors	Rounded Percentage	Participants
0 – 5	19	44%	8
6 – 10	13	30%	6
11 – 15	6	14%	2
16 – 20	3	7%	2
20+	2	5%	2
Total = 242	Total = 43	Total = 100%	Total = 20 ^a

^aTotal participants increased from 20 to 26 to account for possible non-participation

Lastly, an online research randomizer facilitated the selection of individual participants. The stratified sampling for tutees consisted of the number of tutoring sessions they had received. Total participants equaled 20, 10 participants for the questionnaire and 10 participants for the focus group interview.

Table 4

Quantity/Range of Tutoring Sessions Received, Quantity of Tutees, Rounded Percentage, and Quantity of Participants

Quantity/Range of Sessions Received	Tutees	Rounded Percentage	Participants
1	67	60%	12
2	38	17%	3
3	27	8%	2
4	20	4%	1
5+	60	11%	2
Total = 242	Total = 108	Total = 100%	Total = 20 ^b

^bTotal participants increased from 20 to 26 to account for possible non-participation

Once again, an online research randomizer facilitated the selection of individual participants.

Role of Researcher

Prior to the study, researcher’s titles included that of teacher, club sponsor, and program coordinator. The primary roles had been: 1) teach class, 2) create and sponsor the PMPT club, and 3) organize and supervise the school-wide peer tutoring program.

During the study, the researcher’s positionality was that of insider in collaboration with other insiders (Herr & Anderson, 2005). Furthermore, during the study, the researcher assumed four distinct and different roles, first as teacher, second club sponsor, third as program coordinator, and fourth as researcher; therefore, positionality varied, from insider to outsider and occasionally somewhere in between, depending on the type of collaboration. Primary co-collaborators included tutors and tutees.

In no other group was the positionality as complex as it was with the tutors, some more than others. All tutors viewed the researcher as the program coordinator and researcher, which automatically positioned the researcher as more of an outsider as opposed to an insider. The researcher was unfamiliar to most and possessed, to a certain degree, authoritative power. Therefore it was imperative that the researcher become as much of an insider as possible in order to secure true co-collaboration and to establish a sense of democracy (Herr & Anderson, 2005). In an effort to foster co-collaboration and democracy (Herr & Anderson, 2005), the researcher was completely transparent, beginning with the first informational meeting in early August, of role as researcher and purpose of conducting research. During this meeting, the researcher made it clear that, as researcher, he would not be conducting any formal evaluations as is expected of a program coordinator. Additionally, it was requested they be completely honest when asked questions pertaining to the study. Lastly, the researcher was as visible and involved as possible, throughout the study, in order to become acquainted with them and gain their trust. Another additional and potential threat to positionality existed amongst those tutors over whom the researcher was teacher. More than likely, not only was the researcher viewed as the program coordinator with an element of authoritative power, the researcher was now, potentially, viewed more as an authoritative figure because to a certain extent the researcher controlled their grades. In order to establish undeniable lines of demarcation between role as teacher, club sponsor, program coordinator, and researcher, the researcher strived to not allow these roles to blend together. Tutors knew that their participation, or the lack thereof, did not have any bearing on their academic status in researcher's class.

Similarly, the tutees viewed the researcher as teacher, program coordinator, and researcher. In terms of positionality and in comparison to that of the tutors, the tutees viewed the researcher more as an outsider. Possible reasons for this may have been that they did not know the researcher, they saw him as an authority figure, and they felt somewhat vulnerable because they were in need of tutoring services. To become as much of an insider as possible while collecting field notes, the researcher made himself visible on a consistent basis, introduced himself, briefly explained the study, and expressed the desire to become co-collaborators.

Innovation

The innovation was a school-wide peer tutoring program, in particular, its unique design and organization. The uniqueness of the innovation was first the creation of a school-sponsored peer tutoring club which became the backbone of the program. In terms of its organization, the peer tutoring club/program consisted of 43 peer tutors, 1 coordinator, and 16 teacher-supervisors. The purpose of the club/program was to offer tutoring services to all students. The innovation, to be congruent with the tenets of DBR, needed to create a model, which directly impacts the learning in, and practice of, a local setting (Barab & Squire, 2004). The value or role of the intervention/innovation lies in its ability to use the model “in the service of developing broad models of how humans think, know, act and learn” (Barab & Squire, 2004, p. 5). Consequently, the innovation for this study became twofold, 1) the peer tutoring program itself, and 2) the creation of a peer tutoring model. The experiences of the tutor and tutee, with specific inquiry into what constituted both an ideal peer tutor and peer tutoring session, are the basis from which a model emerged.

Location & Procedures

Peer tutoring services took place in the Institute of Academic Excellence, located in rooms B205 and B207 on campus. The institute offered eight, one-hour peer tutoring sessions per week before and after school. Sessions were secured by way of walk-ins, online appointments, and on occasion, teacher/administrator referrals. Upon arrival, a tutee checked in with the receptionist and disclosed full name, student ID number, class in need of tutoring, and teacher's last name. Next, the receptionist paired the tutee with the appropriate tutor and the tutoring session began. Typically, tutoring arrangements occurred on a one-to-one basis with tutees being paired with either a peer tutor (same age) or a cross-age peer tutor (older in age). In order to communicate with all stakeholders (i.e., administration, counselors, and department chairs) and to promote collaboration, receptionists would input the tutee attendance into the program's website, the coordinator would then transfer the attendance into a Google spreadsheet, and consequently would share it with stakeholders via their Google Drive. Fundamental in its organization are the tutors of the PMPT club.

PMPT Club

Members

In the history of the school, there has never existed a peer tutoring program, let alone a peer tutoring club. The closest club, in terms of purpose, was the Future Teachers of America (FTA) club; however, the FTA's focus was not on tutoring. Consequently, the establishment of the PMPT club occurred in the Fall of 2012 for four specific reasons: first, to have a primarily student- run organization which required leadership positions, second, to establish a school sponsored and school affiliated entity, third, to have an

official club established in order to effectively recruit peer tutors, and fourth, to promote a shared, inclusive vision among members. PMPT consisted of 43 club members (tutors), a president, vice president, treasurer, secretary, institute director, and 2 technology directors. In terms of club officers, the president oversaw the entire club and peer tutoring program, the vice president handled tutors' schedules, the treasurer managed all in-coming and out-going funds, the secretary oversaw attendance, took minutes, and handled all communication (e.g., Facebook, Remind101.com, email), the institute director oversaw the institute with its two centers and supervised the receptionists, and the two technology directors maintained the club website and handled all publicity. Tutors dedicated a minimum of 32 hours (1 session per week) of service throughout the course of the school year. Depending on tutors' individual schedules, the hours dedicated to the program/club ranges from 32 – 128 hours. A hallmark of PMPT is its training component. Having trained tutors, positively impacts the academic success of the tutees (Boylan, Boham, & Bliss, 1994). Each tutor received an initial training, which focused on SHAPES. Each letter indicates a tutor's role: S (smile), H (hello), A (ask), P (present), E (evaluate), and S (support). On-going training occurred throughout the course of the school year during mandatory monthly club meetings.

Coordinator

PMPT consists of a coordinator who is also the researcher. The coordinator worked closely with school administration, club officers, club members, teacher-supervisors, and faculty/staff. Frequent meetings with the principal and the assistant principals secured continual, school-wide support and necessary resources. Frequent meetings with club officers occurred to discuss any immediate questions and/or concerns

and to make any necessary corrections to the manner in which the program functioned. Regular encounters with club members at the center and monthly meetings took place to safeguard effective tutoring and continual support. Collaboration and communication with teacher-supervisors facilitated the everyday management of the center and the tutors and tutees. All faculty/staff had access to tutees' attendance roster, via their department chair, which in addition to identifying a tutee's name and date of attendance, identified the specific course and teacher.

Teacher-Supervisors

Each peer tutoring session had at least one teacher-supervisor who was there to monitor, facilitate, and help run the center. Maintaining an atmosphere that was conducive to learning was their primary responsibility. In addition to supervising, on a needs basis, teacher-supervisors assisted in offering tutoring as well. Teacher-supervisors receive a small stipend at the end of the school year, which is part of the district's Individualized Performance Incentive Plan (IPIP).

In summary, the innovation was much more than the creation of a peer tutoring program per se, as mentioned, the innovation also encompassed the program's design and organization (e.g., PMPT club, coordinator, teacher-supervisors), and key stakeholders, in particular, the school's principal.

Data Sources and Collection

Action Plan

Table 5 illustrates the timeline of the study that took place during the 2013 Fall semester. During weeks 1 through 10, archival data (daily attendance), field notes, impromptu interviews, and sessions tutored survey occurred. During weeks 11-13, questionnaires, focus group interviews, the semi-structured interview, and archival data were examined.

Table 5

Action Plan Timeline

Week	Date	Instrument	Participants
1-10 ^c	9/2/2013	Archival Data Field Notes Impromptu Interviews Sessions Tutored Survey	Tutees Tutors/Tutees Tutors/Tutees Tutors
11-13	12/6/2013	Questionnaires Focus Group Interviews Semi-structured Interview Archival Data	Tutors/Tutees Tutors/Tutees Exemplar Tutor Tutors/Tutees

^c Data was not collected during Fall break (10/7 – 10/11)

Table 6

List, Description, and Detailed Inventory of all Qualitative Data Collection Instruments

Data Collection	Description	Inventory
Field Notes	Notes taken as observation during peer tutoring sessions	26 hours 47 sessions 106 pages of transcription
Impromptu Interviews	Interviews conducted immediately after peer tutoring sessions	Tutors: 13 interviews 28 pages of transcription Tutees: 14 interviews 34 pages of transcription
Questionnaires	Questionnaires consisted of 6 open-end questions	Tutors: 10 questionnaires Tutees: 7 questionnaires
Focus Group Interviews	Group interviews consisted of a separate protocol for tutors and tutees	Tutors: 13 tutors 26 minutes 11 pages of transcription Tutees: 9 tutees 23 minutes 10 pages of transcription
Semi-structured Interview – Exemplar Tutor	Interview conducted with a tutor who had tutored 20+ times and had tutored 4 sessions per week	27 minutes 9 pages of transcription

Qualitative Data

Field notes. The researcher observed 47 tutoring sessions, which amounted to 26 hours of field notes. Field notes totaled 106 journal-sized pages of transcription. Field

notes consisted of observations, primarily the pairing of one tutor and one tutee at a time. The researcher made a concerted effort to observe a different tutor and/or tutee with each observation; however, conducting as many observations as possible was of greater concern to the researcher. In addition to observing particular dyads, observations of a more holistic approach did occur, which encompassed all tutoring that was taking place at any given moment. According to Creswell (2009), an advantage of an observation is it allows for a first-hand experience with the participant.

Impromptu interviews. Immediately after the observation of a tutoring session, the researcher conducted impromptu interviews with either the tutor, the tutee, or both. The total amount of impromptu interviews conducted were 27, 13 tutors and 14 tutees. Impromptu interviews yielded 28 pages of transcription and tutee interviews generated 34 pages of transcriptions. Impromptu interviews are informal, semi-structured interviews, with questions based on field notes taken and/or research questions. A notable limitation to interviews is it “provides indirect information filtered through the views of interviewees” (Creswell, 2009, p. 179). In an attempt to counteract this limitation, the collection of field notes took place prior to the impromptu interviews. Moreover, an advantage of conducting an interview immediately after a previous observation is it allows participants to provide historical information (Creswell, 2009) which may offer additional, and possibly much needed, explanation.

Questionnaires. The researcher invited 13 tutors and 13 tutees to complete the questionnaire (Appendix B; Appendix C); however, a total of 10 tutors and 7 tutees actually completed the questionnaires due to either the lack of individual assent, parental consent, or unforeseeable circumstances. According to Plano Clark and Creswell (2010),

a questionnaire is a type of qualitative interview. Questionnaires used consisted solely of open-ended questions, which promoted both exploration and explanation (Plano Clark & Creswell, 2010). Questionnaires offer hard data on the ideas and categories that an observation provides which is not possible by observation alone (Eckert, 1987).

Focus group interviews. The researcher conducted a focus group interview with both tutors and tutees (see Appendix D & Appendix E for protocols). Similar to the questionnaires, the researcher invited 13 tutors and 13 tutees to participate in the focus group interview; however, a total of 13 tutors and 9 tutees actually participated due to either the lack of individual assent, parental consent, or unforeseeable circumstances. The tutor focus group interview lasted 26 minutes and yielded 11 pages of transcription. Similarly, the tutee focus group interview lasted 23 minutes and yielded 10 pages of transcription. Focus groups elicit a shared understanding of several individuals as well as specific people (Plano Clark & Creswell, 2010). Focus groups are ideal when the probability for interaction among interviewees is greatest and when the interviewees are cooperative with and similar to one another (Plano Clark & Creswell, 2010). The anticipation that interviewees will generate richer descriptions collectively, rather than individually, is the reason for focus groups instead of one-to-one semi-structured interviews.

Semi-structured interview – exemplar tutor. The researcher conducted a semi-structured interview with one exemplar tutor with the intent to create a vignette. A vignette helps to bring to light a participant's general attitudes and beliefs on a particular topic (Barter & Renold, 1999). This particular tutor had tutored 20+ times and had worked in the peer tutoring center 4 sessions per week, which was far more than any

other tutor. Additionally, the researcher chose this tutor due to multiple exemplary observations and impromptu interviews. The semi-structured interview lasted 27 minutes and generated 9 pages of transcription.

Table 7

List, Description, and Detailed Inventory of all Quantitative Data Collection Instruments

Data Collection	Description	Inventory
Sessions Tutored Survey	Survey to help determine stratified sample	Tutors: Weeks 8 & 9 43
Archival Data: Daily Attendance	Daily attendance of all tutees that come in for tutoring sessions with additional emphasis on content area need	Weeks 1 – 10 242 sessions 108 tutees Content Area
School Records	Official school file for each student which includes ethnicity, grade, and gender	Tutors: Weeks 11 – 13 43 Ethnicity Grade Gender Tutees: Weeks 11 – 13 108 Ethnicity Grade Gender

Quantitative Data

Sessions Tutored Survey. Completed by 43 tutors during weeks 8-9, this survey helped the researcher to determine the stratified sample for tutors.

Archival data (daily attendance). For 10 weeks, daily attendance occurred immediately after tutees arrived at the tutoring center and prior to receiving tutoring services. The majority of the time, a tutor-receptionist assisted tutees in this process. Tutees provided first and last name, student ID, teacher's name and subject area. Through the daily attendance of tutees, the researcher focused specifically on the quantity of tutees and the content area in need. In fact, during 10 weeks, there were 242 sessions, 108 different tutees, and tutoring in Mathematics, English, Science, and Foreign Language.

Archival data (school records). Based on the daily attendance of tutees and general tutor's list, the researcher used the school's records to glean the ethnicity, grade, and gender, of the identified 43 tutors and 108 tutees.

Data Analysis

Qualitative

Field notes, impromptu interviews, questionnaires, focus group interviews, and the semi-structured interview were the sources from which the qualitative data came. It was necessary to transcribe the impromptu interviews, focus group interviews, and the semi-structured interview; therefore, the researcher hired a professional transcription company to transcribe the audio files. To ensure accuracy, a thorough verification check occurred by comparing the transcription with its original audio file. The process by which the researcher analyzed all qualitative data was the same; except for the semi-structured interview, since the purpose of the semi-structured interview was to create a vignette.

The first step in data analysis for the researcher was to read through the raw data (e.g., field notes, transcriptions), and to memo. Memos are necessary to keep track, systematically, of the categories and subcategories that emerge (Corbin & Strauss, 1990). In fact, according to Corbin and Strauss (1990), “memos are not simply about ‘ideas’” but rather the “formulation and revision of theory” and should be used throughout the entire research process (p.10). In the second step, the researcher carefully read over the memos and used open coding, which is “the interpretive process by which data are broken down analytically” (Corbin & Strauss, 1990, p.12). During this step, the analysis of memos occurred by first grouping emerging concepts (Corbin & Strauss, 1990), and then creating themes. In the third step, the researcher used axial coding, which is the analysis of themes and the creation of codes. During this step, the creation of a codebook transpired, which consisted of major codes and sub codes. In the fourth and final step, the researcher reanalyzed the raw data by coding it with the major codes contained in the codebook. This took place to promote a level of data saturation and to create a codesheet that contains the raw data for each major code.

Codebooks and code sheets exist for field notes (Appendix F & Appendix G), impromptu interviews (Appendix H & Appendix I), questionnaires (Appendix J, Appendix K, Appendix L, & Appendix M), and focus group interviews (Appendix N & Appendix O). Field notes yielded 10 major themes/codes which were DEP (Dependency), EMOTUTE (Emotions – Tutee), EMOTUTO (Emotions – Tutor), LAYCE (Layout – Center), PAI (Pairing), PRE (Preparation – Tutee), QUA (Qualification – Tutor), RES (Resources), RESP (Responsibilities – Tutor), and TRA (Training – Tutor) (Appendix F). Impromptu interviews yielded 11 major themes/codes

which were BENTUTE (Benefits – Tutee), BENTUTO (Benefits – Tutor), DEP (Dependency), DIF (Different Pairing), GRO (Group Tutoring), IDES (Ideal Session), IDET (Ideal Tutor), LAC (Lacking Fundamentals), OVE (Overall Experience), PRE (Preference – Peer vs. Teacher), and SAM (Same Pairing) (Appendix H). The tutor questionnaire yielded 18 major themes/codes, which stemmed from specific questions, and the major themes/codes were HEL (Help Others), SEL (Self-promotion), FRI (Friends), TIM (Time – Value of), EVI (Evidence), BEL (Belief), HOP (Hope), PEE (Peer), TEA (Teacher), TUTE (Tutee), TUTO (Tutor), QUA (Qualities), COG (Cognitive Skills), REL (Relationship), TUTR (Tutor – Responsibility), TUTE (Tutee – Responsibility), LEA (Learning), and CEN (Center) (Appendix J). The tutee questionnaire yielded 11 major themes/codes, which also stemmed from specific questions, and the major themes/codes were ACA (Academic Assistance), STU (Study Hall), TEAU (Teacher Unavailability), PREF (Preference), AFF (Affirmative Response), IMP (Improvement), IND (Individual Assistance), CON (Confusion), PREP (Prepared), PAC (Pacing), and FRI (Friendly) (Appendix L). Due to the similarity of the prompts (Appendix D & Appendix E), the researcher analyzed both the tutor and the tutee focus group interviews together, which yielded 8 major themes/codes. Themes/codes were as follows: CHATUTE (Challenges – Tutee), CHATUTO (Challenges – Tutor), EXP (Experience – Tutee), IDETUTE (Ideal Tutee), IDETUTO (Ideal Tutor), IMP (Improvements – Program), STE (Stewardship), and TEA (Teacher – Best Option) (Appendix N).

In order to promote inter-rater reliability, a critical friend (i.e., fellow doctoral candidate) conducted memoing, open coding, and axial coding with two pages of field

notes and two pages of impromptu interview transcriptions. As a result, the researcher and the critical friend concluded that there was indeed an inter-rater reliability of major codes and sub codes. In short, the use of inter-rater reliability was used to meet the constraints and guidelines of qualitative data analysis. Furthermore, member-checking occurred after the vignette was created based on the semi-structured interview.

Quantitative

The researcher first analyzed all quantitative data individually, which was garnered through the sessions tutored survey and archival data (i.e., daily attendance, school data). Next, the researcher used descriptive statistics to determine the relative standing (e.g., percentage rank; Plano Clark & Creswell, 2010) of each data point and all percentages were rounded to the nearest whole number.

Threats to Validity

Threats to internal validity exist and have the potential to compromise the credibility of the research as it relates to all stages of the study. Pertinent to qualitative research, and this study, there were three threats to validity, 1) observational bias, 2) researcher bias, and 3) reactivity (i.e., the Hawthorne effect, novelty effect; Onwuegbuzie & Leech, 2007). There also existed an external (Onwuegbuzie & Leech, 2007) quality/criteria validity which was catalytic validity (Herr & Anderson, 2005). Catalytic validity is a noteworthy goal of action research because if attained, this gives validation to the research (Herr & Anderson, 2005).

Internal

Internal threats to validity, if not accounted for, could threaten a researcher's ability to make accurate conclusions from the data about the population under study (Creswell, 2009).

The first threat to internal validity was observational bias. Observational bias can surface at the design/data collection stage when a researcher has not obtained a sufficient sampling of behaviors and/or words (Onwuegbuzie, 2003). Observational bias can also occur during the data analysis stage (Onwuegbuzie & Leech, 2007). To account for observational bias, the researcher spent a sufficient period of time observing (i.e., prolonged engagement; Onwuegbuzie & Leech, 2007) and focused on observations which were most relevant to the study (e.g., persistent observation; Lincoln & Guba, 1985).

The second threat to internal validity was researcher bias. According to Onwuegbuzie (2003), researcher bias occurs when the researcher has prior assumptions and/or personal biases that he/she is unable to keep within bounds. Researcher bias may occur consciously or subconsciously and may occur during the data collection, analysis, and interpretation phases (Onwuegbuzie & Leech, 2007). Furthermore, this threat is very common when the researcher is the individual collecting the data (Onwuegbuzie & Leech, 2007), as was the case in this study. In order to account for researcher bias, and in addition to prolonged engagement and persistent observation, the researcher made contrast/comparisons (e.g., literature and researcher's knowledge base), used theoretical sampling, used extreme cases, and most importantly, provided thick and rich description (Onwuegbuzie & Leech, 2007).

The third threat to internal validity was reactivity. Reactivity refers to the reactions of participants and the way in which a study was conducted (Onwuegbuzie, 2003). Reactivity may occur during the data collection phase. Two components of reactivity pertaining to qualitative research are: 1) the Hawthorne effect and 2) the novelty effect. The Hawthorne effect suggests that participants may react unnaturally while being observed since they are being given special consideration (Onwuegbuzie & Leech, 2007). Similarly, the novelty effect refers to contrived responses on the part of participants because a novel stimuli is used for the purpose of collecting data (e.g., audio recorder; Onwuegbuzie & Leech, 2007). Similar to researcher bias, in order to account for reactivity, the researcher used prolonged engagement, persistent observation, made contrast/comparisons (e.g., literature and researcher's knowledge base), used theoretical sampling, used extreme cases, and most importantly, provided thick and rich description (Onwuegbuzie & Leech, 2007).

External

External quality/validity is not viewed so much as a threat but more as a desirable outcome which gives validation to the research.

Catalytic validity is pertinent to qualitative research (Onwuegbuzie & Leech, 2007) and is defined as “the degree to which the research process reorients, focuses, and energizes participants toward knowing reality in order to transform it” (Lather, 1986a, p. 272). Catalytic validity liberates and empowers a research community (Lather, 1986b). According to Herr and Anderson (2005), as seen in action research, catalytic validity is evident when all involved in the research are deepened in their understanding of the innovation and /or moved to reaffirm their support of it. Moreover, catalytic validity is

reached when there occurs a reorientation or change in both the researcher's and participants' understandings (Herr & Anderson, 2005). As will be shown in the subsequent chapters, the researcher believes catalytic validity was achieved based on the results of the extensive data analysis conducted. Results suggested that tutors, tutees, and the researcher were reoriented, became energized and empowered, gained a greater understanding of reality and therefore transformed and perpetuated it (i.e., peer tutoring; Lather, 1986a; Lather, 1986b; Onwuegbuzie & Leech, 2007).

In summary, DBR was the preferred research design, and this study utilized a concurrent, mixed-methods approach focused on complementarity (Greene, 2007) in hopes of gaining a better understanding of the phenomena under study. The weighted priority was QUAL – quan. The mixing occurred at the point of interpretation and the results of the two databases were merged for analysis. To promote trustworthiness, inter-rater reliability occurred along with, when necessary, member-checking. Threats to validity and quality/criteria of validity were revealed and the measures taken to increase legitimation. The collection and analysis of data, specifically, field notes, impromptu interviews, questionnaires, focus group interviews, a semi-structured interview, the sessions tutored survey, and archival data, helped to answer the study's research questions, which again were:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

Chapter 4: Results

To review, the data collection methods included both qualitative and quantitative research techniques. Data collection sources consisted of field notes, impromptu interviews, questionnaires, focus group interviews, a semi-structured interview, the sessions tutored survey, and archival data. This chapter will discuss, in great detail, the results garnered from all data collection sources. Again, the research questions were as follows:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

Qualitative

The collection of multiple sources of qualitative data occurred throughout the study in an effort answer research questions. Data collection instruments included field notes, impromptu interviews, questionnaires, focus group interviews, and a semi-structured interview. Provided is each of the data collection instruments with particular detail given to analysis and results.

Field Notes

The researcher observed 47 tutoring sessions, which amounted to 26 hours of field notes. Sessions observed occurred before and after school. In general, field notes consisted of observations of isolated pairings of tutors and tutees along with observations of all tutoring that took place at any given moment. After a thorough analysis of field notes, a wide range of major themes/codes emerged which included: DEP (Dependency), EMOTUTE (Emotions – Tutee), EMOTUTO (Emotions – Tutor), LAYCE (Layout –

Center), PAI (Pairing), PRE (Preparation – Tutee), QUA (Qualification – Tutor), RES (Resources), RESP (Responsibilities – Tutor), and TRA (Training – Tutor) (Appendix F).

Additionally, see Appendix G for all raw data that correlates with major and sub themes.

Table 8

Field Notes: Description and Examples of Themes/Codes

Theme/Code	Description
Dependency	Individuals, entities, and organizations that were dependent upon peer tutoring (PT) in one form or another
Emotions - Tutee	Tutees who received PT demonstrated a wide range of emotions throughout the PT process
Emotions – Tutor	Tutors demonstrated a wide range of emotions throughout the PT process
Layout – Center	The layout of the tutoring center refers to the arrangement of desks etc.
Pairing	Pairing refers to the dynamics, variables, and the selection process of pairing a tutee with a tutor
Preparation – Tutee	Tutees began tutoring sessions with varying levels of preparation which either helped or hindered the tutoring process
Qualification – Tutor	Qualifications that tutors possessed which either helped to promote or stifle the effectiveness of a tutoring session
Resources	Evidentiary and necessary resources for both the tutor and the tutee
Responsibilities – Tutor	Roles, responsibilities, processes, and procedures inherent to tutors and which tutors followed to assist tutees.
Training - Tutor	Evidence of or need for tutor training

DEP (Dependency). In general, field notes revealed that many individuals, organizations, and entities were and are dependent upon peer tutoring in one form or another to provide academic assistance. In fact, tutees, parents, teachers, coaches, directors, and the school/district at large, rely on peer tutoring and the services it provides. For example, the researcher heard on more than one occasion how tutees were not able to understand the material the way in which teachers explained it. One tutee said the following: “He’s a good teacher but he doesn’t explain things very well.” (Field Notes, 10/22/13) Consequently, the researcher noted that multiple tutees were able to understand the material better due to the peer tutors’ explanations. In terms of a parent’s dependency upon peer tutoring, on another occasion, a custodian, whose daughter had been receiving tutoring services, thanked the researcher because her daughter had been doing much better academically due to the peer tutoring services she had received (Field Notes, 9/18/13). In summary, field notes revealed that many stakeholders were dependent upon peer tutoring to provide additional academic assistance.

EMOTUTE (Emotions – Tutee). Generally speaking, observations exposed a wide-range of emotions which tutees displayed while receiving peer tutoring. Emotions observed were anxiety, belonging, confidence, desperation, desire, disappointment, empowerment, frustration, gratitude, hope, and inadequacy. In general, many of tutees, prior to a tutoring session, displayed and/or expressed a lack of confidence. On the other hand, many tutees, after a tutoring session, displayed and/or expressed more confidence than prior to the tutoring session. For example, after a tutoring session, one student expressed that for the past week he had felt like the waves were crashing down on him (trying to understand mathematics) but now the tutoring session was such a confidence

booster for him (Field Notes, 9/19/13). On the other hand, tutees also displayed negative emotions. For example, one tutee became disappointed when the tutoring session ended up not being helpful due to a tutor's lack of preparation (Field Notes, 9/4/13). Another tutee expressed a sense of desperation by stating, "I don't know any of this." "I can't do any of it." (Field Notes, 11/12/13) In summary, the researcher noted that tutee emotions were varied, numerous, contextualized, and would fluctuate easily.

EMOTUTO (Emotions – Tutor). Similar to tutees' emotions, observations revealed a wide-range of emotions, which tutors displayed while conducting tutoring sessions. Emotions observed were anxiety, authoritativeness, compassion, doubt, empowerment, enjoyment, friendship, frustration, inadequacy, responsibility, uncertainty, and unpredictability. In general, multiple tutors exhibited much compassion for those with whom they tutored. Conversely, multiple tutors displayed frustration when attempting to tutor low-achieving tutees. An example of compassion occurred when on one occasion, a tutor was in the process of helping a tutee (it appeared she did not know this tutee previously) in mathematics when the tutee asked if the tutor had a calculator. Realizing that the tutee did not own a calculator and discovering that the tutee could use a calculator on an upcoming test, the tutor said to the tutee, "You can totally use mine and just give it back to me later." (Field Notes, 9/30/13) In fact, she was even willing to give the tutee her calculator that very day. In the end, she decided to drop off the calculator in the tutee's classroom and pick it up at a later date. An example of frustration occurred when a tutor made various attempts to explain a Geometry concept, which was how to prove that lines are parallel, but the tutee still did not understand. Due to this frustration, it appeared that the tutor did not want to help the tutee anymore. It seemed as if the tutor

had given up on the tutee. In the end, the tutor resorted to doing much of the work for the tutee (Field Notes, 11/1/13). To summarize, similar to the emotions observed in the tutees, tutors displayed and/or expressed a variety of emotions during the course of any given tutoring session – everything from compassion to frustration and many more emotions in between.

LAYCE (Layout – Center). The layout of the peer tutoring center refers to the arrangement of the desks. The peer tutoring center is located in a regular classroom with standard desks, all in rows. In general, the layout of the center, in particular the arrangement of desks, made it difficult to conduct one-on-one tutoring sessions. Each tutor had his/her own way of arranging the desks. In fact, the arrangement of desks, by a tutor, made one particular tutee very uncomfortable. This tutor decided to sit very close to the tutee and even ended up resting her hands on the tutee's desk. Consequently, the tutee sat on the very edge of his seat, as far away from the tutor as possible and appeared to be very uncomfortable (Field Notes, 10/17/13). On another occasion, the researcher noted the need to possibly replace standard desks with circular tables with chairs as the desks appeared to make it difficult to conduct one-on-one tutoring sessions (Field Notes, 11/18/13). In summary, observations revealed that the current layout of the peer tutoring center and its lack of standardization might adversely affect the tutee and the efficacy of the tutoring session.

PAI (Pairing). This refers to the dynamics, variables, and selection process of pairing a tutee with a tutor. In general, observations revealed the need for a standardized process. One-on-one tutoring sessions were the ideal as group tutoring had inherent challenges. Additionally, proper pairing promoted follow-up sessions. For example, the

researcher observed how familiarity in the pairing promoted effective tutoring. On one occasion, as soon as the tutee entered the center, the tutor and the tutee were both visibly excited to see each other (this was at least the third time this pairing had worked together). As if they were picking up where they left off, the process of tutoring began as soon as they sat down and continued seamlessly throughout the session. The researcher noted a unique cohesiveness, and they seemed to “be dancing harmoniously” (Field Notes, 11/15/13) as it were. On the other hand, observations suggested that same-age/level tutoring was more challenging than cross-age tutoring. For example, in one particular pairing, both tutor and tutee were in the same mathematics class. The tutor was able to answer all of the tutee’s questions until they reached a certain equation and both of them were stuck. The tutee suggested that they go and ask their teacher how to solve the equation (Field Notes, 9/18/13). The researcher observed a similar outcome in another pairing where same-age/level tutoring was more challenging than cross-age/level tutoring (Field Notes, 10/24/13). To summarize, observations revealed that the pairing of a tutor and a tutee is multifaceted and is vital to the effectiveness of any given tutoring session.

PRE (Preparation – Tutee). Overall, the researcher observed that tutees come to the tutoring center with varying levels of preparation and expectations, and for a variety of reasons. Possibly of greatest importance, is the preparation of the tutees. Some tutees arrive for tutoring with a complete lack of preparation. On one occasion, in the middle of a tutoring session a tutee stated to the tutor, “I don’t know where to begin.” (Field Notes, 10/22/13) On another occasion, a tutee indicated that he needed help with an entire chapter in mathematics (Field Notes, 10/23/13). Furthermore, the researcher observed

tutees, on multiple accounts, showing up for tutoring without any materials (e.g., notes, worksheets, etc.). On the contrary, observations revealed that some tutees arrive for tutoring with adequate preparation. One tutee in particular came to tutoring so well prepared that he had specific questions for the tutor and knew exactly with what he needed help. In fact, the researcher noted that the tutoring session went very well, due to tutee's preparation, and that it appeared to have been an effective tutoring experience for him (Field Notes, 9/13/13). In summary, tutees' preparation, based on researcher's observations, appeared to play an integral role in the outcome and effectiveness of the tutoring session – regardless of the varying levels of preparation, expectations, and/or the variety of reasons for which tutees seek support.

QUA (Qualification – Tutor). This refers to the character traits, knowledge, and/or experience that tutors possessed which either helped to qualify a tutor and to promote effective tutoring sessions or the exact opposite. Qualifications observed were confidence, mastery of content, patience, self-awareness, ability to clarify, incompetence, and recency of material. In general, the researcher observed that tutors lacked knowledge and experience but possessed character traits vital for tutoring. The researcher observed that mastery of content knowledge seemed to be the determining factor of whether or not a tutoring session went well. To illustrate this, at the onset of a tutoring session, the researcher heard a tutor state that she did not know the answer to a problem therefore the tutor decided to skip it. A few minutes later, the tutor stated, “I don't know”, “I don't think...”. The tutor even asked the tutee how to solve the problem. The tutor was unable, yet again, to answer another problem and this time the tutor called over another tutor for assistance. Luckily, the second tutor was able to help the tutee answer the

problem but had this tutor not been there, the tutee would have left with yet another problem unanswered (Field Notes, 11/5/13). On another occasion, a tutoring session ended unexpectedly because 2 tutors were unable to assist a tutee on a particular problem (Field Notes, 10/24/13). In terms of vital character traits observed, the dominant trait, which helped to qualify tutors and promote effective tutoring session, was patience. The researcher noted that one particular tutoring session lasted 50 minutes. The tutee needed a lot of help with simple mathematic concepts and continued to answer the problems and tutor's questions incorrectly. After each incorrect response, the tutor would respond with patience and encouragement and would try a different approach. Throughout the duration and in an effort to help the tutee, the tutor used scrap paper, mini white boards, visual aids, a relevant acronym, and did so with patience rather than frustration (Field Notes, 9/24/13). To summarize, there seems to be no substitute for the mastery of content knowledge – for this is the reason why tutees show up to receive additional content knowledge. Mastery of content knowledge and patience seemed to be paramount in ideal peer tutoring sessions.

RES (Resources). This refers to the resources, excluding the act of tutoring, inherently offered by the peer tutoring program/center, the resources needed for ideal tutoring sessions, and/or the underutilization of both resources offered and needed. In general, observations were that the peer tutoring program/center inherently offered many resources such as a study hall, access to teacher-supervisors, additional tutors, and computers with internet capabilities. In terms of resources needed, the researcher noted the use of materials (e.g. textbooks, handouts, notes, calculator), and occasionally the use of the internet and course-specific software. The researcher observed that perhaps the

resource which was both utilized and underutilized the most, was that which additional tutors were able to offer. More often than not, tutors did not have the answer to every question posed by tutees nor did they remember how to teach every concept. For some, it was an instinctive reaction to seek out fellow tutors for help, but for others it was not. The researcher noted a high percentage of sessions were successful when tutors sought additional help. In fact, on one occasion, a second tutor came over to help with a chemistry problem and initially both tutors did not know the answer. The researcher noted that it took about 5 minutes for both tutors to co-construct the knowledge necessary to answer the problem (Field Notes, 9/3/13). On the contrary, in general, the researcher noted that sessions ended just as quickly as they began when tutors did not seek the help of other tutors. In summary, observations suggested that perhaps the resource, which was both utilized and underutilized the most, was that which additional tutors were able to offer. When utilized, the session seemed to be a success, when underutilized, the session suffered and generally ended unexpectedly.

RESP (Responsibilities – Tutor). Tutor responsibilities refers to roles and responsibilities, which are inherent to tutors. Furthermore, it refers to processes and procedures tutors follow to assist tutees. In general, the researcher noted that tutors have a myriad of responsibilities, which required them to assess, teach, explain, guide, correct, encourage, and give recommendations. In particular, the charge to offer further explanation was one of the most common responsibilities of a tutor. Not only was it the explanation itself, but it was the way tutors explained it. For example, on one occasion, after receiving an explanation on object pronouns, the tutee stated that the tutoring received was helpful because the tutors explained it in a different way, different from the

teacher (Field Notes, 9/5/13). The researcher observed this sentiment on more than one occasion. Another particular was that tutors were able to teach by offering step-by-step guidance. On this certain occasion, the tutor had been working with the tutee on the parts of speech in English in a specific sentence. The tutor went word-by-word asking questions and explaining the parts of speech. Throughout the session, the tutor would assess for comprehension. In fact, at one point the tutor asked the tutee if going word-by-word was working for the tutee and the tutee responded in the affirmative (Field Notes, 11/5/13). In summary, tutors inherently have many roles and responsibilities and naturally follow procedures and processes in order to assist tutees. Two specifics observed were that tutors offered unique ways in which to explain content and assess for comprehension.

TRA (Training – Tutor). Tutor training refers to the evidence of or the need for tutor training. In general, observations suggested that many tutors had not received sufficient training prior to becoming a peer tutor. Observed were deficiencies in tutoring methodologies, content mastery, tutoring philosophy, and general assessment knowledge. On the other hand, observations suggested that some tutors exhibited an understanding of the importance of reciprocal communication. The researcher observed that many tutors would just give the tutees the answer to problems and would not take the time to assess tutees' level of understanding. On one occasion the researcher overheard the tutor use the phrase, multiple times, "I would do this ... and that ...". There was very little interaction between the tutor and the tutee. Later on in the session the tutor stated, "Let me show you how to set up a box/table" (p.13). Again, the expectation was for the tutee to do as told. Throughout the session, observation suggested that the tutee became more

and more dependent upon the tutor for simple processes and procedures in solving mathematic problems (Field Notes, 9/17/13). Other noteworthy observations were that some tutors encouraged and expected tutees to communicate and verbalize the processes taken to solve problems/questions. On a particular occasion, a tutor was carefully looking over a tutee's assignment while the tutee was working on it. Soon, the tutee began communicating with the tutor by verbalizing her thought process, in step-by-step manner, in order to solve a particular mathematic problem. Consequently, during this process, the tutor offered occasional insights to help guide the tutee along the path of understanding (Field Notes, 9/17/13). In summary, the researcher observed a general lack of tutor training, especially a lack of basic pedagogy. On the other hand, the researcher observed that some tutors understood the importance of communication with the tutee, in verbalizing his/her thought processes.

After observing 47 tutoring sessions, which amounted to 26 hours of field notes, the researcher noted a wide range of themes. This range included everything from emotions of tutors/tutees to the pairing of the tutor/tutee. Most importantly, field notes offered data, which will be helpful in answering this study's research questions, in particular what constitutes an ideal peer tutor and an ideal peer tutoring session. Discussed next will be the impromptu interviews, which occurred immediately after field notes.

Impromptu Interviews

The researcher conducted 13 tutor interviews, which amounted to 28 pages of transcription. The researcher also conducted 14 tutee interviews, which amounted to 34 pages of transcription. In general, impromptu interviews occurred immediately after the

tutoring session. Moreover, the researcher attempted to interview different tutors and/or tutees each time; however, availability determined the selection of the tutors/tutees. After a thorough analysis of impromptu interview transcripts as a whole (i.e., both tutor and tutee transcripts), a wide range of major themes/codes emerged which included:

BENTUTE (Benefits – Tutee), BENTUTO (Benefits – Tutor), DEP (Dependency), DIF (Different Pairing), GRO (Group Tutoring), IDES (Ideal Session), IDET (Ideal Tutor), LAC (Lacking Fundamentals), OVE (Overall Experience), PRE (Preference – Peer Tutor), and SAM (Same Pairing) (Appendix H). Additionally, see Appendix I for all raw data that coincides with sub and major themes.

BENTUTE (Benefits – Tutee). Both tutors and tutees reported that tutoring had many benefits for the tutee.

Table 9

Impromptu Interviews: Description of Benefits for Tutees

Benefit	Description
Slower Pacing	Tutees benefited when tutored at a slower pace (in comparison to a typical classroom pace)
One-on-one assistance	Benefited from one-on-one tutoring, which equated to one-on-one attention
Individualized pacing	Benefited from pacing tailored to their needs
Different approach (compared to teacher)	Benefited by being taught in a different way
Step-by-step process	Benefited greatly when tutors took a step-by-step approach in solving problem and/or answering questions
Increased understanding	Benefited by receiving added understanding, which was not there previously
Relatability	Benefited by being taught by someone close in age and/or someone at a similar level of cognition
Availability	Benefited from the availability of tutors (8 sessions a week) compared to what teachers typically can offer
Catch up on school work	Benefited especially when they had missed multiple days of school
Less intimidating	Benefited by being tutored by peers as they were less intimidated (compared to being tutored by a teacher)
Less stressful	Benefited by being in a less stressful environment as opposed to a classroom setting
Additional practice	Benefited when tutors created additional practice problems and/or questions
Confidence booster	Benefited when tutors were positive and offered encouragement

A common benefit participants mentioned was the one-on-one assistance tutees received. One tutee said the following, “I felt great because I learned a lot, and it was

just one-on-one attention and that was great. Yeah, and I could just kind of relax and we didn't have to go at a set classroom pace.” (Appendix I) Another common benefit was the increased understanding which came as tutors took a different approach than a teacher might have taken. One tutee stated, “[The tutor] explained it in a way that made sense...” (Appendix I). One tutor noted that the tutee “seemed to understand it when I explained it to him, so he seemed to get it after that.” (Appendix I) The next major theme was tutor benefits.

BENTUTO (Benefits – Tutor). Tutors reported they benefited by tutoring in many ways.

Table 10

Impromptu Interviews: Description of Benefits for Tutors

Benefit	Description
Interpersonal skills	Tutors gained interpersonal skills
Synthesis	Increased ability to synthesize
Cooperative learning	Experienced the power of cooperative learning
Compassion	Compassion increased while tutoring
Critical thinking	Learned the importance of explaining content in a variety of ways
Refresher	In order to tutor, had to re-learn previously acquired content knowledge
Resourceful	Learned the importance of resourcefulness
Personable	Learned how being personable fostered tutees' learning
Depth of knowledge	Depth of knowledge increased as they took necessary measures to prepare to tutor
Patience	Encountered multiple occasions which helped tutors to learn patience
Multi-tasking	On occasion, conducted group tutoring sessions which required multi-tasking

Patience, and the opportunities to acquire it, was a common implicit and explicit theme gathered by impromptu interviews from tutors. The ability to be patient depended on the tutor's demeanor and also on the tutor's perspective of tutoring. On one occasion, a particular tutor kept on asking the same question over and over and the tutee still did not get it correct. The researcher asked the tutor how she was able to be so patient and she responded with,

It's easy to get discouraged, but I think that if you keep on asking...I don't think it's a hopeless case. I think you can get discouraged if you start thinking it's a hopeless case, but I don't think it ever is. ...I think eventually, if you just keep in mind that eventually they'll get there, it's not really discouraging. (Appendix I)

Another common theme that emerged was that tutors learned the importance of being resourceful, in particular, when they had to re-learn the material. One tutor, after the tutee showed him the material "...kind of freaked out..." (Appendix I) and stated, "Holy cow, I don't remember how I do this. Then there're resources so I went to the math book, one of the chapter[s]. I looked over the stuff, and I just quickly refreshed my memory." (Appendix I) The next major theme was the dependency of tutees on the tutoring services.

DEP (Dependency). Both tutors and tutees reported that tutees became dependent on tutoring and the services it provided them.

Table 11

Impromptu Interviews: Description of the Reasons for Dependency

Theme	Description
Additional assistance	Tutees needed additional academic assistance due to class content difficulty
Lack of parental help	Their parents, in general, are unable to provide academic assistance at home
Another option	Needed another option to learn when the primary option (teachers) was not helping
Lost	Become completely lost in class and need additional help
Self-awareness	Demonstrated a sense of self-awareness (understanding of abilities and the lack thereof)
Absenteeism	Sought tutoring after missing multiple days of school because they fell behind

One common reason tutees sought tutoring was for additional academic assistance because they fell behind. One tutee sought tutoring services because she missed a month of school due to a concussion. The tutee told the researcher, “I honestly have no idea what’s going on in class right now. I’m so behind...so this is really stressful, ... I just kind of was handed the study guide [for a test] and said, ‘here’.” (Appendix I) Another reason was the lack of academic assistance available outside of school. One tutee mentioned a preferable option to receive help in class, besides asking the teacher, is to “...try and get help through a friend...” (Appendix I). Another tutee mentioned that once school ends it is difficult to get extra help, especially at home – the tutee stated, “I go home and ask my mom and my mom doesn’t know. I ask other people and they don’t

know.” (Appendix I) The next major theme was advantages of having different pairings of tutors and tutees.

DIF (Different Pairing). Both tutors and tutees reported advantages of having different pairings.

Table 12

Impromptu Interviews: Description of the Advantages of Different Pairings

Theme	Description
Helpful	When tutees received tutoring from more than one tutor, this was helpful
Different perspective	When tutees received tutoring from more than one tutor, on different tutoring sessions, this afforded tutees a different perspective on essentially the same concepts
Availability	When tutees were not tied down to only one tutor, it increased the availability to receive tutoring services

The most common advantage to having a different pairing was the additional approach and/or different perspective this gave to the tutees on essentially the same academic concept. After being paired with a new tutor and comparing the old one with the new one, one tutee responded with the following, “I thought they were both really good. They both did things differently. It’s always good to get another perspective on how to do a math problem. I thought that was helpful. (Appendix I) On another occasion, after being tutored by three tutors at once, the researcher asked the tutee if having more than one perspective helped and the tutee stated, “It was helpful. They all

had different views.” (Appendix I) In summary, both tutors and tutees agreed there were advantages to having different pairings with different perspectives being the most common advantage. The next major theme was the benefits and challenges of group tutoring.

GRO (Group Tutoring). Tutors recounted both the benefits to tutees and the challenges to tutors of group tutoring.

Table 13

Impromptu Interviews: Description of the Benefits and Challenges of Group Tutoring

Theme	Description
Different levels – learning	Each tutee had different speeds of processing and levels of learning
Time to process	Group tutoring allowed tutees more time to process new information and to apply it in some way, shape, or form
Variations	There were a variety of ways in which to conduct group tutoring
Resources needed	Group tutoring required additional resources compared to one-on-one tutoring

One benefit to group tutoring, per a tutor’s perspective, was it afforded tutees more time to process the information given by the tutor and it allowed tutees more time to apply it. Immediately after conducting a group tutoring session for the first time and tutoring three tutees at the same time, this tutor stated, “It kind of gave them sometime between me teaching them a new concept to work and understand the concept ... I’d say

that it worked well. (Appendix I) One challenge was trying to tutor three tutees on the same assignment, yet all three of them were at different levels of learning. The tutor stated, “They were all on the same assignment but they had different speeds of working so it was hard to work all at once.” (Appendix I) To summarize, group tutoring has clear benefits and challenges to both tutors and tutees. The next major theme was what constituted an ideal tutoring session.

IDES (Ideal Session). Tutors reported that an ideal tutoring session consisted of many facets.

Table 14

Impromptu Interviews: Description of the Facets of an Ideal Session

Theme	Description
Voluntary – tutee	Tutees voluntarily seek tutoring services
Willing – tutor & tutee	Both tutors and tutees willingly want to be there
Limited distractions	Unnecessary distractions are limited
Verbalization	Both tutors and tutees openly verbalize throughout the session
Receptive – tutee	Tutees are receptive and want to be tutored
Needs met	Tutees’ needs are met at the end of the tutoring session
Active participation	There exists active participation throughout the tutoring session
Interaction	Both tutors and tutees interact one with another
Knowledgeable – tutor	Tutors are knowledgeable of content area
Preparation – tutor & tutee	Both tutors and tutees adequately prepare for the tutoring session
Environment – conducive	The peer tutoring environment is conducive to learning
One-on-one	One-on-one pairings are ideal in comparison to group tutoring
Assessment – ongoing	There exists ongoing assessment, both formative and summative, of newly disseminated information

One component of an ideal tutoring session verbalized by tutors more than once was the importance of tutees being prepared – knowing with what they need help. On this topic, one tutor stated, “...I would love it if they [tutees] would come in knowing

what they were trying to get accomplished, because someone will just come in here and it's just like, 'I just need help with math.' I'm like, 'Okay, is there a certain subject?' They're like, 'No, just everything.' I'm like, 'Oh, okay...'.’ (Appendix I) Tutors had expressed, on multiple occasions, the difficulty of not knowing where to begin when tutees did not know with what they needed help. Another component of an ideal tutoring session is the interaction between the tutors and tutees, which included the asking of questions. One tutor mentioned, “...the most important thing is interaction with the tutee [and] that [the tutee] was not afraid to ask questions.” (Appendix I) In summary, ideal tutoring sessions consist of many variables; particularly tutees’ preparation, tutor and tutee interaction, and the asking of questions. Another major theme was what constituted an ideal tutor.

IDET (Ideal Tutor). Tutors recounted that an ideal tutor consists of many qualifiers and character traits.

Table 15

Impromptu Interviews: Description of the Qualifiers and Character Traits

Theme	Description
Patient	Tutors are patient with tutees
Positive	Positive in word and deed
Inviting	Inclusive and inviting
Resourceful	Use the resources that are available
Willing	Willing to do all they can do to help tutees
Caring	Genuinely care for tutees
Responsible	Mature and responsible
Compassionate	Show compassion for tutees
Knowledgeable	Adequate content knowledge to tutor
Interpersonal	Possess interpersonal skills
Articulate	Articulate well on multiple levels
Charismatic	Charismatic
Humble	Humble and do not think they are better than tutees
Creates – ability	Ability to create/generate new problems/questions
Explanation – elicits	Able to elicit explanations from tutees
Understanding	Understanding of tutees
Critical thinker	Critical thinkers
Realistic expectations	Realistic expectations of tutees
Optimistic	Optimistic
Understands learning	General understanding of learning

One quality an ideal tutor has is the ability to understand how learning takes place. The tutee in this particular pairing had some difficulty at the beginning because

she was not sure what was going on in class. The tutor decided to do some homework problems, which would expose any deficiencies she may have had. The tutor stated,

Yeah, I tried to re-teach ... kind of go back a little bit and then move forward, and then try to make sure that at each point, they're like, 'Oh, did you get this? Okay, it's fine, let's move on.' Then we redid a problem the same exact way, and all this re-teaching her those kinds of ways ... that was my strategy [and] ... then she was able to wrap her head around it. (Appendix I)

Another quality an ideal tutor has is he/she is knowledgeable and is able to explain it well. In response to "What constitutes an effective peer tutor?" one tutor answered, "Someone who can ... doesn't necessarily have to be the smartest person but someone who's good at explaining things or can do it in multiple ways so that anyone can understand what they're talking about." (Appendix I) To summarize, according to the tutors themselves, ideal tutors ought to possess many qualities and character traits such as an understanding of learning, adequate knowledge, and the ability to explain them in multiple ways. One more major theme that surfaced was the concept that both tutors and tutees were lacking fundamentals.

LAC (Lacking Fundamentals). Tutors, and tutees in particular, lacked fundamental concepts and principles of learning to either tutor or learn effectively.

Table 16

Impromptu Interviews: Description of the Concepts of Lacking Fundamentals

Theme	Description
Recognized by tutor	Tutors recognized lack of fundamentals in tutees and were hesitant to proceed
Review needed	Many tutees needed a review of previous concepts
Nature of learning	Due to the nature of learning, (concepts build on each other) many tutees fell behind
Preparation – tutor	Tutors needed to be prepared for worst case scenarios
Deep learning – absence of	In general, tutees demonstrated an absence of deep learning
Lost – tutee’s perspective	Tutees had a sense of feeling lost

A common theme that emerged was that multiple tutees lacked fundamental academic concepts and thus had a difficult time trying to catch up. One tutor put it this way, “After a while it kind of caught up to [the tutees] so they couldn't understand...key concepts and that was stifling what they were doing ...” (Appendix I). When tutees lacked fundamental concepts, it made tutoring that much more difficult, especially in explaining foundational concepts. Another tutor explained it this way, “...it was kind of harder for me to explain that because she didn’t come with the proper background.” (Appendix I) In summary, a few tutors, but mainly tutees, lacked fundamental concepts necessary to tutor or learn. As tutees lack fundamentals, it becomes difficult to catch up and it becomes more of a challenge for tutors. As one tutor put it, “... [it is] not like at that point where the next time he comes he can get. It might take a few sessions to

get...those concepts down.” (Appendix I) The next major theme deals with the overall experience of the tutees.

OVE (Overall Experience). Tutees reported their overall experience to be both positive and negative.

Table 17

Impromptu Interviews: Description of Tutees’ Overall Experience

Theme	Description
Understanding – better	Tutees attained a better understanding of course content
Disappointment	Were disappointed when expectations were not met
Skepticism – peer tutoring	Were a little skeptical in being tutored in the wrong way
Worthwhile	Felt that tutoring was worth their time and effort
Content	Were content with the experience
Equality increased	Did not feel inferior to tutors but felt more as if equals
Dependency	Wanted to return for additional tutoring
Consistency	Saw value in having the same tutor each session
Positive experience	Viewed tutoring as a positive experience
Enjoyable	Found tutoring to be enjoyable

The researcher frequently asked if peer tutoring was helpful, and a common response, which was similar to one student’s, was “Yeah. It was definitely helpful.” (Appendix I) Another tutee stated, “I feel like it went really well.” (Appendix I) One more said, “Yeah, this is like very good.” (Appendix I) In fact, when asked to rate how

well the tutee knew the subject material, both before and after tutoring on a scale of 1 – 10, with 1 not being very well, the tutee said 7.5 before and 9.5 after (Appendix I). In addition to feeling that tutoring was worthwhile, it was also enjoyable. On one occasion a tutee stated, “Other than that it’s pretty fun; I like the tutoring thing, it helps.” (Appendix I) To summarize, according to the majority of tutees, the overall experience was positive and worthwhile, and even one tutee viewed the experience as being enjoyable. The next theme deals with tutees’ preference in receiving extra assistance – a peer or a teacher.

PRE (Preference – Peer Tutor). Tutees reported multiple advantages in receiving academic assistance from a peer tutor as opposed to a teacher.

Table 18

Impromptu Interviews: Description of Reasons to Seek a Peer vs. a Teacher

Theme	Description
Class pacing – fast	Peer tutors slowed down the pacing of learning
Individual pacing	Peer tutors tutored at an individual pace
Embarrassed – less	Tutees were less embarrassed to receive assistance from a peer tutor
Individual modeling	Peer tutors offered modeling on an individual basis
Nervous – less	Tutees were less nervous compared to receiving assistance from a teacher
Teachers busy	Teachers were more busy than peer tutors
Teachers unavailable	Teachers were less available than peer tutors
Teachers’ inability to connect	Tutees found it easier to connect with a peer tutor
Increased understanding – peer tutor	Tutees experienced increased understanding from a peer tutor
Simplicity	Tutees noticed that peer tutors were more simplistic in their explanations

One common theme tutees mentioned was that peer tutors were able to provide better-individualized academic assistance as opposed to what teachers typically are able to offer. In fact, one student stated, “I like going here better than going to like the math department because they’re like it’s really busy down there, but [at peer tutoring] you can have like one-on-one [help].” (Appendix I) The researcher asked additional questions and discovered that daily there were 20 students at a time who go to the math department for extra help. This particular tutee has had to wait up to 15 minutes before receiving help (Appendix I). Another common theme had to do with pacing. One student noted,

I took Algebra I last year and I had one of those teachers where – I’m in honors classes so it was one of those honors classes where he would say the material but he wouldn’t go back and help you through it. If you were lost, you were lost on your own and the other kids didn’t understand it. (Appendix I)

In summary, impromptu interviews revealed many reasons why students preferred receiving help from a peer tutor as opposed to a teacher. Two common reasons were peer tutors helped provide better-individualized academic assistance and more individualized pacing. The final theme was the advantages of having the same pairing.

SAM (Same Pairing). Both tutors and tutees reported advantages in having the same pairing.

Table 19

Impromptu Interviews: Description of the Advantages of Same Pairing

Theme	Description
Stewardship	Tutors took care of tutees and demonstrated a sense of stewardship
Connectedness	Tutors and tutees displayed a strong connectedness and tutees wanted to have the same tutor the next time
Consistency	Over time, after consistency in pairing, tutees found value in same pairing
Smooth session	Tutoring sessions went smoother in comparison to other first-time pairings
Efficiency	Tutoring sessions demonstrated more efficiency
Security	Tutees seemed to be more comfortable and secure with themselves

One theme the researcher observed, which in essence encompasses more than one advantage, was that tutor and tutee seemed to effortlessly be on the same page. On one

memorable occasion, the researcher noticed that as soon as the tutee walked in the center and sat down with the tutor they were “on the same wavelength” and everything was “seamless” (Appendix I). When asked about this experience, the tutee stated, “I thought it was really good because he knew more or less where I was with understanding ... because I’d been tutored by him before, so it was easier to get in the rhythm of doing the equations.” (Appendix I) Another theme was that tutors displayed a genuine care for tutees and seemed to possess a sense of stewardship. On another occasion, a tutor told the tutee that if the tutee answered a problem correctly the tutor would let the tutee go. The researcher specifically asked how this statement made the tutee feel and she stated, “He [tutor] wanted to know that I know how to do it - that I can do this right.” (Appendix I) In summary, impromptu interviews revealed multiple advantages to having the same pairing. Two examples were the manner in which both tutor and tutee instinctively were on the same page and the manner in which tutors assumed stewardship over the tutees and the tutoring session.

In summary, after conducting 27 impromptu interviews with both tutors and tutees, the researcher noted a wide range of themes. This range included everything from benefits to the tutor and tutee to what constituted an ideal peer tutor and tutoring session. Consequently, impromptu interviews offered data, which will be helpful in answering this study’s research questions of what constitutes an ideal peer tutor, an ideal peer tutoring session, and what model depicts an ideal peer tutor and peer tutoring session. Discussed next will be the questionnaires, take by both tutors and tutees, which occurred during weeks 11-13 of study.

Questionnaires

The researcher administered 10 tutor and 7 tutee questionnaires (Appendix B & Appendix C). Each questionnaire consisted of 6 specific questions tailored to either the tutor or the tutee. Questionnaires occurred during weeks 11-13 of study. After thorough analysis of each questionnaire, many times similar responses emerged, which warranted results in a range format. Presented first are tutor questionnaires followed by tutee questionnaires.

Tutor Questionnaire

Question #1 - Why did you decide to be a tutor? Based on responses, 9 of 10 responded in a way that reflected the element of self-promotion (e.g., volunteer hours, self-gratification, college application, deepen own knowledge). One tutor stated, “I also believed that it would help make me look more appealing on a college application.” (Appendix K) Next, 7 of 10 responded that they wanted to help others. One tutor stated, “I decided to be a tutor because I wanted to help students who were struggling. I felt that I could make a difference in a tutee’s studying, and ultimately, grades.” (Appendix K) Lastly, 3 of 10 mentioned the value of their time (e.g., extra time, convenient), and 1 of 10 mentioned friends.

Table 20

Tutor Questionnaire: Reasons to be a Tutor

Range	Response
9 of 10	Self-promotion
7 of 10	Help others
3 of 10	Time – value of
1 of 10	Friends

Question #2 – Do you believe your tutoring has helped those you have tutored? Based on responses, 8 of 10 believed that their tutoring has helped those they have tutored. One tutor stated, “I believe that my tutoring has helped, but I only tutored them once so I don’t know exactly how they are doing in their classes after I tutored them.” (Appendix K) Next, 6 of 10 stated that they had evidence their tutoring helped. One tutor stated, “... I helped a girl understand a few problems she had on her test and when she retook the test she sent me a text saying, “Thanks for helping me with math! I got an A on my retake😊” (Appendix K). Lastly, 1 of 10 expressed less than a belief but a hope. One tutor simply stated, “I would hope so.” (Appendix K)

Table 21

Tutor Questionnaire: Responses why or why not Tutoring has Helped

Range	Response
8 of 10	Belief
6 of 10	Evidence
1 of 10	Hope

Question #3 – When should students seek tutoring from a peer, and when should they seek tutoring from a teacher? Based on responses, there were 5 themes that emerged in favor of seeking help from a peer and 5 themes in favor of seeking help from a teacher. Reasons to seek help from a peer included: 1) relatability, 2) different viewpoint, 3) clarification, 4) uncomfortable with teacher, and 5) minor necessities (Appendix J). One tutor stated, “Students should seek tutoring from a peer first, because since we are closer in age the tutor can better understand what the tutee is not understanding.” (Appendix K) Another tutor mentioned, “Students should seek tutoring from a peer when the teacher doesn’t have time or if they are uncomfortable asking the teacher.” (Appendix K) On the other hand, reasons to seek help from a teacher included: 1) absenteeism, 2) fundamentals, 3) secondarily, 4) lost, and 5) important assignments (Appendix J). One tutor explained, “If the student missed a lesson or has no clue what is going on in class, then that student should seek help from a teacher.” (Appendix K) Another tutor stated, “It’s best to seek tutoring from a teacher to master fundamental concepts.” (Appendix K)

Table 22

Tutor Questionnaire: When to Seek help from a Peer vs. a Teacher

Peer	Teacher
Relatability	Absenteeism
Different viewpoint	Fundamentals
Clarification	Secondarily
Uncomfortable with teacher	Lost
Minor necessities	Important assignments

Question #4 – What are some challenges of being a tutor? Based on responses, there were 13 themes that emerged in terms of the challenges of being a tutor; 7 of which dealt with the tutees and 6 of which dealt with the tutors. Tutors’ challenges in regards to tutees included: 1) lack of communication, 2) need of multiple explanations, 3) unwillingness to learn, 4) purpose to get answers only, 5) unpreparedness, 6) unmotivated, and 7) feeling of hopelessness (Appendix J). One tutor indicated, “Some challenges of being a tutor is to keep the tutee motivated ... after constant bad grades and endless trying, that motivation dries up like a raisin.” (Appendix K) Another student said, “The biggest challenge is getting the tutee to open up to and tell you everything that they don’t understand.” (Appendix K) In terms of tutors’ own challenges, there were 1) not knowing all the answers, 2) lack of assistance, 3) having to learn on the spot, 4) unsure if tutoring is helping, 5) sensing the heavy weight of the task, and 6) ability to explain (Appendix J). One tutor stated, “... it is also hard to explain some things, because every person learns differently.” (Appendix K) Another tutor said, “The first challenge of a tutor is making sure you understand what you’re tutoring. Many times it

will be material from past years that you need a textbook to jog your memory.”

(Appendix K)

Table 23

Tutor Questionnaire: Challenges of being a Tutor

Tutee	Tutor
Lack of communication	Not knowing all the answers
Need of multiple explanations	Lack of assistance
Unwillingness to learn	Having to learn on the spot
Purpose to get answers only	Unsure if tutoring is helping
Unpreparedness	Heavy weight of task
Unmotivated	Ability to explain
Feelings of hopelessness	

Question #5 – What does it take to be a good tutor? Based on responses, 9 of 10 tutors mentioned that in order to be a good tutor, tutors must possess certain qualities (e.g., patience, friendly, caring, etc.). In fact, 6 of 10 specifically mentioned patience. One tutor mentioned, “It takes patience with the tutees if they don’t get it right away.” (Appendix K) Another tutor stated, “You also need to be friendly, [because] often, the tutees are either scared or embarrassed to come for help...” (Appendix K). Next, 6 of 10 mentioned cognitive skills (e.g., content knowledge, tutoring techniques, self-learning etc.). One tutor said a good tutor, “...knows the topic very well...” (Appendix K). Another tutor said, “Being open minded can help enormously when trying to explain concepts. Different analogies & examples can really help.” (Appendix K) Lastly, 4 of 10

mentioned the importance of establishing a relationship. One tutor summed up this concept with,

All it takes to be a good tutor is to get to know your tutee. The more you know your tutee the better you can help them because they will feel more comfortable to tell you what they are struggling with. (Appendix K)

Table 24

Tutor Questionnaire: Characteristics of a Good Tutor

Range	Response
9 of 10	Personal qualities
6 of 10	Patience
6 of 10	Cognitive skills
4 of 10	Relationship with tutee

Question #6 – What does it take to have a good tutoring session? Based on responses, 8 of 10 mentioned that in order to have a good tutoring session it is the responsibility of the tutor (e.g., friendly, committed, prepared, etc.). One tutor stated,

You need to first be friendly as a tutor and encourage your tutee to talk and be open & free ... Next, you need to know what questions to ask to get the tutee to participate & respond & actually try to solve the problems. (Appendix K)

Next, 7 of 10 mentioned that tutees also have a responsibility in promoting a good tutoring session. Another tutor commented, “On the tutee’s side, they have to be proactive and ask a lot of questions. They have to want to be there.” (Appendix K) Next, 3 of 10 mentioned learning and its acquisition. One tutor indicated, “A good tutoring session is not when the tutee finishes his/her homework, but when he/she understands the

overall concept.” (Appendix K) Another tutor wrote, “... a good tutoring session is when the tutee can solve a problem by [him or herself] correctly.” (Appendix K) Lastly, 2 of 10 mentioned the actual peer tutoring center (e.g., resources, environment). One tutor indicated, “... to have a good tutoring session the proper tools must be used ... Tools can include textbooks, whiteboards and other online tools.” (Appendix K) Another tutor pointed out, “[The tutoring center] should be relatively quiet to promote focus.” (Appendix K)

Table 25

Tutor Questionnaire: Characteristics of a Good Tutoring Session

Range	Response
8 of 10	Tutor responsibilities
7 of 10	Tutee responsibilities
3 of 10	Learning acquisition
2 of 10	Center

Ensuing, are the results from the tutee questionnaire.

Tutee Questionnaire

Question #1 – Why have you needed peer tutoring? Based on responses, 7 of 7 responded that they needed peer tutoring for the purpose of academic assistance (e.g., lack of understanding, underperformance, help with homework). One tutee responded to this question with, “To get help with some of my subjects, because I was confused.” (Appendix M) Another tutee stated, “I’ve needed peer tutoring because of low test

grades.” (Appendix M) Lastly, another tutee wrote simply, “To do my homework” (Appendix M).

Table 26

Tutee Questionnaire: Reasons for Seeking Peer Tutoring

Range	Response
7 of 7	Academic assistance <i>Lack of understanding</i> <i>Underperformance</i> <i>Homework</i>

Question #2 – Why did you decide to receive tutoring from a peer instead of a teacher? Based on responses, 4 of 7 responded that they decided to receive tutoring from a peer instead of a teacher due to the unavailability of teachers. One tutee wrote, “Because [the teacher] wasn’t in class after school.” (Appendix M) Another tutee stated, “... I think peer tutoring is open longer than my teacher’s office hours.” (Appendix M) Next, 2 of 7 had the option of both peer and teacher yet preferred to receive tutoring from a peer. One tutee mentioned, “Approaching a peer tutor was easier to me than approaching a teacher.” (Appendix M) Another tutee indicated, “... I understand better when peers tutor me.” (Appendix M) Lastly, 1 of 7 mentioned that it was this tutee’s parents’ preference. This tutee stated, “My parents suggested for me to get tutoring from a peer.” (Appendix M)

Table 27

Tutee Questionnaire: Reasons for Seeking a Peer vs. a Teacher

Range	Response
4 of 7	Teacher unavailability
2 of 7	Individual preference
1 of 7	Parental preference

Question #3 – Has peer tutoring helped you? Based on responses, 6 of 7 responded affirmatively that peer tutoring had helped them. In all 6 responses, the very first word they chose to use was “Yes” (Appendix M). On the other hand, the one remaining tutee commented with the words “Kind of...” (Appendix M). Lastly, the 6 who responded in the affirmative also stated that peer tutoring helped to improve a particular aspect of their academic studies. From the 6 responses, 4 areas/themes emerged, 1) understanding, 2) efficiency, 3) test score, and 4) ability (Appendix L). One tutee responded, “...by explaining and showing examples [of] the subject I needed help on.” (Appendix M) Another tutee stated, “...it hiahered (actual spelling) test scores.” (Appendix M) Yet another tutee wrote, “...it has helped me, because now I can write essays better and get more work done.” (Appendix M) On the other hand, the one tutee who responded with “sort of” (Appendix M) commented, “...my teacher was able to help me a lot more and the tutor kind of confused me.” (Appendix M)

Table 28

Tutee Questionnaire: Responses if Peer Tutoring has Helped

Range/Theme	Response
6 of 7	Affirmative response
1 of 7	Neutral response
Improvement	Understanding Efficiency Test Score Ability

Question #4 – What did your tutor(s) do that helped you the most? Based on responses, all 7 tutees stated that what helped them the most was that tutors provided individualized assistance. Of these responses, 3 salient themes emerged, 1) pacing, 2) explanation, and 3) step-by-step (Appendix L). In terms of pacing, one tutee wrote, “I really like how the tutors will help me go at my own pace.” (Appendix M) In regards to explanation, one tutee stated simply, “[The tutor] explained it better” (Appendix M). Another tutee said, “[Tutors] explain to me what I was confused about.” (Appendix M) Lastly, in reference to the step-by-step assistance tutors were able to provide, one tutee commented, “... [tutors] show examples and explain step by step the subject.” (Appendix M)

Table 29

Tutee Questionnaire: What Tutors did that Helped the Most

Range	Theme/Response
7 of 7	Individualized assistance
	<i>Pacing</i>
	<i>Explanation</i>
	<i>Step-by-step</i>

Question #5 – What did your tutor(s) do that helped you the least? Based on responses, 3 of 5 (2 had no response) stated that what tutors did to help the least was they confused the tutees with either offering too much detail or relying too heavily on the textbook . One tutee commented, “[Tutors] teach me in a way that I couldn’t understand.” (Appendix M) Another tutee said, “I don’t like that the tutors have to use the book for everything.” (Appendix M) The last tutee mentioned, “One [tutor] did a ‘trick’ in math ... that made the ... subject kind of confusing.” (Appendix M)

Table 30

Tutee Questionnaire: What Tutors did that Helped the Least

Range	Theme/Response
3 of 5	Confusion
	<i>Too much detail</i>
	<i>Heavy reliance on textbook</i>

Question #6 – What advice would you give a brand new tutor on how to be a good tutor? Based on responses, 5 of 6 (1 did not respond) mentioned that the advice they would give a brand new tutor on how to be a good one was to be prepared. One tutee suggested, “...practice more subjects to become... better so that you can answer almost any question a student has.” (Appendix M) Along these same lines, another tutor stated, “...be prepared to answer a lot of questions.” (Appendix M) Another tutee gave a specific suggestion, “...make sure that [tutors] know what they are doing and have a least received an B or A...and [know] a 100% that they can teach the subject.” (Appendix M) Next, 1 of 6 mentioned pacing. This tutee stated, “Remember to go at a slow pace...” (Appendix M). Lastly, 1 of 6 mentioned friendliness. This tutee suggested, “Make the person [you are] tutoring think [you are] friends with them.” (Appendix M)

Table 31

Tutee Questionnaire: Advice for New Tutors

Range	Response
5 of 6	Prepared
1 of 6	Pacing
1 of 6	Friendly

In summary, after administering 10 tutor and 7 tutee questionnaires, the researcher noted a wide range of responses and themes in response to specific open-ended questions. For tutors, this range included everything from when students should

seek tutoring from a peer and when they should seek tutoring from a teacher to what it takes to be a good tutor. As for tutees, this range included everything from why they had sought out peer tutoring to what extent peer tutoring had helped them. Subsequently, questionnaires offered data, which was helpful in answering this study's research questions. Discussed next will be the focus group interviews, of both tutors and tutees, which occurred during weeks 11-13 of study.

Focus Group Interviews

The researcher conducted a focus group interview with 13 tutors, which yielded 11 pages of transcription and a focus group with 9 tutees, which yielded 10 pages of transcription. Focus group interviews occurred during weeks 11-13 of study. The researcher used a protocols (Appendix D & Appendix E) for each focus group interview; however, interviews became much more organic than anticipated, based on the responses of participants. Due to the overlap of questions asked by the researcher and the similarity of responses from the participants, a thorough analysis took place which combined both the tutor and tutee focus group interviews. A wide range of major themes/codes emerged which included: CHATUTE (Challenges – Tutee), CHATUTO (Challenges – Tutor), EXP (Experience – Tutee), IDETUTE (Ideal Tutee), IDETUTO (Ideal Tutor), IMP (Improvements – Program), STE (Stewardship), and TEA (Teacher – Best Option) (Appendix N). The researcher will discuss each theme in a sequential order offering direct quotations from both the tutor and tutee.

Table 32

Focus Group Interviews: Description of Tutees' Challenges

Theme	Description
Coursework load	Tutees had a heavy coursework load
Embarrassed	Felt embarrassed because they sought tutoring
Underpreparedness of tutors	Noticed a lack of preparedness in terms of content knowledge
Lost	Did not know where to begin
Time constraints	Often participated in extracurricular activities before and/or after school
Language barrier	Some were English Language Learners (ELL) and found school to be extremely difficult
Explanation – lack of	Required more explanation than was sometimes given
Space – small	Desired a larger tutoring space
Inequality of tutors	Desired an equality of tutors in terms of quality and level of expertise
Uncomfortableness	Felt uncomfortable when paired with someone they did not know

CHATUTE (Challenges - Tutee). Tutors and tutees discussed challenges that tutees face in regard to their academic endeavors, specifically as it deals with receiving peer tutoring services.

Of all the challenges faced by tutees, the ones involving the tutors (e.g., underpreparedness, explanation – lack of, inequality of tutors) were the challenges mentioned the most. One tutee stated, "...[tutoring] helped, but I just don't think it helped as much, because I felt that [the tutors] didn't know exactly what they were doing." (Appendix O) Another tutee stated, "...it depends on what person helps me...this one guy that helped me, he was really, really good at it and it helped me a lot. Then this other girl, she didn't explain it well enough." (Appendix O) The next major theme that emerged was the challenges faced by the tutors.

CHATUTO (Challenges - Tutor). Tutors and tutees discussed challenges that tutors face in regard to tutoring, specifically as it deals with administering peer tutoring services.

Table 33

Focus Group Interviews: Description of Tutors' Challenges

Theme	Description
Unmotivated – tutees	In general, some tutees were unmotivated
Vastness of material	Tutors found it difficult to remember material due to its vastness
Underpreparedness of tutees	In general, tutees came in for tutoring underprepared
Ill-equipped	Tutors may not have had the necessary resources to assist tutees
Answers – desire of tutees	Many tutees just wanted answers rather than wanting to learn
Vision – lack of	In general, tutors lacked the vision of tutoring and its primary purpose
Patience – maintaining	In general, it was difficult to maintain patience throughout the tutoring session
Understanding – how to assess	Tutors found it challenging to assess tutees' understanding
Explanations – variety	Tutors found it challenging to offer a variety of explanations
Unrealistic expectations – tutees	Tutees sometimes had unrealistic expectations of tutors
Conversation – fostering	In general, tutors found it difficult to foster and continue a conversation with the intent to tutor

One common challenge faced by tutors happened when tutees were unmotivated to learn and for one reason or another, did not want listen and/or try. One tutor articulated this phenomenon this way,

It's fine when they actually want to learn. It's not so good when they just don't want to listen. ...either they don't want to listen, or they think that they don't know it, therefore they can't learn it, so they don't want to actually start trying to figure it out. (Appendix O)

Another very common challenge was that the majority of tutees wanted to be tutored to obtain answers to problems rather than obtain conceptual knowledge. Another tutor stated,

Their goal is not to learn the material, but to finish the assignment that's due tomorrow. Not all the students, but some of them. I know of others that want to study for tests also; they actually do want to learn it. Others just want to finish the assignment.” (Appendix O)

The next major theme that emerged was the general experience of tutees.

EXP (Experience - Tutee). Tutees discussed, in general, their experiences while being tutored.

Table 34

Focus Group Interviews: Description of Tutees' Experience

Theme	Description
Satisfied	Tutees viewed their tutoring experience as satisfying
Unsatisfied	Viewed their tutoring experience as unsatisfying
Mixed feelings	Had mixed feelings on whether tutoring was helpful or not
Preference over teacher	Preferred peer tutoring over receiving help from the teacher
Awkward	Felt awkward because of not knowing any of the tutors beforehand
High expectations	Had high expectations of tutors
Social opportunity	Viewed tutoring as an opportunity to meet other students as well as to receive tutoring

The level of satisfaction varied from one tutee to the next. Some deemed their tutoring session(s) satisfactory. One tutee commented, “It was pretty cool ... because sometimes the teacher can’t really explain it for you to understand, but when it’s somebody else they can probably explain it better.” (Appendix O) Another tutee stated, “It helped. We took a pretest in math and I didn’t do too good on it, but then I went to tutoring. They helped me and I got a better grade on the actual test.” (Appendix O) On the other hand, some deemed their tutoring session(s) unsatisfactory. One tutee simply stated, “...some ways not.” (Appendix O) Another tutee explained, “...it didn’t because ... the [tutor] that I was with didn’t explain how I was messing up ... it wasn’t necessarily helping me because I didn’t understand completely what I was supposed to do.” (Appendix O) Another important theme that emerged was that tutees had high expectations of the tutors. One tutee mentioned, “... I assume that the [tutors] that would help me knew exactly what they were doing.” “They helped a lot, but still I couldn’t understand the concept of what they were coming from.” (Appendix O) Another major theme that emerged was what constitutes an ideal tutee.

IDETUTE (Ideal Tutee). Tutors discussed what constitutes an ideal tutee.

Table 35

Focus Group Interviews: Description of an Ideal Tutee

Theme	Description
Respectful	Tutees are respectful to tutors
Focused	Focused on the task at hand
Prepared	Prepared to be tutored
Communicates	Openly communicate with tutors
Inquisitive	Inquisitive and ask a lot of questions

One theme that emerged was an ideal tutee stays focused throughout the tutoring session. One tutor commented, “Some [tutees] get distracted. You’re trying to talk to them, and they’re just looking around, that kind of thing; maybe on their phone occasionally...” (Appendix O). Another theme was the need for tutees to be inquisitive and ask questions. One tutor said,

I think a good tutee is one who asks questions whenever they don’t understand something. ... you’re like 5 to 10 minutes into something, and all of a sudden, they say that they don’t understand it. Maybe they’ve already lost the concept like 5 minutes back. (Appendix O)

This tutor continued, “One who continues to ask questions, who has a specific idea of what they don’t understand...” (Appendix O). The next major theme that emerged was what constitutes an ideal tutor.

IDETUTO (Ideal Tutor). Tutors discussed what constitutes the ideal tutor.

Table 36

Focus Group Interviews: Description of an Ideal Tutor

Theme	Description
Patient	Tutors are patient with tutees
Knowledgeable	Possess much content knowledge
Friendly	Genuinely friendly
Relatable	Relate to tutees
Sympathetic	Sympathetic
Perspective – proper	Possess the proper perspective of the process of tutoring and learning
Simplicity	Explain concepts with simplicity

A common theme that has emerged previously and that was the first to emerge during the focus group interview was that of patience. One tutor put it this way, “You need a lot of patience.” (Appendix O) The next theme mentioned was that of being knowledgeable. One tutor stated simply, “[A tutor] knows what [he or she is] doing [and] understands the material.” (Appendix O) Another theme was the need for tutors to sympathize with tutees and see things from their perspective. One tutor explained,

I think if [tutors] can put...themselves in the other person’s shoes, they can figure out...what will best help the other person. It takes some time, but if [a tutor] can really know multiple ways of describing things, and be able to tell which one will help the tutee best. (Appendix O)

Another major theme that emerged dealt with suggested improvements for the tutoring program itself.

IMP (Improvements - Program). Tutees gave specific suggestions on how to improve the peer tutoring program.

Table 37

Focus Group Interviews: Description of Suggested Improvements

Theme	Description
Tutor qualification – ensure	The need to ensure tutors are qualified
Application process – tutors	Tutor application process
Motive – tutors	Assess tutors’ motive for wanting to be a tutor
Supervision of tutors – enhanced	Increase adult supervision of tutors while at the tutoring center
Space – additional	More space in the tutoring center

One noteworthy suggested improvement that emerged was the need to ensure tutor qualification. One tutee stated, “...make sure that they’re actually good at that and they know it by heart...” (Appendix O). This tutee went on to say, “The question is, are they really good at that? I mean, something to think about is if they took a test or something to see if they’re actually specialized in that.” (Appendix O) Another noteworthy comment, and therefore an indirect suggestion, was the need to assess tutors’ motive for wanting to be a tutor. This particular tutee disclosed that, “I know like half the people who [are tutors]... just want [community service] hours.” (Appendix O) The next major theme that emerged was the idea of tutors having stewardship over tutees.

STE (Stewardship). Tutors discussed specific ways in which to help tutees have a productive tutoring session.

Table 38

Focus Group Interviews: Description of the Concept of Stewardship

Theme	Description
Discover the answer(s)	Tutors need to discover the answer(s) of the tutees
Ask other tutors	Ask other tutors for help
Resources	Use all available resources
Accountable to tutees	Possess a sense of accountability to tutees
Sympathetic	Be sympathetic in order to best help tutees
Patience	Have patience because learning can be a gradual and slow process
Genuine interest	Be genuinely interested in tutoring and the tutees' learning

A prime example of stewardship, which encompasses multiple themes, is evident in the following quotation by a tutor:

Sometimes, what I do is I tell [the tutees] that I'll get back to them on that. When I have time at home, I'll work through the problem that we were stuck on, for example. Then like either if I get their e-mail, I can send it to them. If I see them during the day, I can give it to them. I've done that several times before, when I either didn't have time to finish it during the session, or I couldn't find a way to work it out, that could help them. (Appendix O)

Another good example of stewardship is found in the following quotation by a tutor:

What I've done sometimes in the past was ask some of the other tutors that have taken the class previously, and then we have access to computers, so maybe we can like bring the tutees over to the computers and search it out, and look at it together. (Appendix O)

The last major theme that emerged dealt with instances in which teachers would be the best option by which to receive additional academic assistance as opposed to going to a peer tutor.

TEA (Teacher – Best Option). Through the course of discussion, tutors and tutees discussed instances, indirectly and directly, for which teachers would be the best option for tutees.

Table 39

Focus Group Interviews: Description of when Teachers would be the Best Option

Theme	Description
Unmotivated – tutees	Teachers may be best suited to help unmotivated tutees
Absent – tutees	Miss multiple days
Foundations – lack for (tutees)	Lack foundational knowledge/concepts
Hopeless – feeling of tutees	Feel hopeless in terms of acquiring knowledge
Time constraints – extracurricular activities	Participate in extracurricular activities
Confused, after tutoring	Remain confused even after receiving peer tutoring services

One common theme that emerged was that some tutees lacked basic foundational knowledge, which made it difficult for tutors to assist the tutees. One tutor summed it up this way, “Regarding the problem of them not knowing even the basics...I think we should probably just like combine it with their teachers. We don’t really have enough time to teach them everything, from the start.” (Appendix O) Similarly, another tutor stated, “Sometimes, I’ve noticed that some [tutees]...haven’t learned anything since like sixth grade, say, and it’s kind of hard to start tutoring them at this point, when they haven’t even learned the basics.” (Appendix O) Another theme that emerged was that even though tutees received tutoring, they still were confused. One tutee commented,

“...but still I couldn’t understand the concept of what they were coming from.”

(Appendix O)

In summary, after conducting 2 focus group interviews (1 tutor and 1 tutee) the researcher noted a wide range of responses and themes. This range included everything from the challenges facing both tutors and tutees to suggested improvements to the peer tutoring program at large. Next, the researcher will include a vignette, which originated from a semi-structured interview of one exemplar tutor.

Semi-Structured Interview – Exemplar Tutor (Vignette)

The researcher decided to interview a particular tutor because he had tutored more times than any other tutor (20+) and he had tutored on more days than any other tutor (4 sessions per week). The researcher’s rationale was that of all the tutors, this tutor had the most experience and ideally would be able to shed additional light in answering this study’s research questions, which were again:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

The following vignette describes the thoughts, feelings, suggestions, and experiences of an exemplar tutor:

Ben (pseudonym) really wanted to take a class before school in order get ahead, but there was a schedule mix up and unfortunately, he had to drop his zero hour class. Since he was going to be on campus before school anyway, he wanted to do something productive with his time. He was taking Honors Finite Mathematics and Brief Calculus, Engineering 1-2, Honors Junior English, Advanced Placement (AP) Chemistry,

AP United States History, and AP Spanish Language and Culture. He decided to become a peer tutor because it would afford him extra practice on school subjects and it would be a good college-application builder.

Ben was a little concerned about being a peer tutor because usually he is not very good at explaining things. After a week or two, he discovered that tutoring was actually easier than he had thought it would be. Tutoring was similar to helping his friends with their homework, etc. but it was just a little more formal. He found it to be more difficult talking with tutees compared to talking with his friends. After tutoring a couple of different students, Ben's confidence grew. He liked being a tutor and he enjoyed being able to help other people. He also liked the fact that it was helpful to review material he had previously learned. However, he did notice that, more often than not, he had to relearn, on the spot, previous material he had taken. For Ben, it was easy to remember the big topics but difficult to recall the details. He quickly discovered two major challenges of being a tutor. First, it was challenging to help the tutees understand what he was saying and second, it was challenging to figure out how they learn best. Ben learned that when he gave multiple examples and explained the material in different ways, this helped increase tutees' understanding. Ben consistently strived to understand where the tutees were coming from by engaging them in open communication. He learned that many tutees needed him to walk them, step-by-step, through the material. He also strived to explain the material in a clear and concise manner.

Ben noticed that tutoring sessions went well when tutees came prepared to learn and genuinely wanted to be there. When this was the case, he noticed that they paid attention and listened to what he had to say.

Ben realized that he did not need to be nervous about tutoring because there were many available resources at his disposal such as: 1) class notes, 2) textbooks, and 3) other tutors. He realized that he did not have to know all the answers, but he did need to figure out a way to get them.

Lastly, Ben desired that students remember, before and while coming for tutoring for the first time, to: 1) bring notes, scratch paper, and pencil, 2) be prepared, 3) be patient with the tutor, 4) know what they want to learn, 5) be patient with self (see Appendix P for interview transcription).

Quantitative

The collection of multiple sources of quantitative data occurred throughout the study in an effort to assist in answering the research questions. Data collection instruments included archival data (daily attendance, school records) and the sessions tutored survey. Provided is each of the data collection instruments with particular detail given to analysis and results.

Archival Data – Tutees (Daily Attendance)

Daily, the researcher collected 10 weeks of attendance, of all tutees who received peer tutoring services. During the 10 weeks, 108 individual tutees received tutoring and 242 sessions took place. Of the 108 tutees, 60% had been tutored 1 time, 20% had been tutored 2 times, 8% had been tutored 3 times, 5% had been tutored 4 times, and 11% had been tutored 5 or more times (percentages rounded; see Figure 1). Furthermore, of the 242 sessions conducted, 73% were for mathematics, 17% were for English, 8% were for science, and 2% were for foreign language (percentages rounded; see Figure 2).

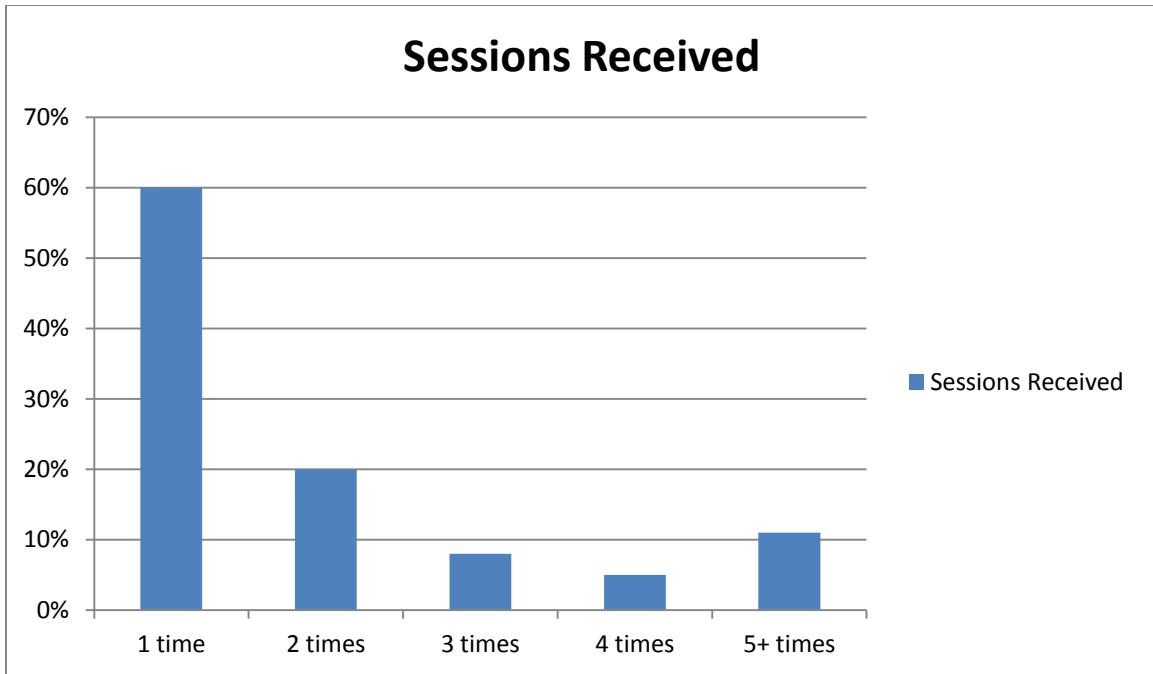


Figure 1. Archival data: Sessions received.

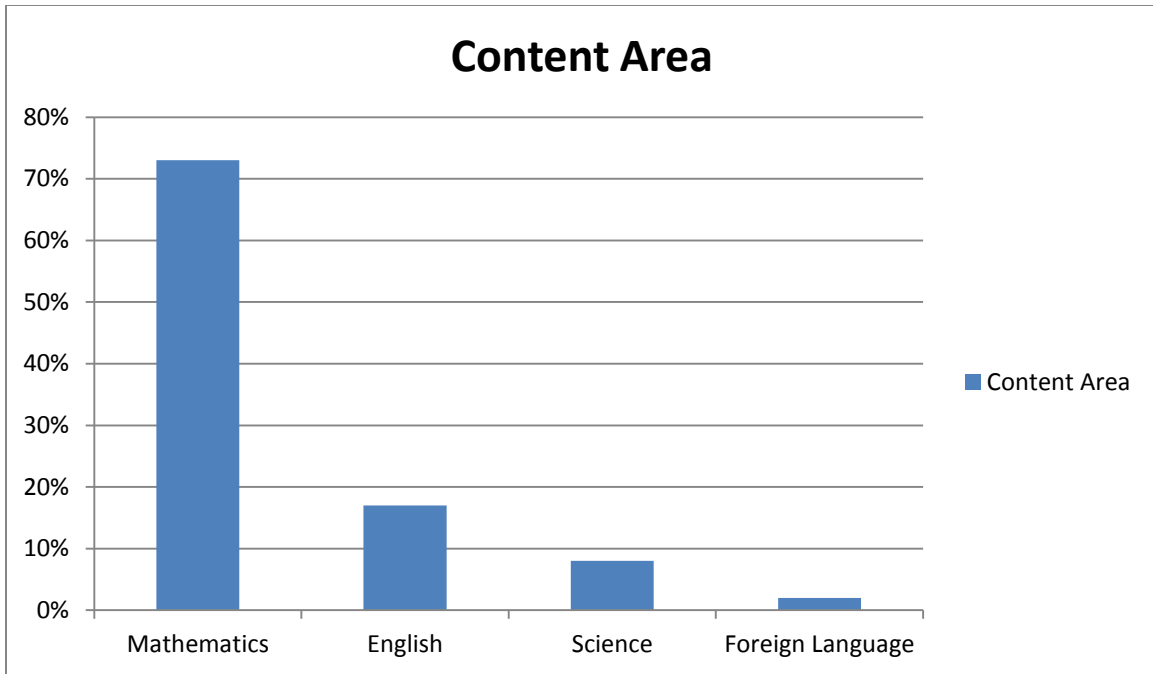


Figure 2. Archival data: Content area.

Sessions Tutored Survey - Tutors

In order to determine the stratified sample for tutors, the researcher administered the sessions tutored survey during weeks 8 and 9 (Appendix A). Of the 43 tutors, 44% had tutored 0 to 5 times, 30% had tutored 6 to 10 times, 14% had tutored 11 to 15 times, 7% had tutored 16 to 20 times, and 5% had tutored 20+ times (percentages rounded; see Figure 3).

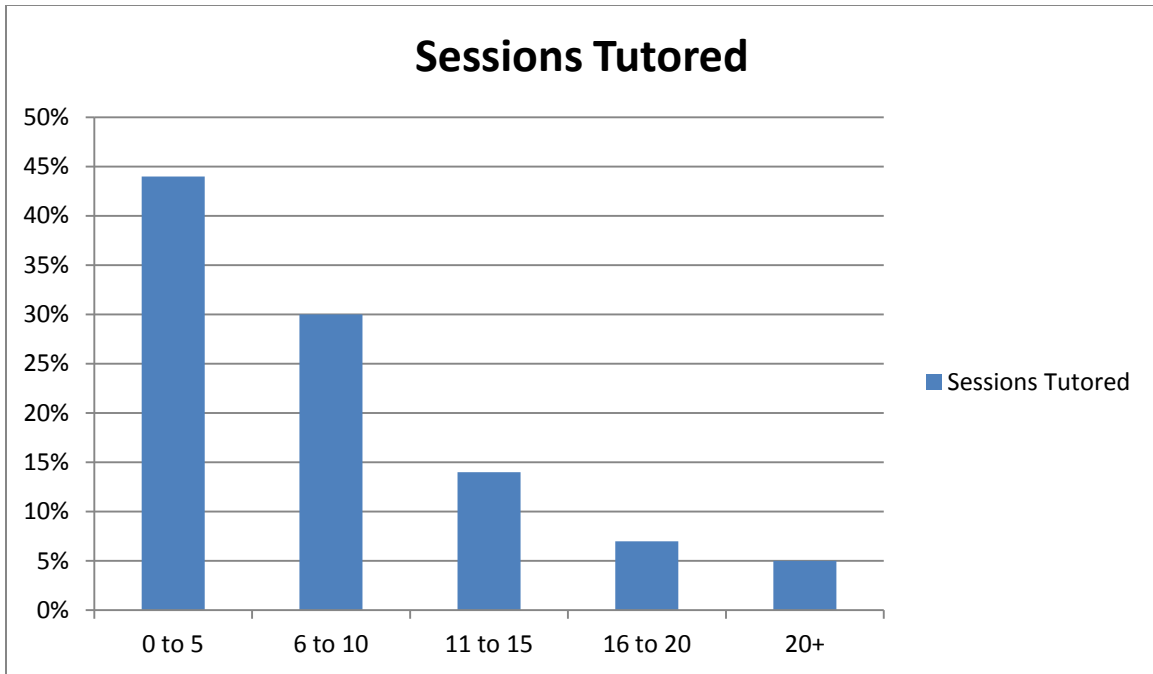


Figure 3. Archival data: Sessions tutored.

Archival Data – Tutors (School Data)

School records, for both tutors and tutees, consisted of three main components: 1) ethnicity, 2) gender, and 3) grade level. The researcher collected school record data during weeks 12 and 13 and this included 43 tutors. In terms of ethnicity, 56% were Asian, 40% were White, 2% were Black and 2% were Hispanic (percentages rounded; see Figure 4). Referencing gender, 53% were Female and 47% were Male (percentages rounded; see Figure 5). In terms of grade level, 47% were in 10th grade, 26% were in 12th grade, 14% were in 11th grade, and 14% were in 9th grade (percentages rounded; see Figure 6).

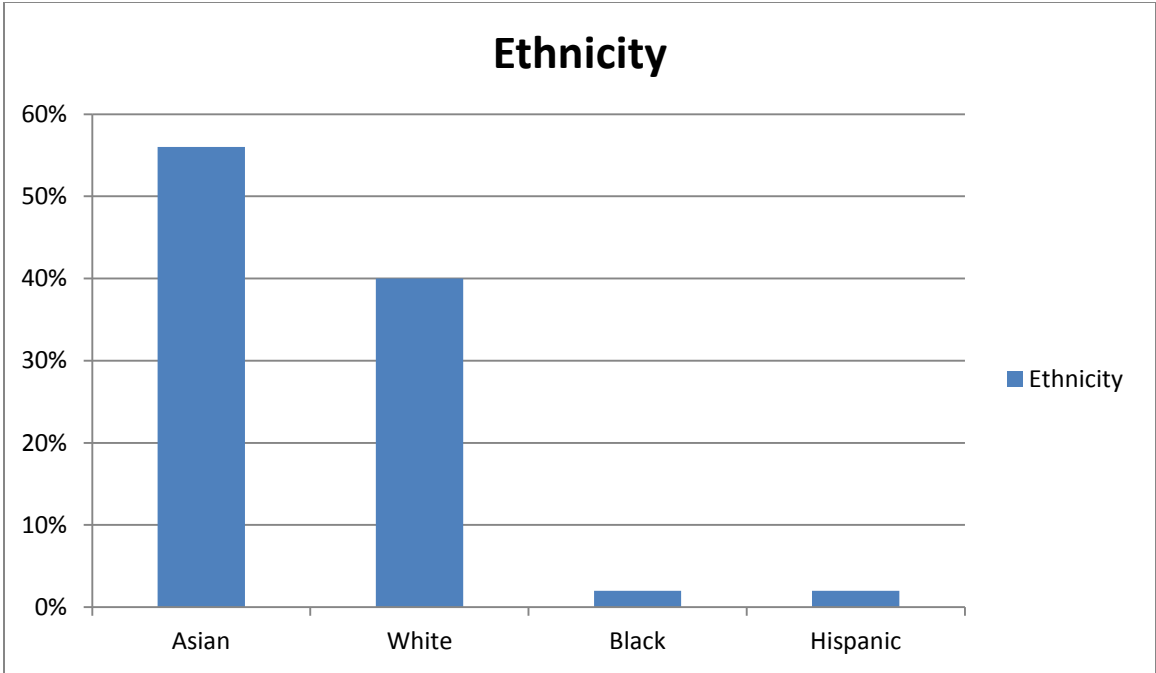


Figure 4. Archival data: Ethnicity of tutors.

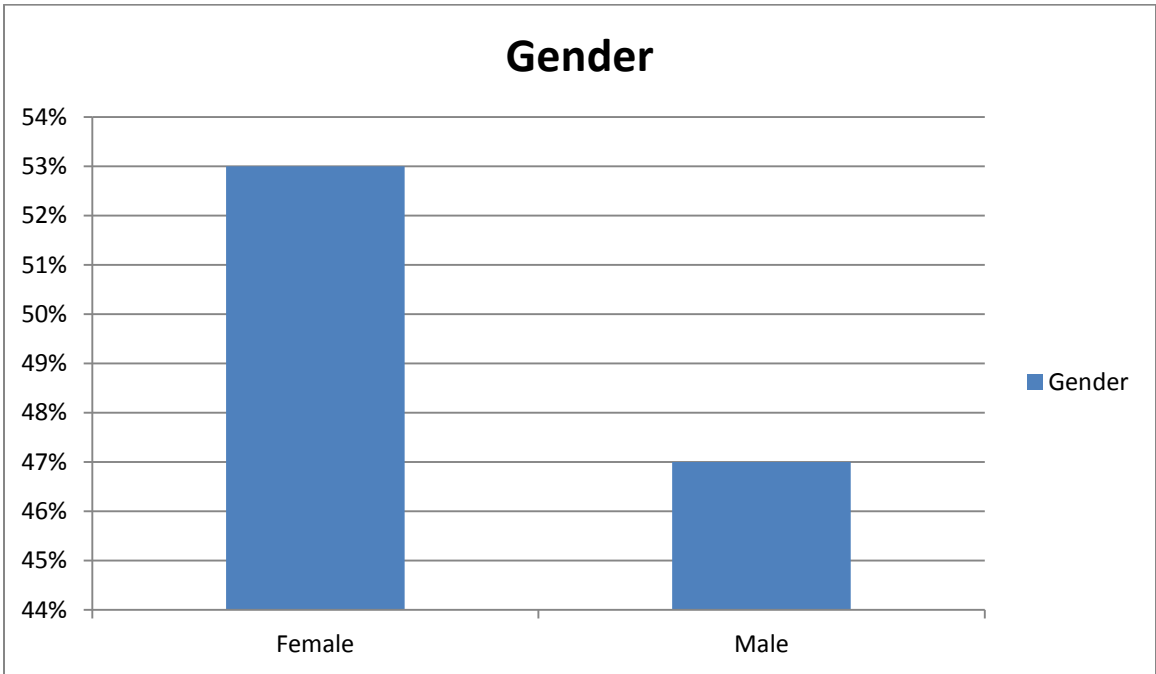


Figure 5. Archival data: Gender of tutors.

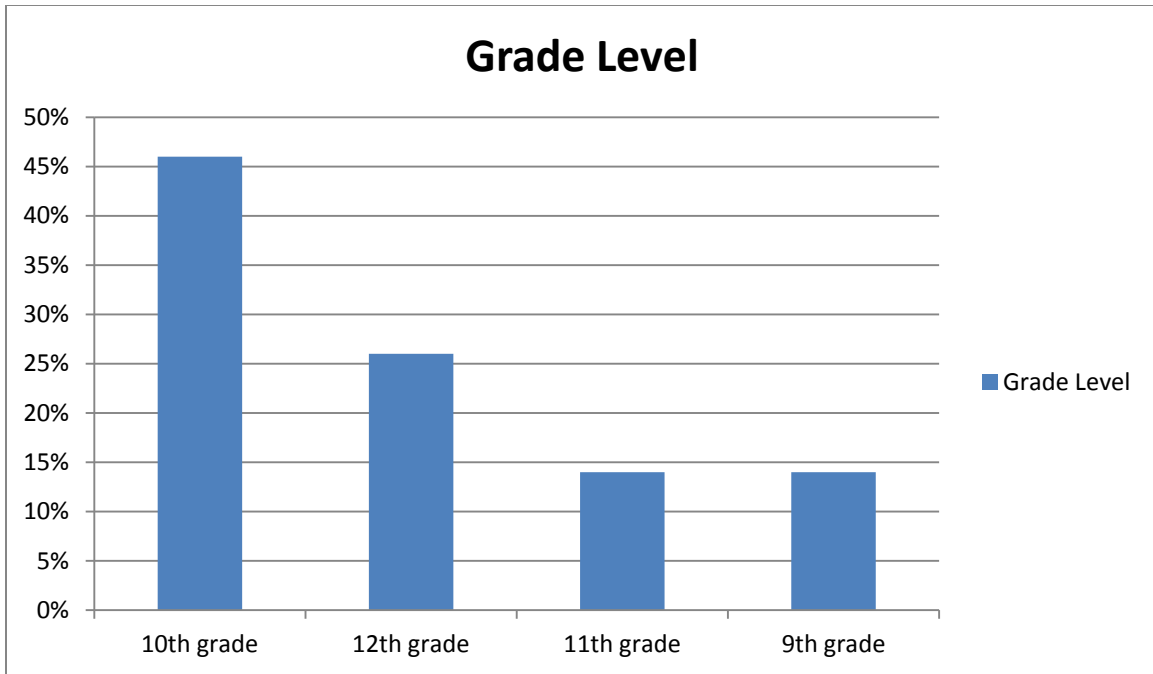


Figure 6. Archival data: Grade level of tutors.

Archival Data – Tutees (School Data)

In terms of tutees, this consisted of 108 tutees (2 had incomplete data). The researcher collected school record data during weeks 11-13. As far as ethnicity, 45% were White, 23% were Hispanic, 20% were Black and 15% were Asian (percentages rounded; see Figure 7). Referencing gender, 53% were Female and 47% were Male (percentages rounded; see Figure 8). In terms of grade level, 38% were in 9th grade, 31% were in 10th grade, 22% were in 11th grade, and 15% were in 12th grade (percentages rounded; see Figure 9).

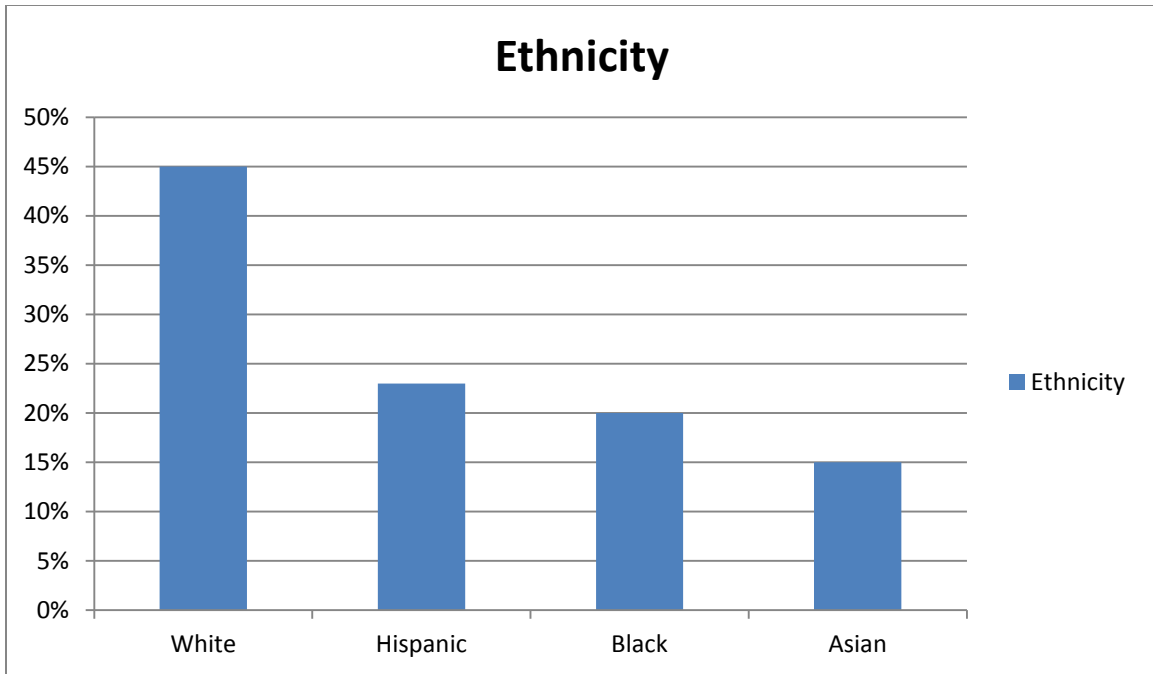


Figure 7. Archival data: Ethnicity of tutees.

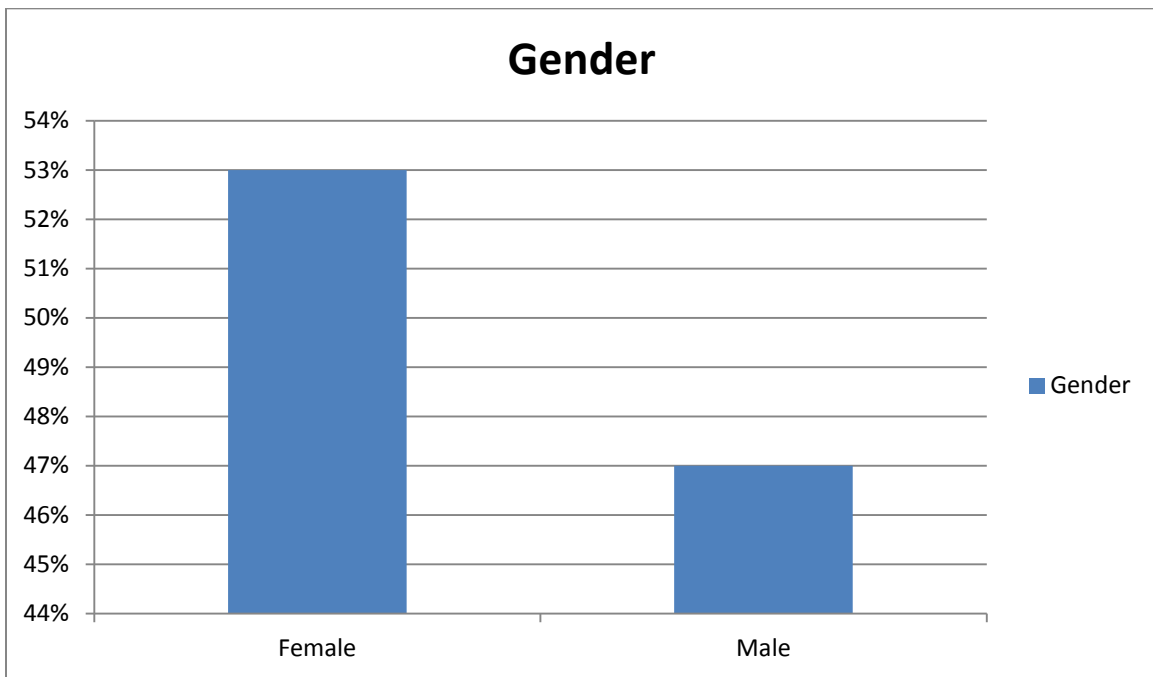


Figure 8. Archival data: Gender of tutees.

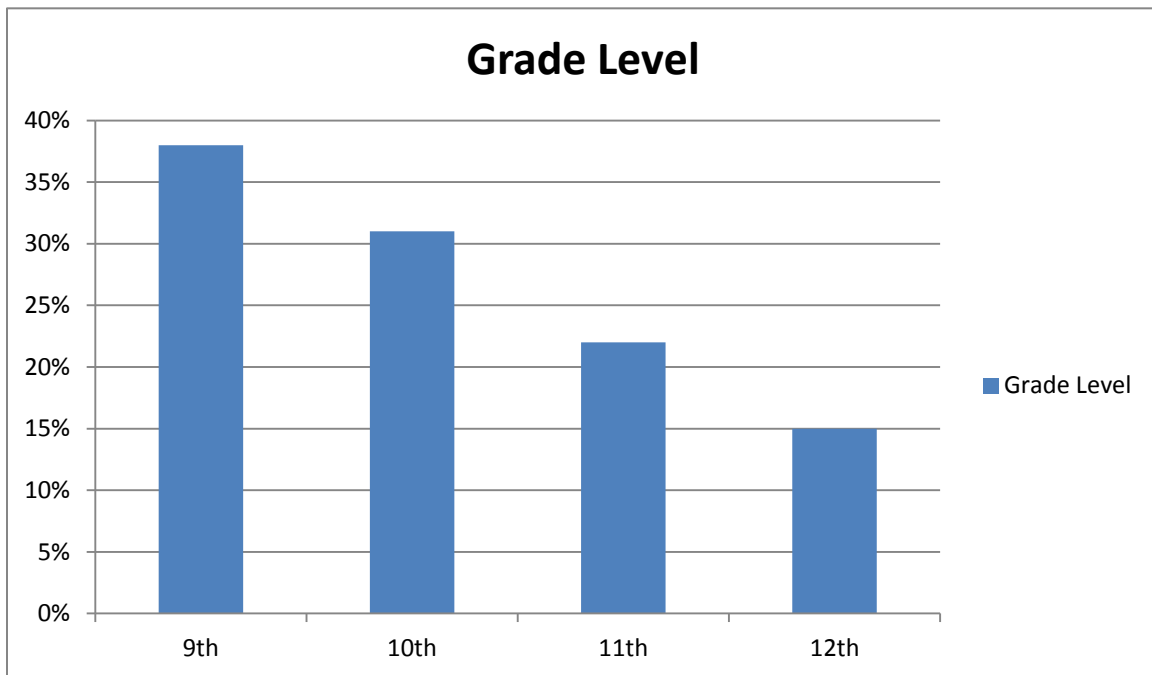


Figure 9. Archival data: Grade level of tutees.

In summary, through the quantitative data results of archival data and the sessions tutored survey, the researcher attempted to better answer the research questions of study.

Again, the research questions were as follows:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

In the next chapter, the researcher will discuss how both the qualitative and quantitative data collected attempts to answer the study's research questions.

Chapter 5: Discussions

DBR was the preferred research design of this study along with a concurrent mixed-methods approach with the purpose of complementarity as the research method. Originally, the researcher had planned to look at what constituted an “effective” peer tutor and peer tutoring session but decided to look at what constituted an “ideal” peer tutor and peer tutoring session instead for the following reasons: 1) the word “effective” was too abstract and subjective and would have needed to be operationalized for tutors and tutees, 2) the word “ideal” rather than “effective” better aligned with the study’s theory, design, and method (i.e., grounded theory, DBR, complementarity), which was to provide a general explanation, model, and elaboration of a social phenomena (Corbin & Strauss, 1990; Barab & Squire, 2004; Greene et al., 1989). Therefore, the research questions were as follows:

- What constitutes an ideal peer tutor at PMHS?
- What constitutes an ideal peer tutoring session at PMHS?
- What model depicts an ideal peer tutor and peer tutoring session at PMHS?

Based on the results of this study, six assertions and two models are made. Related to each research question, assertions are summarized in Table 40.

Table 40

Research Questions and Assertions

Research Question	Assertion
RQ1: What constitutes an ideal peer tutor at PMHS?	A1: A tutor must possess certain qualities and character traits A2: A tutor must receive extensive training. A3: Content knowledge is not enough; a tutor must possess content mastery
RQ2: What constitutes an ideal peer tutoring session at PMHS?	A4: A tutor must assume stewardship of a tutee’s learning. A5: A tutee must be willing to learn A6: Tutors and tutees must engage in open and ongoing communication
RQ3: What model depicts an ideal peer tutor and peer tutoring session at PMHS?	M1: Ideal peer tutor M2: Ideal peer tutoring session

This chapter will attempt to answer the study’s research questions by providing assertions based on the results of the data collected over the course of the study. Data sources include field notes, impromptu interviews, tutor and tutee questionnaires, focus group interviews, a semi-structured interview, archival data, and sessions tutored survey. These assertions are the principal conclusions that have been made as a result of this research. This section will also discuss the limitations of this study and implications for teacher educators and policy makers.

Assertions

Assertions emerged as research questions guided the data collected throughout the course of the study. The following section discusses assertions, in relation to research questions, and the evidence that supports them.

Research Question 1: What Constitutes an Ideal Peer Tutor at PMHS?

Three assertions can be made, based on the results of this study, in terms of what constitutes an effective/ideal peer tutor. First, a tutor must possess certain qualities and character traits. Second, a tutor must receive extensive training. Third, content knowledge is not enough; a tutor must possess content mastery. These assertions are expounded in the sections that follow.

Assertion 1: A Tutor Possessed Certain Qualities and Character Traits

Researchers Galbraith and Winterbottom (2011) conducted a study to better understand tutoring from a tutor's perspective. Initially, tutors believed that their motivation to help tutees would stem from a desire to answer tutees' questions and to avoid embarrassment. However, researchers discovered that tutors began to look at their role and motivation to help tutees much differently. In fact, instinctively and sustainably, tutors became genuinely motivated and strived to help tutees as much as possible. In short, it appears that tutors possessed certain qualities and character traits, which enabled them to be effective tutors.

Possessing certain qualities and character traits came first. Tutor questionnaires, focus group interviews, field notes, archival data and the semi-structured interview suggested that in order for tutors to be effective, they needed to possess certain qualities and character traits. When asked what it takes to be a good tutor, 90% of tutors (Appendix K) mentioned that a tutor must possess certain qualities such being patient, friendly, caring, and encouraging (Appendix J). Interesting to note, only 60% mentioned the need for cognitive skills (e.g., content knowledge, critical thinking, tutoring techniques, understanding of teaching/learning) to be a good tutor (Appendix J). The

ideal tutor is one who is friendly, patient, and sympathetic (Appendix N). Ben's example (exemplar tutor) demonstrates that these qualities and character traits might be acquired if not initially present. The primary reasons for his becoming a tutor were to be productive with his time, have extra practice with school subjects, and have one more thing to add to his college-application. After a short while, he enjoyed being a tutor in large part because he could help other students. The qualities and character traits possessed by Ben seem to have been what has sustained him as a dedicated tutor (see Appendix P for transcription).

The most important quality possessed was patience. As mentioned previously, 90% of tutors stated that they must possess certain qualities in order to be a good tutor. Additionally, 60% of tutors specifically mentioned patience (Appendix M). Focus group interviews revealed that the ideal tutor should possess patience (Appendix N). Likewise, field notes suggested that an important qualification of tutors is patience (Appendix F). In this same vein, one tutor stated, "It takes patience with the tutees if they don't get it right away" (Appendix K), while another tutor stated emphatically, "You need a lot of patience" (Appendix O). A common challenge for tutors was maintaining patience (Appendix N) and not becoming frustrated (Appendix F). One tutor put it this way, "It is easy to lose your patience when nothing you say seems to be clicking with the tutee" (Appendix K). Lastly, archival data indicated that out of 108 tutees whom received tutoring services, only 40% returned for a second tutoring session. The researcher is left to wonder if this occurred, in large measure, because tutors lacked essential qualities and character traits, in particular, patience.

To summarize, an effective tutor must possess certain qualities and character traits. Data collection suggested that certain qualities and character traits could be acquired while tutoring and may be more important than possessing cognitive skills such as content knowledge. Furthermore, data collection suggested that the most important quality for a tutor to possess was patience.

Assertion 2: A Tutor Needed to Receive Extensive Training

Originally categorized as being very informal, peer tutoring lasted well into the 20th century (Gardner et al., 2007). Since then, there has been a shift from informal and incidental peer tutoring arrangements (Gardner et al., 2007) to a more formal and comprehensive approach (Heron & Harris, 2001). Complementary to the shift of more formal and comprehensive tutoring has been the need of tutor training. The concept and need for formal, explicit training (Heron et al., 2006) resulted from more than 30 years of research (Gardner et al., 2007). Today, according to Topping (2005, p. 631), peer tutoring is characterized by “specific role-taking as tutor and tutee ... in which tutors receive generic and/or specific training.”

It was not easy being a tutor. Tutors have the responsibility to explain, teach, encourage, assess, and correct, just to name a few (Appendix F). This is difficult in and of itself but to make matters worse, tutees oftentimes had the unrealistic expectation that tutors were supposed to know the answer to all of their questions (Appendix L) which became a real challenge for tutors (Appendix N). A common complaint from tutors was that the majority of tutees did not want to necessarily learn but to be told the right answers. One tutor mentioned that “...[tutees] always just want answers, which won’t help them on tests or quizzes. They usually aren’t interested in understanding the

concepts they are learning” (Appendix K). Even worse, in addition to tutors having multiple responsibilities, tutees having unrealistic expectations, and not really wanting to learn, field notes revealed that tutors experienced anxiety, doubt, a sense of inadequacy, and uncertainty before, during, and after tutoring sessions (Appendix F)

Regardless of the formal training received, tutors were still underprepared.

The majority of peer tutors in the study received formal training before they began tutoring and also received formal training on a monthly basis. In general, training consisted of general topics such as greeting the tutee, being friendly, asking appropriate questions, presenting the material, formative evaluation, and providing support. Tutee questionnaires, field notes, impromptu interviews, and focus group interviews suggested that tutor training was lacking and should be a top priority. In fact, based on tutee questionnaires, in terms of making the training of tutors a priority, 83% of tutees stated that tutor preparation was the most important factor in being a good tutor (Appendix L). Field notes, in particular, revealed that many tutors lacked a general conceptual understanding of learning (Appendix F) During the tutee focus group interview, one tutee simply requested that tutors “...actually know what they are doing...” (Appendix M). This lack of content knowledge may have been due to the fact that many tutors attempted to tutor for classes they had taken a year or two before (Appendix G). One tutor stated, a “challenge of a tutor is making sure you understand what you’re tutoring. Many times it will be material from past years...” (Appendix K). Furthermore, field notes revealed that tutors lacked explicit knowledge of tutoring methodologies (i.e., philosophy, pedagogy; Appendix F). The researcher observed tutoring methodologies in practice but they occurred instinctively and perhaps unintentionally (Appendix G). In

addition to content knowledge and tutoring methodologies, further training is needed in the areas of assessment and communication (Appendix F).

In summary, an ideal tutor, above all else, must receive proper training. This study revealed many challenges associated with being a tutor. In short, it is not easy being a tutor. This study also discovered that regardless of the formal training tutors received, in general, they were underprepared.

Assertion 3: Content Knowledge Was Not Enough; A Tutor Possessed Content Mastery

Historically, tutors have been (Bell, 1808) and presently are, selected, because of their superiority in content knowledge. For example, in the late 1800's to early 1900's, Bell (1808) selected the "best boy" to be a tutor (p. 41). In fact, Bell (1808) chose his best tutors from the school's brightest students. Similarly, in early American education, teachers relied on certain students (Johnson, 1970), most likely the brightest ones, to teach the others (Johnson, 1970). Generally speaking, today, cross-age tutoring (i.e., tutor is in a higher grade level than tutee; Robinson et al., 2005) is the most common form of tutoring; however, according to Topping (2005), tutors who are in the same age/grade level as the tutees, are becoming more common since this type of tutoring arrangement is more advantageous for both tutors and tutees. The primary purpose of peer tutoring is to promote the "acquisition of knowledge and skill" (Topping, 2005, p. 631) and it makes sense that in order to achieve this, tutors must possess adequate content knowledge.

Content knowledge was a given. The idea that tutors need to be knowledgeable surfaced in both the focus group interviews (Appendix N) and the impromptu interviews

(Appendix H). Obviously, tutors have the responsibility to teach (Appendix F) what they know. One tutor stated, “the whole point of [tutees] coming to tutoring [is] to learn information. The most important thing is [having] ... [a tutor] who knows what they’re doing...” (Appendix O). When asked why they needed peer tutoring, all tutees said they needed academic assistance (Appendix L). One tutee stated, “I needed help on a subject that I didn’t understand” (Appendix M). Another one said, “To get help with some of my subjects because I was confused” (Appendix M). Since tutees came in for tutoring expecting answers to their questions (Appendix L) a challenge for tutors was not knowing, in advance, what the questions would be. In fact, one tutor said it this way, “...not knowing what they want you to teach them before you [tutor], and being kind of blind to that, is kind of hard” (Appendix O). Consequently, tutors were faced with yet another challenge, having to relearn course material on the spot.

Tutors had no choice but to relearn material on the spot. A common challenge expressed by tutors, besides not knowing ahead of time with what the tutees would need help, was the vastness of material (Appendix N) they were expected to remember. Ben, the exemplar tutor, experienced this very challenge and discovered a way to make relearning the material more manageable. He noticed that it was somewhat easy to remember the big topics but difficult to recall the details (Appendix P). He also noticed that, more often than not, he had to relearn, on the spot, previous material he had taken (Appendix P). Another tutor shared his thoughts on the first time he tutored and what he did to jog his memory:

Honestly, [with] the first person I tutored...I kind of freaked out...[I thought]‘Holy cow, I don’t remember how to do this.’ Then there are resources available so I went to the math book...I look[ed] over the stuff and I just quickly refreshed my memory.

Similarly, researchers Galbraith and Winterbottom (2011) reported that the tutors in their study would recognize gaps in their own learning and would need to revisit the fundamental concepts they were teaching in order to better understand and teach the material. Since there seems to be a need for tutors to be able to relearn material on the spot, it is imperative that tutors possess content mastery as opposed to just content knowledge.

Tutoring could not take place if tutors did not possess content mastery.

During the 26 hours of field notes, the researcher noticed evidence of content mastery, and the lack thereof (Appendix F; Appendix G). In terms of the latter, tutors needed to be much more qualified (Appendix N; Appendix F) and prepared to teach their specific subject areas (Appendix L). The researcher also noted that the quickest way to end a tutoring session was to have a tutor who lacked content mastery (Appendix F). On one occasion, a tutoring session ended unexpectedly because not one, but two tutors, did not have adequate content mastery to help the tutee (Appendix O). Of this concept, the researcher noted in his research journal that perhaps it is “...more important to be knowledgeable than personable.” “A tutor[ing] session ends immediately if a tutor is not competent. A tutor[ing] session does not end immediately if the tutor is not personable” (Appendix G).

In summary, tutors must possess content knowledge; but more importantly, they must possess content mastery. Tutors do not know what questions the tutees will ask and therefore must relearn course material on the spot. The only way to effectively and

efficiently relearn the material on the spot is to have a reservoir of knowledge from which to draw and this reservoir is content mastery.

Research Question 2: What Constitutes an Ideal Peer Tutoring Session at PMHS?

Three assertions can be made, based on the results of this study, in terms of what constitutes an effective/ideal peer tutoring session. First, findings from this study suggest that a tutor must assume stewardship of a tutee's learning. Second, a tutee must be willing to learn. Third, a tutor and a tutee must engage in open and ongoing communication. These assertions are expounded in the sections that follow.

Assertion 4: A Tutor Assumed Stewardship of a Tutee's Learning

Findings from this study support existing literature, which identifies stewardship as being an important factor in an effective tutoring session (Galbraith & Winterbottom, 2011). Field notes, focus group interviews, and impromptu interviews provide evidence of and the necessity for tutors to assume stewardship of a tutee's experience and learning

A tutor was not be able to answer a tutee's every question. A common challenge of tutors was being able to remember and answer all the questions tutees had. One tutor stated, "...as a tutor, you may come across a question that you do not know the answer [to]..." (Appendix K). Even though the tutor had already learned the material, it was still challenging. Another tutor described that, "...I may not remember what the tutee is asking me even though I have taken and passed the subject" (Appendix K). Mentioned by the tutors from the focus group interview was also the challenge of remembering all concepts of a subject/class. When a tutee has a question that a tutor cannot answer, and this seems to be inevitable, the tutor is forced to make a decision. A tutor described it this way, "...you do not know the answer...and there is no one else to

help you. You face the conflict of telling the tutee you don't know the answer or creating up a likely answer." (Appendix K) Rather than offering an educated guess, it is at this moment that the tutor must assume stewardship of the tutee's learning and find out the answer somehow, someway.

A tutor discovered the answer to a tutee's every question. Stewardship was a common theme that emerged from focus group interviews. Both tutors and tutees suggested ways in which tutors could become better stewards: 1) be accountable to tutees, 2) ask other tutors, 3) utilize all available resources (e.g., teacher-supervisors, textbooks, internet etc.), and 4) simply discover the answers. Ben, the exemplar tutor, did not know all the answers but he strived to figure out a way to get them. During field notes, on occasion, tutors would seek additional assistance from other tutors, the internet, textbooks, and/or teacher-supervisors. One tutor epitomizes the principle of stewardship perfectly. When asked what she has done to help tutees, in addition to asking other tutors and utilizing all available resources, she stated the following:

Sometimes, what I do is I tell them that I'll get back to them on that. When I have time at home, I'll work through the problem that we were stuck on, for example. Then like either if I get their e-mail, I can send it to them. If I see them during the day, I can give it to them. I've done that several times before, when I either didn't have time to finish it during the session, or I couldn't find a way to work it out, that could help them. I just said that I'd work it out at home, and write up an explanation, and give it to them.

A tutor knew when to refer a tutee to his/her teacher. A tutee's needs must be met in an ideal tutoring session (Appendix H). Tutors noted that tutees ought to seek tutoring from a peer for minor necessities such as clarification of a concept etc.

(Appendix J). One tutor stated, "[Tutees] should seek tutoring if they are struggling to grasp a concept...[and] to ask someone for clarification" (Appendix K). Another tutor

commented that tutees "...should somewhat know the subject before they come in..." (Appendix K). Frequently, tutors recognized that tutees were lacking the fundamentals (Appendix H). Overall, there was an absence of deep knowledge in these tutees and they seemed lost (Appendix H). In these situations, tutors felt concerned that their tutoring would not suffice. In both the focus group interview and the tutor questionnaire, tutors stated that the teacher might be the best option when tutees 1) lack fundamentals, 2) are lost, 3) have important assignments, and/or 4) are unmotivated. One tutor suggested that, "It's best to seek tutoring from a teacher to master fundamental concepts" (Appendix K). Another tutor suggested, "to seek help from a teacher, [when] the [tutee] may not be able to understand the subject at all..." (Appendix K). Lastly, one stated, "the hardest time I've had [was when]...they didn't really want to get help ... I think we should...combine it (tutoring) with their teachers" (Appendix O).

In summary, a tutor must assume stewardship of a tutee's learning. A tutor must keep in mind that he/she may not be able to answer a tutee's every question; however, a tutor has the responsibility to discover the answer to a tutee's every question. Furthermore, a tutor must recognize his/her limits and realize that referring a tutee back to his/her teacher may in fact be the best option.

Assertion 5: A Tutee Was Willing to Learn

There exist two forms for peer learning: 1) peer tutoring and 2) cooperative learning (Topping, 2005). Peer learning is the "acquisition of knowledge and skill" through the help and support of peer (Topping, 2005, p. 631). An important variable of cooperative learning is that each student have a common outcome or goal (Johnson &

Johnson, 2009), and it is fair to say that also holds true for peer tutoring. More often than not, tutees struggled to want to learn.

A tutee generally was unmotivated. In order for an ideal tutoring session to occur, tutees must have the motivation to be there and to learn. When tutees are unmotivated, it becomes difficult for the “acquisition of knowledge and skill” (Topping, 2005, p. 631) to take place. When asked what were some challenges of being a tutor, a common theme emerged which was the tutees were the challenge (Appendix J). These challenges included tutees that were unwilling to learn, unmotivated, and expressed a feeling of hopelessness (Appendix J). Similarly, field notes revealed that tutees experience a wide range of emotions such as: 1) inadequacy, 2) frustration, 3) disappointment, 4) depression, and 5) anxiety during a tutoring session. It is understandable then why tutees arrive at the tutoring center unmotivated. Therefore, in order to counteract tutees’ lack of motivation, it is important for tutors to foster a positive learning environment by being 1) positive, 2) charismatic, and 3) optimistic (Appendix H).

A tutee came prepared to learn. More often than not, tutees arrived unprepared (Appendix J; Appendix H; Appendix F). One tutor explained that tutees would come in for help and would only give statements such as, “Here’s my notes” or “I missed a day” (Appendix O) and expect the tutor to take it from there. This tutor continued, “They’re not really sure what they want to get help in...” (Appendix O). When asked, tutors said that tutees needed to be prepared in order for an ideal session to occur. On one particular occasion, the researcher observed that because the tutee was very prepared, the tutoring session was effective. The researcher wrote, “Student (tutee) came prepared with

questions and had an agenda. Student knew what he wanted to learn. Effective experience for the student.” (Appendix F) This confirms Ben’s observation and experience as well. He noticed that tutoring sessions went well when tutees came prepared to learn and genuinely wanted to be there (Appendix P)

A tutee was more willing to learn when attendance was not mandatory. A major theme that surfaced from field notes was the idea of dependency. Besides a tutee’s obvious dependency upon peer tutoring, other individuals, entities, and organizations are also dependent upon peer tutoring and the services it provides. Such stakeholders include: 1) parents, 2) teachers, 3) athletic department, 4) activities department, and 5) the school at large (Appendix F). During the course of the study, multiple tutees attended peer tutoring because they were forced to attend by these various stakeholders. One tutor recounted his experience in which an athlete was forced by the athletic department to attend. “The hardest time I’ve had...is some football players were failing math and they didn’t really want to get help...that was probably just because they were forced to [attend]” (Appendix O). Another tutor commented, “Some challenges are having tutees that are unwilling to tutor and only come because they are forced to. It is hard to motivate these students to want to actually learn...” (Appendix K). Perhaps one of the main reasons why tutees sought peer tutoring was due to parental recommendations (Appendix L; Appendix F). On one occasion, the researcher was walking on campus when the janitor stopped him and said, “Good job on that peer to peer [tutoring]. My daughter is doing much better now. She has been going for two days now” (Appendix G). The researcher does not know if the janitor’s daughter sought peer tutoring voluntarily or was forced to attend. However, throughout the study the idea of tutees

attending tutoring mandatorily was evident. The ideal session is one in which the tutee voluntarily attends (Appendix H). Ben, the exemplar tutor, noticed that when tutees genuinely wanted to be there they paid attention and listened to what he had to say. He also stated that a tutee should have a "...willing attitude to be there and to learn because if ...[they] don't want to be there, it's less likely they're going to actively participate..." (Appendix P).

In summary, tutees must, for an ideal peer tutoring session to occur, be willing to learn. This occurs when first, a tutor keeps in mind that a tutee, in general, is unmotivated. A tutor must do all in his/her power to foster a positive environment and be optimistic and positive. Second, a tutee must come prepared to learn. Lastly, a tutee is more willing to learn when attendance is not mandatory.

Assertion 6: A Tutor and a Tutee Engaged in Open and Ongoing Communication

The zone of proximal development (ZPD), which is a concept commonly found in peer tutoring, refers to "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Tutor-tutee discourse, which according to Thomas (1994) and Roscoe and Chi (2007), provides tutees with increased attention, feedback, and opportunity for discussion, is important to the learning of both the tutor and the tutee. According to Roscoe and Chi (2007), tutors foster positive outcomes when questions are based on reflective knowledge-building (where tutors reflect tutees' understanding and build upon prior knowledge) as opposed to knowledge-telling (where tutors merely lecture). Interesting to note, Roscoe and Chi (2007) discovered that school-aged tutees

are inclined to knowledge-telling rather than reflective knowledge-building. They recommended that tutoring training be focused on knowledge-building strategies (Roscoe & Chi, 2007).

Tutors and tutees assumed the responsibility to communicate. When asked what it takes to have a good tutoring session, two major themes emerged; 1) tutor responsibilities and 2) tutee responsibilities (Appendix J). A tutor's responsibility is to foster open communication and a tutee's responsibility is to openly communicate (Appendix J). Simply put, good tutors and ideal tutees communicate (Appendix F; Appendix J). In response to what it takes to be a good tutor, one tutor stated, "Communication...because the tutor and tutee both have to understand each other." Additionally, through field notes the researcher discovered that tutors have a responsibility to communicate but more particularly, to offer explanations. In terms of tutees, oftentimes, tutees struggled to openly communicate with tutors (Appendix J). Ben, the exemplar tutor, discovered tutees' learning increased as he strived to offer many explanations and engage tutees in open communication (Appendix P).

Communication was a challenge for both tutors and tutees. The ability to foster a conversation, in particular, the ability to explain, was a common challenge for tutors (Appendix N; Appendix J). Many times a tutor's challenge to communicate was directly connected to a tutee's ability or lack thereof to communicate. One tutor mentioned, "Some challenges are being able to explain things in a way that everyone will understand." (Appendix K) Another tutor said, "The biggest challenge is getting the tutee to open up to and tell you everything that they don't understand." (Appendix K) Furthermore, another tutor expressed, "...one of the hardest things was to make sure that

they [tutees] understood what I was saying” (Appendix O). Tutors’ statements and general observation suggested that it was difficult for tutees to be open and honest with tutors – in terms of how well they were actually learning the material (Appendix F; Appendix N; Appendix J). Tutees need to “...make it clear whether they understand something or not” (Appendix O). One tutor recounted an experience that helps to illustrate the challenge and a proposed solution. During the course of the tutoring session, the tutee had remained quiet and had not asked any questions. After 5-10 minutes of explaining a concept, the tutee all of a sudden said that they were not understanding it. This tutor shared her frustration, “Maybe [the tutee] already lost the concept 5 minutes back” (Appendix O). She suggested that a tutee is “one who continues to ask questions, who has a specific idea of what they don’t understand, and at least can specify once it’s presented” (Appendix O). She concluded with, “then you can really accomplish a lot because...it is modeled to what they don’t understand, rather than just trying to explain the entire concept” (Appendix O). In fact, according to Graesser and Person (1994), tutees may learn more in tutoring situations compared to a normal classroom setting because tutees can ask individualized questions pertaining to their own level of understanding and development.

Tutors and tutees benefited from open and ongoing communication. When asked to describe the ideal tutoring session, tutors and tutees mentioned active participation, interaction, verbalization, transparency, and the asking and answering of questions (Appendix H). By engaging in the aforementioned activities, tutors were able to increase their own depth of knowledge (Appendix H). As for tutees, a salient benefit was an increase in understanding (Appendix H). Impromptu interviews and results from

the tutee questionnaire revealed that a benefit from seeking help from a peer rather than a teacher was an increase in understanding and comprehensibility. When asked what helped tutees the most, a common response was the individual assistance they received which included pacing, step-by-step instruction, and particularly, added explanation (Appendix L). One tutee wrote of the importance of explanation, “[tutors] explain[ed] to me what I was confused about” (Appendix M). Another one simply stated, “[tutors] explained it better” (Appendix M). Furthermore, during field notes the researcher noted that both tutors and tutees benefited from open and on-going communication.

Research Question 3: What Model Depicts an Ideal Peer Tutor and Peer Tutoring Session at PMHS?

Two models can be made, based on the results of this study, in terms of what model depicts an ideal peer tutor and an ideal peer tutoring session. First, findings from this study suggest that an ideal peer tutor must be qualified, trained, and is experienced. Second, an ideal peer tutoring session must have a location conducive for tutoring, and learning, a tutee must be prepared, and a tutee must actively participate. These models are explained and illustrated in the sections that follow.

Model 1: An Ideal Peer Tutor

Grounded theory and DBR were the preferred theory and research design of this study. Grounded theory attempts to “provide a thorough explanation of social phenomena” (Corbin & Strauss, 1990, p. 15) by developing a general, abstract theory (Creswell, 2009) or explanation of an action, process or interaction (Plano Clark & Creswell, 2010). Similarly, DBR also attempts to produce new theories (Barab & Squire, 2004). Additionally, DBR attempts to produce artifacts and practices that will impact

learning and teaching in naturalistic settings (Barab & Squire, 2004). In the end, creating a model is the goal of DBR (Brown & Campione, 1996). The value therefore of the intervention lies in its design or model (Barab & Squire, 2004). Therefore, the value of this peer tutoring program lies in this study's models.

An ideal peer tutor was qualified. Ideal tutors genuinely desire to help others (Appendix J). Tutors may have other secondary motives such as wanting volunteering hours for the National Honor Society (NHS) but their primary reason for being a peer tutor is to help others (Appendix J). Tutors' motives must be pure and unpretentious (Appendix N). When this happens, tutors are always willing to help (Appendix H) and are dedicated (Appendix L). Tutors must also possess certain qualities and character traits with patience being the paramount quality (Appendix N; Appendix H; Appendix J). Lastly, tutors must possess a high level of content knowledge and most importantly, content mastery (Appendix F; Appendix N). The best way to discover and recruit ideal tutors is through a rigorous application/selection process, which assesses the areas of desire, motive, qualities/character traits, and content knowledge/mastery.

An ideal peer tutor was trained. Ideal tutors must receive adequate and comprehensive training (Appendix F). This confirms the systems model approach to tutoring, which emerged after more than 30 years of research conducted by four major tutoring centers in the United States (Gardner et al., 2007). Ideal tutors know and understand expectations, procedures, responsibilities, and realities (i.e., challenges) of tutors and tutees (Appendix F; Appendix N; Appendix J). Tutors are well versed with tutoring philosophy, pedagogy, learning theories, and methodologies (Appendix F). Similar to a tutoring systems model, which is any "formal and comprehensive approach

to teaching...” (Gardner et al., 2007, p. 452) tutors plan, implement, assess, and evaluate (Gardner et al., 2007). Ideal tutors also learn specifics in active participation, communication, assessment, correction (Appendix F), and guidelines if referring tutees back to their teacher (Appendix J). Tutors must receive adequate and comprehensive training before tutoring period.

An ideal peer tutor was experienced. In this study, the researcher discovered that during a 10 week period, close to 50% of tutors had only tutored 0 to 5 times (Appendix A). Ideal tutors need to have ample tutoring experiences, which provide opportunities to put their qualities, knowledge, and training into practice. Ben (exemplar tutor) had confidence after he had tutored, not before (Appendix P). Ideal tutors unselfishly share their talents and abilities with all tutees. Ideal tutors are friendly, caring, kind, compassionate, and most importantly, patient (Appendix N; Appendix J). They are positive, optimistic, encouraging, and genuinely listen (Appendix F; Appendix H). Ideal tutors foster active participation (Appendix J), ask questions (Appendix F; Appendix J), effectively communicate (Appendix F), and have realistic expectations (Appendix H). Lastly, ideal tutors assume stewardship of tutees’ learning (Appendix N), are resourceful (Appendix H), and maintain a proper perspective of tutoring and the learning process (Appendix N).

In summary, an ideal peer tutor must be qualified, trained, and have opportunities to put their qualities, knowledge, and training into practice. This process must be cyclical. Once tutors have tutored, applying what they have been taught, they will realize that tutoring is not easy but very challenging (Appendix F; Appendix N). They must go full circle and reflect and be reminded of why they decided to be a tutor in the first place.

Ideal tutors will be able to rededicate themselves and be willing to continue tutoring. Next, ideal tutors must have on-going training in order to be reminded of and build on the initial training as well as to seek answers to questions and/or concerns. They will then know they are ready to continue tutoring, applying that which they were reminded of and recently learned – thus the cycle continues. An ideal peer tutor is illustrated in the Figure 10 below.

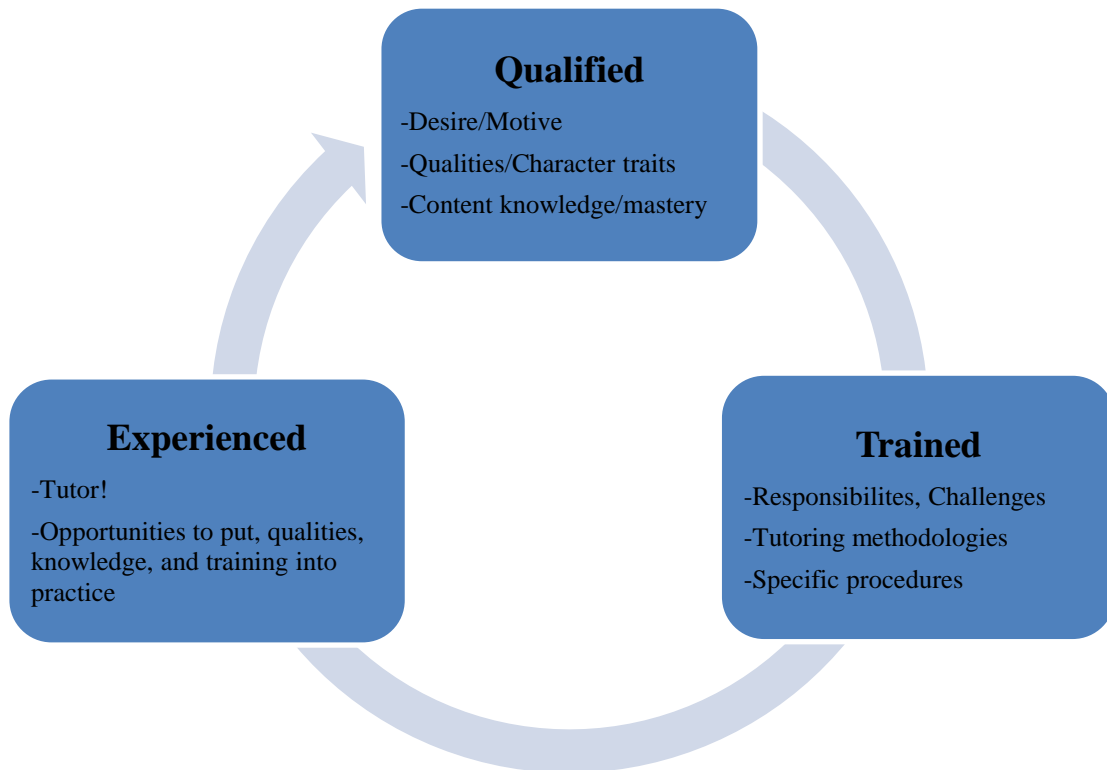


Figure 10. Model of an ideal peer tutor.

Model 2: An Ideal Peer Tutoring Session

In addition to having an ideal tutor, the following are imperatives to ensuring an ideal peer tutoring session.

The peer tutoring center was conducive for tutoring and learning. First and foremost, the layout (e.g., desk arrangement) (Appendix F) and spacing (Appendix N) must be dealt with in order to have center conducive for tutoring and learning. The layout of the center must be conducive for one-on-one tutoring (Appendix H) which consists of desks being arranged side-by-side (Appendix F). The center must be spacious enough where tutors and tutees can move about with relative ease and desks can be rearranged if need be (Appendix F). The center must be equipped with resources such as textbooks, whiteboards, paper, writing utensils, and computer, printer, and internet access (Appendix F ; Appendix H; Appendix J). In this study, individualized assistance was the number one factor that helped tutee the most (Appendix L) and one of the main reasons why tutees chose to seek help from a peer rather than a teacher (Appendix H). Therefore, it is paramount that tutees have the accessibility to and opportunity for one-on-one tutoring (Appendix H). The researcher noted that not only was one-on-one tutoring valuable but also having the same pairing offered additional benefits such as an increase in stewardship, connectedness, efficiency, and a feeling of security (Appendix H). The primary goal is to promote an environment, which is conducive for learning (Appendix H). This can be achieved by having the peer tutoring center be a positive, quiet, and friendly environment and atmosphere (Appendix H; Appendix J; Appendix L).

A tutee was prepared. The first and perhaps the most important step in a tutee's preparation is his/her desire, motivation, and willingness to be tutored (Appendix H; Appendix J). The researcher discovered that many tutees, for one reason or another, were unmotivated, and unwilling to learn (Appendix J). The data collected in this study suggests that tutees are more motivated and willing to learn when they voluntarily seek

tutoring (Appendix H) and when it is non-punitive (Appendix H). Tutees seek tutoring for a variety of reasons (Appendix F). In order to be prepared, tutees must understand the purpose for which they need tutoring because sometimes teachers, rather than peer tutors, are the best option (Appendix J; Appendix N). Tutees need to seek help from a teacher when they 1) lack foundational concepts, 2) feel lost, and 3) have excessive absences (e.g., illness, extra-curricular activities; Appendix N). Tutees can seek help from a peer tutor for 1) minor necessities (e.g., clarification, help with homework, different viewpoint) and 2) teacher unavailability (Appendix H; Appendix J). An ideal peer tutoring session occurs when tutees are prepared (Appendix H; Appendix J; Appendix N). Ben (exemplar tutor) discovered that sessions went well when tutees were prepared. He saw the value of tutees having basic material such as notes, scratch paper, and a pencil (Appendix P). Additionally, tutees must come prepared with questions they want answered (Appendix F; Appendix H). It also helps when they come with a level of inquisitiveness (Appendix N). The last step of preparation is that tutees must have a proper perspective of tutoring and its functions as well as realistic expectations (Appendix L; Appendix F). The researcher discovered that many tutees sought tutoring with the intent to be told what the answers were to certain problems and/or assignments (Appendix F; Appendix L; Appendix N). They also had unrealistic expectations of both the tutors and tutoring in general (e.g., expected tutors to have all the answers, expected tutoring to solve all academic challenges; Appendix F; Appendix L; Appendix N). Essential to an ideal peer tutoring session is the preparation of the tutee. This preparation must take place prior to coming in to the tutoring center.

A tutee actively participated. Data collection sources suggested that one of the most important factors of an ideal peer tutoring session had to do with a tutee's ability to actively engage and participate. First, tutees must know what it is they would like to accomplish during the tutoring session (Appendix F). Many times tutees would show up for tutoring without having any goals for the session which made it difficult for tutors (Appendix J; Appendix N). Second, tutees must communicate openly with tutors (Appendix H; Appendix J; Appendix N) and be completely transparent with them (Appendix H). In fact, one of the biggest challenges for tutors was when tutees did not openly communicate (Appendix J). Third, related to communication is the need for tutees to ask questions throughout the tutoring session (Appendix H; Appendix J). Tutors expressed a concern that tutees were not proactive enough and did not ask enough questions – especially when they were confused (Appendix J). Fourth, tutees need to remain focused (Appendix N) by limiting distractions from text messages, phone calls, and socializing with friends (Appendix H). In general, the researcher found that group tutoring made it harder for tutees to focus (Appendix F; Appendix N) because oftentimes they would come in with friends. Group tutoring also made it more difficult for tutees to receive individualized pacing and modeling (Appendix H) and step-by-step assistance (Appendix L) which were the primary reasons why tutees sought tutoring from peers rather than teachers (Appendix H). Fifth, tutees must actively participate throughout the duration of the tutoring session (Appendix H; Appendix J). In addition to having an agenda, openly communicating, asking questions, and limiting distractions, tutees must be receptive to and interact with tutors (Appendix H). Lastly, tutees need to maintain a proper understanding and perspective of tutoring and its primary purpose which is not to

receive answers but rather understanding and to acquire knowledge (Appendix J). The end result of tutoring is when, as one tutor put it, a “tutee can solve a problem correctly by [him/herself]. This tells me that [he/she] understand the concepts” (Appendix J).

In summary, in addition to all that constitutes an ideal peer tutor (e.g., model 1), in order to have an ideal peer tutoring session, first, the tutoring center must be conducive for tutoring and learning. This includes the layout of the center, available resources, accessibility to one-on-one tutoring, and maintaining a positive, quiet, and friendly environment. Next, a tutee must be prepared. Tutees are prepared to learn from peer tutors when they voluntarily seek tutoring, wisely choose between a peer tutor or a teacher, bring the necessary materials, have questions, and have *realistic* expectations. Lastly, a tutee must actively participate. Tutees must know what they want to accomplish, openly communicate, continuously ask questions, focus and limit distractions, and strive to learn and acquire knowledge. An ideal peer tutoring session is illustrated in the Figure 11.

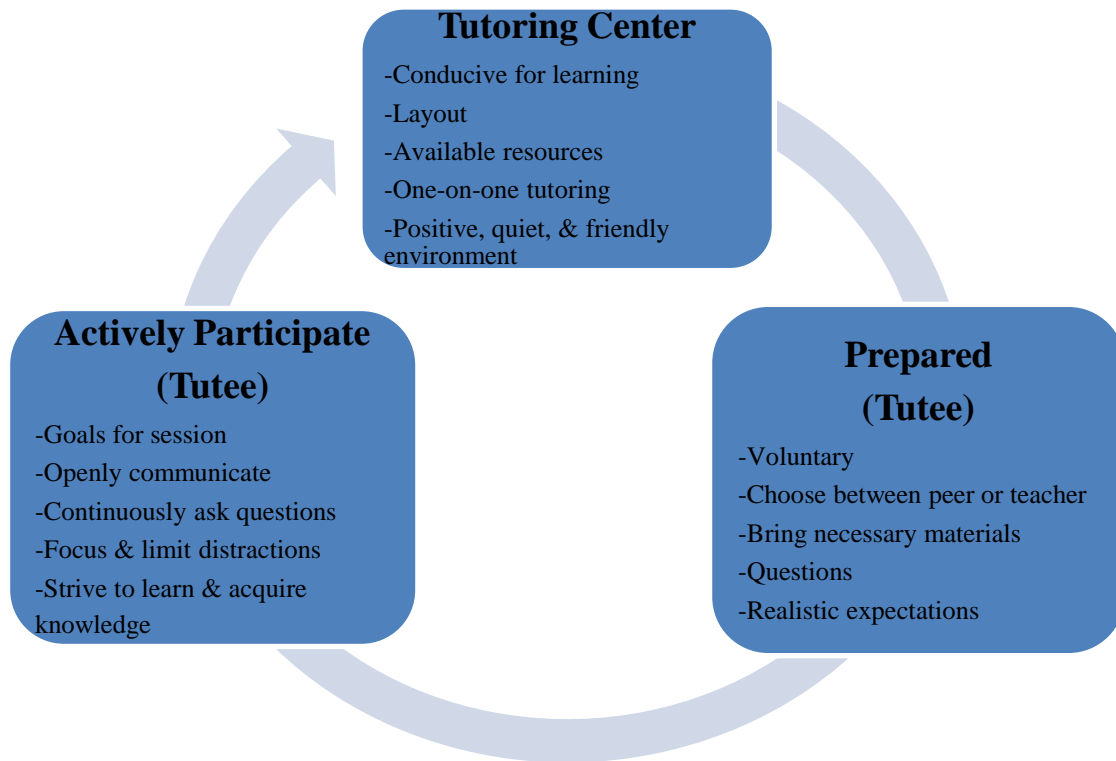


Figure 11. Model of ideal peer tutoring session.

Limitations

This study had several limitations. The first limitation was the fact that the researcher assumed four distinct roles: 1) researcher, 2) peer tutoring coordinator, 3) PMPT club sponsor, and 4) teacher. Many times throughout the study, the researcher was compelled to switch in and out of roles depending on each given situation. For example, many times while the researcher would be collecting field notes, an administrative need and/or issue would arise that would call for him to switch to the role of coordinator. When this would happen, the researcher would have to stop collecting data and attend to duties non-pertinent to the study.

The second limitation had to do with the low response of tutees filling out the tutee questionnaire. Of the 15 who were selected, only 7 completed the questionnaire. In order for the researcher to administer the questionnaire, tutees were required to take home the parent consent form, have it signed, and remember to bring it back to the researcher. Many times high school-aged students need to be reminded of things and it helps when parents are aware and are able to help give those reminders as well.

The third limitation was the general lack of details and specifics given by some tutees when completing the questionnaire and participating in the focus group interview. Both the questionnaire and focus group interview occurred during weeks 12 and 13. The reason for doing so towards the end of the study was to allow tutees ample time to have participated in and had experience with peer tutoring. Unfortunately, 80% of participants had only received 1-2 tutoring sessions up until this time (see figure 1). The researcher believes that tutees' general lack of experience with peer tutoring may have led to the general lack of detail in their responses to questions.

The last limitation was the lack of quantitative data collected. Quantitative data consisted of: 1) sessions tutored survey, and 2) archival data (daily attendance, school records). Descriptive statistics were gleaned from the quantitative data; however, the data primarily assisted in creating the stratified sample and in offering general program and demographic information. In an attempt to strengthen this study's research design, it is requisite that more quantitative data be collected. In addition to collecting more quantitative data, it is necessary that the data collection instruments be aligned to directly answer the research questions thus enhancing the research method, which is mixed-methods. In an attempt to accomplish this, the researcher could have administered daily

surveys to all tutees (108) right after they had received a tutoring session and surveys could have focused on 1) what constitutes an ideal peer tutor, and 2) what constitutes an ideal peer tutoring session. After analysis, this data would then be integrated and mixed, at the point of interpretation with the qualitative data, with hopes of gaining an even better understanding of the phenomena (Greene, 2007).

Strengths

This study's innovation (peer tutoring program) was developed and initiated in the 2012-2013 school year. This was the school's first ever school-wide peer tutoring program. After the 2012-2013 school year, the researcher knew that many tutees had been tutored throughout the course of the school year but that was the extent of his understanding. The researcher did not know how well the tutors were tutoring nor did he know how well the tutees were learning. The researcher decided that in order to know the answer to these questions, he would first have to determine what constituted an ideal peer tutor, an ideal peer tutoring session at PMHS, and what models would depict these two phenomena. This study's strengths lie in its methodology (e.g., theory, design, method) and its extensive data analysis.

Methodology

First, since the researcher decided to explore and discover what constituted an ideal peer tutor and an ideal peer tutoring session, grounded theory was chosen. Grounded theory helped the researcher develop a general, abstract theory (Creswell, 2009) or an explanation of actions, processes, and/or interaction through the use of qualitative procedures (Plano Clark & Creswell, 2010), that were "grounded in the views of participants" (Creswell, 2009, p. 13). Furthermore, the researcher created "a visual

model that depicts the theory” (Plano Clark & Creswell, 2010, p. 241). Next, DBR was used as the research design in order to advance existing and/or generate theories on learning and teaching (i.e., peer tutoring) and to directly impact practice in a localized context (Barab & Squire, 2004). The researcher wanted to create a model/design of what constituted an ideal peer tutor and an ideal peer tutoring session; creating a model/design is the goal of DBR (Brown & Campione, 1996). DBR, in particular the models that were created, provided the researcher with valuable insights into the local dynamics (Barab & Squire, 2004) of peer tutoring at PMHS. Lastly, a concurrent mixed-methods approach with the purpose of complementarity was used. Mixed-methods is a research method used in DBR (Design-Based Research Collective, 2003). Both mixed-methods and complementarity helped to gain an elaborated, detailed understanding of the phenomena (Greene et al., 1989; Greene, 2007). Moreover, the weighted priority of QUAL – quan further strengthened this study’s goal in answering the research questions.

Extensive Data Analysis

The last real strength of this study was the extensive data analysis conducted. The researcher collected and analyzed 26 hours of field notes, 27 impromptu interviews, 17 questionnaires, 2 focus group interviews, 1 semi-structured interview, the sessions tutored survey, and archival data (i.e., daily attendance, school records). In terms of qualitative data analysis, 58 major themes/codes (multiple overlap) emerged along with 1 vignette. For each qualitative data collection source, the researcher created a codebook (list of major codes and sub codes) and a code sheet (actual notes and quotations related to major /sub codes). Additionally, as a result of the data analysis, the researcher generated 6 assertions and created 2 models which answered the questions of 1) what

constituted an ideal peer tutor, 2) what constituted an ideal peer tutoring session, and 3) what model depicted an ideal peer tutor and peer tutoring session at PMHS.

Implications for Teaching Practice and Policy

There are many implications for teaching practice. First, many students struggle in school, fall behind, and need additional academic assistance outside of regular school hours. Students fall behind for a variety of reasons. This study suggests that two primary reasons are: 1) class pacing and 2) absenteeism. On many occasions, the researcher noticed and/or tutees mentioned that students are not given enough time in class to learn the material and that the pacing of the class is too fast. One of the main reasons students come to peer tutoring is the individualized pacing and assistance it offers them.

Additionally, a sure way for students to fall behind is missing school. Some reasons for missing school include chronic illness, appointments, domestic problems, suspension, and extra-curricular activities. Second, peer tutoring provides these students a viable option to catch up; however, peer tutors are limited to how much they can help students.

Teachers, not peer tutors, are the best option for students who have missed school.

Teachers are better equipped to catch a student up and to teach new concepts and material. Likewise, teachers are better able to help students who lack foundational knowledge and understanding. On the other hand, referring students to peer tutoring is completely acceptable under certain circumstances (e.g., clarification, reinforcement, different perspective). Lastly, teachers are encouraged to make peer tutoring and the services it provides, part of their curriculum. For example, teachers could suggest that students brainstorm, with a peer tutor, an idea for a project, have a peer tutor edit a

persuasive essay, and/or have their homework checked for accuracy. The power and potential of peer tutoring on education is endless.

Perhaps the implications for policy and policy makers are this study's most valuable contribution. First and foremost, in terms of PMPT, the assertions made and models created in this study need to be made mandatory for both tutors and tutees at PMHS. 1) Tutors must possess certain qualities and character traits, 2) tutors must receive extensive training, 3) content knowledge is not enough, tutors must possess content mastery, 4) tutors must assume stewardship of tutees' learning, 5) tutees must be willing to learn, and 6) tutors and tutees must engage in open and ongoing communication. Furthermore, tutors must be qualified, trained, and experienced, the tutoring center must be conducive for tutoring and learning, tutees must be prepared, and actively participate. Second, peer tutoring is a must for secondary education. Many students have difficulty learning, for various reasons; consequently, they will fall behind and will struggle to keep up. High schools will not be able to assist all students who struggle academically without having a comprehensive peer tutoring program. Third, a peer tutoring program is highly complex and as such, it is necessary to have a well-established structure and organization. The success of this study's peer tutoring program would have not been possible without the formation of the PMPT club, which provided the program/club with a president, vice president, secretary, treasurer, an institute (center) director, and two technology directors. Not only did the club provide stability, it also helped in recruiting new members/tutors. Fourth, peer tutoring should not substitute the vital roles that teachers play in providing additional academic support outside of class. It is suggested that district and school administrators hold teachers accountable by ensuring

that they have frequent and consistent office hours before and/or after school. Fifth, due to the high demands of being a peer tutor and the matchless benefits it affords both tutors and tutees, schools ought to look into offering peer tutors compensation. This practice is not uncommon as student workers already receive monetary compensation by working in the cafeteria. Sixth, peer tutoring must always be viewed as a formal, rather than an informal approach to teaching and learning. This study focused specifically on what constituted an ideal peer tutor and ideal peer tutoring session. It was discovered that peer tutoring is highly complex and many things must be taken into consideration such as application process, on-going training, center layout, preparation, and distinct roles and responsibilities for tutors and tutees. Lastly, it is suggested that peer tutoring be a high school's number one response to intervention (other than what teachers provide). Districts and schools are encouraged to make peer tutoring a school-wide program; but at the same time, not forgetting the limitless power and potential of having student-run organizations such as was the case with the PMPT club.

As was mentioned previously, an ideal peer tutor was qualified and trained. Since this only applied to the minority of tutors, the researcher plans to develop a qualification process and training curriculum that all tutors must go through and be taught before officially becoming a tutor. Initial ideas in terms of the qualification process include: 1) GPA requirement, 2) teacher recommendations, 3) interview with coordinator, and 4) formal observation(s). As for a training curriculum, initial ideas include: 1) general program procedures, 2) specific tutoring procedures, 3) tutor and tutee challenges, 4) tutor and tutee expectations, and 5) learning and tutoring methodologies.

In addition to focusing on the qualification process and training curriculum, the research also plans to look at the outcomes and measures of success of both peer tutoring models. Model 1 suggested that an ideal peer tutor is qualified, trained, and experienced. Model 2 suggested that an ideal peer tutoring session has a tutoring center that is conducive for learning, the tutee is prepared, and the tutee actively participates. Going forward, the researcher plans to look at the outcomes and measures of success after these models have been implemented. Through data analysis, outcomes and measures of success have already surfaced but this occurred in absence of the models/theories. The researcher plans to use these outcomes etc. as baseline data to facilitate further research.

Since Andrew Bell was undoubtedly the first person in the world to use peer tutoring in a systematic fashion (Topping, 1988), it is only fitting to close with a couple of his thoughts. He stated as far back as 1808, “..if you and I live a thousand years, we shall see this System of Tuition (peer tutoring) spread over the world” (Bell, 1808, p. ix). Furthermore, Bell stated that peer tutoring is “the new method of practical education” (Bell, 1808, p. 1) and is “essential to every institution” (Bell, 1797, p. 9). This study reaffirms Bell’s sentiments expressed more than 200 years ago; as the models for an ideal peer tutor and an ideal peer tutoring session are followed, this type of peer tutoring program is indeed essential to every high school in the world.

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APPENDIX A
SESSIONS TUTORED SURVEY

First and Last name:

How many times have you actually tutored someone this year?

- 0-5 times
- 6-10 times
- 11-15 times
- 16-20 times
- 20+ times

APPENDIX B
TUTOR QUESTIONNAIRE

1. Why did you decide to be a tutor?

Explain your answer:

2. Do you believe your tutoring has helped those you have tutored? If so, give a specific example.

Explain your answer:

3. When should students seek tutoring from a peer and when should they seek tutoring from a teacher?

Explain your answer:

4. What are some challenges of being a tutor?

Explain your answer:

5. What does it take to be a good tutor?

Explain your answer:

6. What does it take to have a good tutoring session?

Explain your answer:

APPENDIX C
TUTEE QUESTIONNAIRE

1. Why have you needed peer tutoring?

Explain your answer:

2. Why did you decide to receive tutoring from a peer instead of a teacher?

Explain your answer:

3. Has peer tutoring helped you? If so, how? If not, why?

Explain your answer:

4. What did your tutor(s) do that helped you the most?

Explain your answer:

5. What did your tutor(s) do that helped you the least?

Explain your answer:

6. What advice would you give a brand new tutor on how to be a good tutor?

Explain your answer:

APPENDIX D

TUTOR FOCUS GROUP PROTOCOL

1. First, why don't we go around the room and each of you tell us your first name and one thing you'd like us to know about you.
3. So, is peer tutoring helpful?
 - If so, in what ways does it help the tutee (the one being tutored)?
2. How has it been being a peer tutor? Please explain.
 - Why has it been a good/bad experience?
4. How would you describe the perfect tutor?
 - What qualities does he/she have?
 - What does he/she do?
5. From start to finish, how would you describe a perfect tutoring session?
 - Describe the tutee.
 - What does the tutee do and/or not do?
 - Describe the tutor.
 - What does the tutor do and/or not do?

APPENDIX E
TUTEE FOCUS GROUP PROTOCOL

1. First, why don't we go around the room and each of you tell us your first name and one thing you'd like us to know about you.
2. What has it been like being tutored by your peers?
 - Why has it been good/bad?
 - Has it helped you? If yes, why? If no, why not?
3. In general, why do students seek tutoring?
4. Why do students decide to be tutored by a peer rather than by a teacher?
 - What are some advantages of being tutored by a peer?
 - What are some advantages of being tutored by a teacher?
 - Why did you specifically decide to be tutored by a peer rather than by a teacher?
5. How would you describe the perfect tutor?
 - What qualities does he/she have?
 - What does he/she do?
6. If you gave our tutors some advice, what would it be?
 - What can they do better?
 - What are they doing well?

APPENDIX F
FIELD NOTES CODEBOOK

01. Dependency

01. DEP – ATH.01 = Athletics

01. DEP – ACT.02 = Activities

01. DEP – PAR.03 = Parent

01. DEP – SCH.04 = School

01. DEP – STU.05 = Student

01. DEP – TEA.06 = Teacher

02. Emotions – Tutee

02. EMOTUTE – ANX.01 = Anxiety

02. EMOTUTE – BEL.02 – Belonging

02. EMOTUTE – CON.03 = Confidence

02. EMOTUTE – DES.04 = Desperation

02. EMOTUTE – DESI.05 = Desire

02. EMOTUTE – DIS.06 = Disappointment

02. EMOTUTE – EMP.07 = Empowerment

02. EMOTUTE – FRU.08 = Frustration

02. EMOTUTE – GRA.09 = Gratitude

02. EMOTUTE – HOP.10 = Hope

02. EMOTUTE – INA.11 = Inadequacy

03. Emotions – Tutor

03. EMOTUTO – ANX.01 = Anxiety

03. EMOTUTO – AUT.02 = Authoritativeness

03. EMOTUTO – CLO.03 = Closeness

03. EMOTUTO – COM.03 = Compassion

03. EMOTUTO – DOU.04 = Doubt

03. EMOTUTO – EMP.05 = Empowerment

03. EMOTUTO – ENJ.06 = Enjoyable

- 03. EMOTUTO – FRI.07 = Friendship
- 03. EMOTUTO – FRU.08 = Frustration
- 03. EMOTUTO – INA.09 = Inadequacy
- 03. EMOTUTO – RES.10 = Responsibility
- 03. EMOTUTO – UNC.11 = Uncertainty
- 03. EMOTUTO – UNP.12 = Unpredictability

04. Layout - Center

- 04. LAYCE – DES.01 = Desk Arrangement
- 04. LAYCE – NEW.02 = New Arrangement

05. Pairing

- 05. PAI – ADD.01 = Additional Session
- 05. PAI – CON.02 = Consistency
- 05. PAI – FAM.03 = Familiarity
- 05. PAI – GRO.04 = Group
- 05. PAI – ONE.05 = One-on-one
- 05. PAI – PER.06 = Personality
- 05. PAI – PRO.07 = Process
- 05. PAI – PROX.08 = Proximity
- 05. PAI – QUA.09 = Quantity
- 05. PAI – SAM.10 = Same Class
- 05. PAI – TUT.11 = Tutor Competence

06. Preparation – Tutee

- 06. PRE – ADE.01 = Adequate Preparation
- 06. PRE – LAC.02 = Lack of Preparation
- 06. PRE – QUE.03 = Questions
- 06. PRE – SEL.04 = Self-awareness
- 06. PRE – VAREX.03 = Varying Expectations

06. PRE – VARLE.04 = Varying Levels

06. PRE – VARRE.05 = Varying Reasons

07. Qualification – Tutor

07. QUA – CLA.01 = Clarify

07. QUA – CON.02 = Confidence

07. QUA – IMC.03 – Incompetence

07. QUA – MAS.04 – Mastery of Content

07. QUA – PAT.05 – Patience

07. QUA – REC.06 = Recency of Material

07. QUA – SEL.07 = Self-awareness

07. QUA – SUB.08 = Subjective

07. QUA – UNQ.09 = Unqualified

08. Resources

08. RES – MAT.01 = Materials

08. RES – ELE.02 = Electronic devices

08. RES – OTH.03 = Other Tutors

08. RES – STU.04 = Study Hall

08. RES – TEA.05 = Teacher-Supervisors

08. RES – TEC.06 = Technology

09. Responsibilities – Tutor

09. RESP – ASSE.01 = Assess

09. RESP – COR.02 = Correct

09. RESP – ENC.03 = Encourage

09. RESP – EXP.04 = Explain

09. RESP – GIV.07 = Give Recommendations

09. RESP – GUI.05 = Guide

09. RESP – TEA.06 = Teach

10. Training – Tutor

10. TRA – ASSE.01 = Assessment

10. TRA – COM.02 = Communication

10. TRA – CON.03 = Content Specific

10. TRA – LAC.04 = Lack of Training

10. TRA – MET.05 = Methodology

10. TRA – PED.06 = Pedagogy

10. TRA – PHI.07 = Philosophy

APPENDIX G
FIELD NOTES CODE SHEET

Dependency

My mom wanted me to get ahead.

Came in for English help – have our tutor edit his paper. T (tutor). “I would write about the event...” T. How many quotes do you need? S (student/tutee). She didn’t say to use quotes. T. I would probably use a couple quotes.

They were able to explain it in a different way, different than the teacher.

I – S. Come to find out S. came in yesterday and got help and S. came in this morning to clarify a few things. I asked him if he understood all those math terms and he said that he did.

It appears that the S. is more knowledgeable than the T. in certain aspects but not in others. S. – T. “How about number 29?” S. is verbally and physically showing the T. how to solve a problem while the T. is agreeing or not.

Two students came in – Pre Calc and Stats we did not have a T. for stats.

S. didn’t know what T. meant and asked “What do you mean?”

S. asks “Did the teacher explain this to you?” T. “No” S. “Did you just figure it out?” T. “Yes”.

S. “Should we just talk to Mrs. Smith?”

T. “On the test you do/don’t have to...”

Janitor stopped me and said “Good job on that peer to peer. My daughter is doing much better now. She has been going for two days now.

This is great for the students, teachers, and the parents!

Remembering what steps to take in the equation. Doesn’t know what to do until the first step is given.

T. is Honors Alg 3-4 S. is in reg 3-4 continually forgets the first step.

S. asks the tutor for help on a problem.

T. "That is good that you are careful about the signs." "If you mess up on the signs then the whole thing is wrong." "You need to remember this for the test."

Afterwards S. said that T. was such a confidence booster and that he'd be back for more. S. said that this past week he had felt like all these waves were crashing down on him (trying to understand math).

He also went to his teacher and she was in a meeting. She referred him to peer tutoring.

While we are sitting here, S. is talking about her other classes and how difficult they are – especially how difficult the teachers are.

T. asked a question and S. didn't know what to do. T. asked S. if she has learned cross-multiplication and S. said she had. T. went on to show S. that there is another way to get the answer besides the way she had just shown her.

She paused for a long time and was stuck.

T. "If your teacher gives you a questions harder than this I'll..." laugh from both.

S. needs to double check with teacher to see if S. needs to cite paraphrasing or is it just direct quotes.

T. "when do you have your test?" S. "tomorrow."

* I've heard on multiple occasions something to the effect of "when you see this on a test..."

How differ from teacher?* Put in terms we understand

S. writes down the answer and asks “is that what it would be?”

S. by the way she is dressed (running pants) it’s been confirmed that S. has a soccer shirt, possibly a club shirt on, club soccer might be going on right now, S. too busy? I’m sure this affects students.

S. “what is the Y one” (supposed to be an intercept)

*today we opened the writing center & we are helping. TPC

“He’s a good teacher but he doesn’t explain things

S. is it this “ $4p=12$?” S. did it and said “is this it?”

She may be one of the student athletes. T. says S. is 1-2 weeks behind.

S3 is trying to explain the questions he missed on the test

2 students are volleyball players and I overheard one of the girls say “we have ac-lab today, right?” Student athletes struggle, not easy.

*what do students do who are not able to receive this immediate feedback? Most likely they need to wait until the next day to get help and that’s if the teacher goes over it. T. was taken back a little. T. then said “why don’t you show me how it’s done since you’ve proved to me that I’m wrong.” *It started to get a little heated.

S. is writing/filling in some paper that was given to him by his teacher.

“What was the first part you said?” T. gave S. an idea of how to begin his concluding sentence. Earlier S. asked T. something like “What is that word for a word for a word that is similar to another word?” T. responds “synonym.”

I overheard something about a test. T. asked what chapter she was on. there is many pairing that is covering geometry, there must be a test today.

*It seems as though S. has been absent because T. suggested that S. get notes from teacher. S. has missed 2 weeks of school and therefore has missed the entire chapter of geometry.

This has to be really tough to do. They do not have a whole list of skill.

They've been given a practice test

T. asks another T. in the room if they remember what a term was. *A second time, T. called over this time the other T. to ask for his help on the problem. They discussed things together and I'm pretty sure they discovered what the answer was. T. feels completely comfortable asking another T. over for additional help.

It appears that S. is in band or choir → had clothes with her.

*interesting → T. asked S. (pre-calc) if S. was going to have a test soon on chapter 3 and S. said "I think we're having gone today."

S. asked another question and T. didn't know what the answer was.

T. looked around and finally called over another T.

T2 knew what he was talking about. He is able to help her quite a lot.

S. came in and said they needed help with a homework worksheet (pre-calc). I've noticed that S. in more advanced classes need different kinds of help, questions seem much more specific.

S. just apologizing for I believe, having to be tutored. He mentioned something like this is what being in football gets you.

*I saw across the room, a T. got up and brought in another T. because she was not sure how to do something. S. told me when she came in that she needed help in a night school math class.

T. says "I still don't know what to do with the 1." "You may want to ask your teacher" "when is this due?"

S. "it's just that my teacher goes too fast in class."

*We have one T. that speaks Chinese and another language which is very helpful to the S.

20 tutors came in today, 4 in for homework only. *Progress reports hit last week

I heard a T. say "I'd recommend doing this to get ready for the test"

Emotions – Tutee

Question: Tutee: Was it helpful? Examples/He would let me do the problem. Immediate "Yes."

Wanted to be there (tutee).

It was helpful. He (T) was able to give me sample question to solve and this was helpful.

They finished a worksheet and all three of them cheered.

"It was kind of helpful."

After student answered the question, the S. was very excited to get the right answer.

Twice now – S. solved the equation and became happy. S. said "Yeah!" His body language changed as well and he seemed to have increased his excitement due to this.

T. "Do you want to do another one?" S. quick to respond. "Yes."

How comfortable does the S. feel?

S. "Thank you for this, this is helping me a lot."

S. got the correct answer. S. is very excited because he got the right answer.

S. said he felt good about the homework assignment but the T. asked him "Do you also want to go over this as well?"

S. expressed excitement when he learned this. (more than one way to solve a problem in math)

Afterwards S. said that T. was such a confidence booster and that he'd be back for more. S. said that this past week he had felt like all these waves were crashing down on him (trying to understand math).

S. was a little hesitant to sign in our tutee sign-in sheet. Maybe she is a little embarrassed?

T. "Do you feel comfortable with this or do you want to do one more?"

T. - S. "Are you good or do you want to do one more?" S. "One more."

T. "Good job."

T. gave S. a high five.

S. said it's also very helpful when S. knows the T.

Both T. and S. laugh now and again

T. didn't know where his math classroom was. S. disclosed that he was in a special math class *he was a little hesitant when he said this.

T. "That's your line! You found it!"

S. Found out that T. is taking the class after Calculus and S. said, "You are smart"

S. "I'm going to write that down, sorry"

T. "Do you want me to go over anything that I just said?" "it's totally fine"-forcefully. S. timidly said "no". T. "Do you want me to help you?" S. sheepishly says, "yes"

I overheard T say "you can do it! you are really smart! you did this."

In a domineering way

S. "really" "thank you so much

S. "this is the first time in a long time that I actually understand the material"

S. graphed a problem and did it incorrectly. T. told S. that it needed to be above and below- S. sighed

T. and S. were talking briefly after session and S. said "what's your name again?" S. said "I saw you on the bus yesterday." Connection between T. and S.!

T. was taken back a little. T. then said "why don't you show me how it's done since you've proved to me that I'm wrong." *It started to get a little heated.

It was great to see how excited the T. was to see the S.

S. seems much more comfortable being here. S. has been in quite a few times. *This might be in part because T. is very friendly and is a great T.

*interesting → T. asked S. (pre-calc) if S. was going to have a test soon on chapter 3 and S. said “I think we’re having gone today.”

S. struggles

S. just apologizing for I believe, having to be tutored

First pairing → T. is trying to explain things but S. Isn’t understanding it. S. says “I’m sorry, I’m just so tired.” S. “I don’t know any of this.” “Can’t do any of it.”

Side note- teenagers are very social and love to talk a lot. They socialize like crazy.

Things are a little more crazy when there are multiple tutors trying to help one S. It seems to me that one-to-one tutoring is the best case scenario. Multiple tutors and one S. not good. 1 tutor and multiple S. is much more manageable.

S. entered the room and T. was excited to see S. and S. was excited to see T. *these two have paired up many times. T. asked a specific question when S. said she needed help with chem-phys.

Thoughts- there seems to be a power that exists when T. and a S. form a bond. Perhaps the key to peer tutoring lies in the consistency in the pairing. this could form into mentorship.

Emotions – Tutor

Tutoring for Alg 1-2 he hadn’t had that since middle school.

Difficult when the S. doesn’t understand it the first time to explain it another way.

Tutor said he didn’t really like doing geometry and it had been awhile. He said he would give it a try.

T. said she hopes to be able to help the S. she hasn't had this subject for a while (last year?)

T. "I'm learning while I'm teaching.

They finished a worksheet and all three of them cheered.

The T. seems to be a little intimidated by the S. T's body language is kind of like "You aren't like the normal S. that need a lot of help. You know a lot and that makes me a little nervous.

Discovery T. and S. are the same grade level. This may explain things and may explain why T. may feel uncomfortable.

T. sometimes doesn't have a whole lot of confidence.

S. "Dude you nailed it!"

T. "That is good that you are careful about the signs. " "If you mess up on the signs then the whole thing is wrong." "You need to remember this for the test."

T. seems a little nervous tutoring this S. Is it because S. is a girl?

T. is being very patient and is not getting frustrated.

T. is beginning to get a little frustrated not too frustrated.

T. "I'll give you one more and if you get it correct I'll let you go.

T. "does your teacher allow you to use a calculator on the test?" S. "yes" T. "do you have a calculator?" S. "no" T. "when do you have class?" S. "3rd hour" T. "you can totally use mine and just give it back to me later" S. "Awesome" *Very interesting! I need to look into this further.

Both T. and S. laugh now and again

T. “ Do you want me to give you my calculator not or...?” “or do you want me to drop it off for you in your math class?” T. is going to do it later.

T. “That’s your line! You found it!” T. “when you have a formula it helps.”

Sense of community

S. found out that T. is in the class after calculus and S. said “you are smart”

I overheard T say “you can do it! you are really smart! you did this.”

T. and S. were talking briefly after session and S. said “what’s your name again?” S. said “I saw you on the bus yesterday.” Connection between T. and S.!

T. held her ground and was able to explain and prove to the S. that she wasn’t correct. *If T. was not competent S. probably would have discredited T. and would have left or possibly never returned.

T. was taken back a little. T. then said “why don’t you show me how it’s done since you’ve proved to me that I’m wrong.” *It started to get a little heated.

* T. normally doesn’t tutor after school on Thursday but she wants to help so bad she told S. she would be there after school for her today. Compassion!

It was great to see how excited the T. was to see the S.

S. seems much more comfortable being here. S. has been in quite a few times. *This might be in part because T. is very friendly and is a great T.

S. struggles and I noticed that T. is starting to get a little frustrated due to S. lack of understanding.

It appears to me that the T. doesn't want to help S. anymore. In a way it seems that T. is giving up on S. or is tired today. It seems like T. gives S. more answers. T. is short with S., T. will be quick to say “no.”

This T. never seems comfortable tutoring.

S. comes in and asks for help in pre calc. I ask the tutors who would be able to tutor for this and one said “I think I can do this.”

T. is explaining to S. and all of a sudden, he says he isn't quite sure what to do after all.

*It seems to me that quite a lot of T. are not comfortable tutoring. I worked in the “tutors” room (Ava told me that she had asked me for algebra 3-4 tutors and a whole row of 5-6 T. refused to get up and tutor). I asked them who could tutor for algebra 3-4 and they were confused somehow. I guessed some of them skipped algebra 3-4 or they had taken it a long time ago.

Side note- teenagers are very social and love to talk a lot. They socialize like crazy.

S. entered the room and T. was excited to see S. and S. was excited to see T. *these two have paired up many times. T. asked a specific question when S. said she needed help with chem-phys.

S. explained how to solve it and T. said “wait there's more” he said with a smile on his face. Thoughts- there seems to be a power that exists when T. and a S. form a bond. Perhaps the key to peer tutoring lies in the consistency in the pairing. this could form into mentorship.

*Side note→ I sensed a feeling of excitement when so many S. showed up to be tutored. they were excited yet at the same time they were a little nervous

Layout – Center

Desks are apart.

The desks are apart.

T. that suggested they move their desks together.

S. body language is he is sitting on the edge of his seat away from T.

desks are put together (side by side)

Another pairing → S. is writing and T. is on her knees giving assistance. I wonder if it's because there are no desks around the S.

We need a room with circular tables, not desks

Pairing

Another tutor comes over and T. Says "I've never learned this before." 2nd T. explains how two substances with varying densities... *I hear a lot of "I'm bad at chemistry" 2nd tutor was able to figure it out after 5 min or so and with the help of the original tutor. *They seem to construct knowledge over time. Both tutors came up with the wrong answer and then they realized this and later discovered the correct answer.

T. asked another T. to come over and help with a question.

A T. gets a little confused so T. asks another T. to come over and answer a question.

Discovery T. and S. are the same grade level. This may explain things and may explain why T. may feel uncomfortable.

The question remains – how similar can a T. and S. be for the session to be effective.
Cross-age vs. Peer.

S. "Can I text you about – problem?"

S. and T. are stuck on a problem and both of them can't figure it out. They are taking the same class both T. and S.

I.- T. T. and S. are friends. Asked T. if he feels like he understands thing better than S. (since in same class) and T. said "Yes."

T. is conversational and speaks with S. in a natural way.

T. is sitting really close to S. I wonder if S. feels uncomfortable?

T. "My only comment is..." "The last time you came in..."

S. said it's also very helpful when S. knows the T.

* At one point we had 6 pairing going. MONDAY week 9 (last week of the quarter)

*another T. is sitting by this T. and asks the T. a question. Tutors need tutoring as well!

T. discovered, by conversing with S. that she skipped a step in the problem. *The other T. asked this T. a question while she was tutoring what she got on a problem. The other T. asked this T. "how did you find..." It appears that the S. has just not spent adequate time on the review guide. They are in the same class and seem to be pretty much on the same page.

T. is tutoring 2 S. at the same time. T. is actually tutoring 3 S.

While T. was helping one S., the other 2 started to chat a little and one got on Facebook
*group tutoring- need training on this.

T. is tutoring 2 students because we only had 1 T. in this morning. T. is now helping 3 students.

We have 3 tutors and T2 is hesitant to help S., he asked T3 to help him with a question and T3 said he couldn't because he was working on something on the computer.

We had one new T. in the writing center. Currently we have 6 T.s in the center and we have 1 T. helping 3 S., one T. helping 2 S. and interestingly 2 T. helping 1 S. *perhaps it is too difficult to tutor someone in the same class unless you are one of the two students.

T. and S. were talking briefly after session and S. said “what’s your name again?” S. said “I saw you on the bus yesterday.” Connection between T. and S.!

*group tutoring suggestions- each has own book, circular tables.

S. is a freshman and T. is either a junior or a senior.
pairing: 2T. 1S.

The majority of S. are ELL S. One S. has only been here in the US for a month. She is from China. We have other S. who are from other countries like Mexico, Philippines...

1 pairing→ They are speaking a lot of Chinese and S. has only written 2 sentences.

Tutoring English is a totally different animal.

T. asks another T. in the room if they remember what a term was. *A second time, T. called over this time the other T. to ask for his help on the problem. They discussed things together and I’m pretty sure they discovered what the answer was.
T. feels completely comfortable asking another T. over for additional help.

* I believe S. is taking the same class as S. however, I believe T. is in the honors version and S. is not. T. called over the other T. and both T. are able to give direction/guidance.

T. is taking the same class as S., Helpful? If T. is a lesson or 2 ahead, it’s fine. * S. is S. is slightly ahead of T. so the T was applying what the teacher was able to give the class a “sneak peak”

*I saw across the room, a T. got up and brought in another T. because she was not sure how to do something. S. told me when she came in that she needed help in a night school math class.

T. is tutoring 2 S. - we are short tutors because some tutors have a club meeting today.

This pairing → is difficult to tutor in a group, especially when s. talk to one another → they'd rather visit than get help → disadvantage of group tutoring.

The S. got off topic again and started talking about driving.

For this reason we are going to implement a system where we will go through each person in a chronological order.

*We have one T. that speaks Chinese and another language which is very helpful to the S.

S. entered the room and T. was excited to see S. and S. was excited to see T. *these two have paired up many times. T. asked a specific question when S. said she needed help with chem-phys.

T. and S. started immediately when they sat down. It was like they were picking up where they left off → without a beat. There is a cohesiveness that exists between these two. They know how each other work and they seem to be “dancing” harmoniously. This is great to see. I have seen this dyad transform over time. They started out pretty well but it has never been like this before.

Another observation → from the very beginning T. has had a close proximity to S. I remember asking S. if this was bothersome and S. said it wasn't. T. has a sheet of paper on his desk and S. will reach over and place her arm on his desk and points with her pencil. (her arm looks like it rests on his arm) T. doesn't get phased by this, he is all business.

Thoughts- there seems to be a power that exists when T. and a S. form a bond. Perhaps the key to peer tutoring lies in the consistency in the pairing. this could form into mentorship.

1T. is technically tutoring 3 S. *It seems to me that the tutoring sessions are going a little slower because T. are having to tutor multiple S.

Preparation – Tutee

Wanted to be there (tutee)

Do you have your notes?

He also said that the S. doesn't know certain theorems so the T. wasn't able to help the S. solve the equations as well.

I wish I had my notes or I wish I had brought my folder.

S. is very knowledgeable – he appears to be – and he is talking through the problems while the T. is verifying things (double checking)

S. came prepared with questions and had an agenda. S. knew what he wanted to learn. Effective tutoring experience for the S.

S. is asking a lot of questions. S. is on a mission to discover the answers to every question he has.

“What did the S. do to make it an effective session?” Know what need help with S. has notes.

Knew what areas they needed help. What do they do? S.

- notes from class
- specific questions
- admitted they need help
- open to share.

- not in a rush
- S. wanted/was willing to try problem
- Actively asked for another one
- repeat process
- willing to do more problems

How did she do on the more difficult ones?

- learned concepts

1st tutee wasn't into it. Pay attention.

This might be huge! Perhaps tutoring is not helpful if used as a punitive measure? The desire has to be there in any context, or learning can be stifled

what can S. do? Motivated! Prepared?

S. says "I didn't know where to start

S3 showed up and said he needed help on the entire chapter. He told T. that he failed the chapter test and he is able to re-take the test.

S. doesn't have any notes out but does have an assignment or worksheet out.

T. asked "Do you know what section/chapter this is?" S. "no, he just gave us this packet"

*This shows that S. doesn't pay a lot of attention.

Qualification – Tutor

He was able to show me step by step how to solve a problem.

It seems that this tutor has not taken the material in a while. She is having to read over the instructions more than once- she is relearning it? *Importance of know the material well* Need to get signed off by a teacher?

Tutor wrote it down so that a student could explain it.

I hadn't taken this particular class before so I had to relearn some of it. "It seemed to have help."

The first thing I would do is...

Asks for a calculator.

Tutor said he didn't really like doing geometry and it had been awhile. He said he would give it a try.

T. is looking over the book and is having to relearn the material on the spot. T. is doing a lot of the talking and is not asking the S. questions.

Tutors need to have self-awareness and know why they need help from other tutors.

T. He said it was difficult because he hadn't seen this math since his freshman year.

Content knowledge seems to be paramount.

T. said (ELL S.) said she hopes to be able to help the S. She hasn't had this subject for a while (last year?)

Another tutor comes over and T. says "I've never learned this before."

Another tutor comes over and T. Says "I've never learned this before." 2nd T. explains how two substances with varying densities... *I hear a lot of "I'm bad at chemistry" 2nd tutor was able to figure it out after 5 min or so and with the help of the original tutor. *They seem to construct knowledge over time. Both tutors came up with the wrong answer and then they realized this and later discovered the correct answer.

The words used are difficult to understand so they are able to help me "simplify them?" "make them simple?" S. Yes

They were able to explain it in a different way, different than the teacher.

T. seems like she's just telling the S. what to do (at least S. is doing the writing and not the T.).

She hadn't had Algebra 1-2 for 2 years. She asked a friend to help. *Depth of knowledge! Is key!

T. is in Honors Algebra 3-4 and S. is in regular Algebra 3-4. The material T. covered was covered during the summer.

T. went on to explain that there are more than one ways to solve math problems. T. said something to the effect on "That's what's cool about Math."

T. is in a very high math class. S 1-2 or 3-4 calculus.

S. corrected the T. on a problem. T. started to explain it incorrectly.

Come to find out T. was incorrect after consulting the back of the book.

S. asks "How would you do this?" T. "What is the opposite of multiplication?" S. "Division."

T. is conversational and speaks with S. in a natural way.

T. told him that he needed to ... math stuff. PEMDAS Tutor used acronym to further help S.

T. is being very patient and is not getting frustrated

T. is getting a little frustrated but not too frustrated

T. has given S. sample problems just off the top of his head.

S. asks T. another question and T. doesn't know what it would be. *How long has it been sense T. has had subject?

T. is able to give help on other problems

How differ from teacher?* Put in terms we understand

T. went on to explain intervals in a simpler way. T. discovered that S. knew what intervals are.

T. had to look over the material for a while to remember what/how to do the problem.

T. doesn't seem to be too sure on the advice he is giving to S.! He is using words like "I think". T. is saying that he would put more steps into the problem to solve a problem but T. is not saying which steps to take. Does S. know what steps to take?

*Is it worse / detrimental to S. if T. is a bad T.? Does this adversity affect S. does it confuse S. more?

When has T. taken Geometry last?- 2 years ago.

T1 and T2 were not able to help S. on a particular problem. The tutor session has just ended. T. apologized for not being able to help. What happened?!

*It seemed to me, based off of what happened this morning, that it is more important to be knowledgeable than personable.

*A tutor session ends immediately if a tutor is not competent. A tutor session does not end immediately if the tutor is not personable.

*Ideally, tutors knowledge should be just enough ahead to be able to fully grasp the concept, but tutor needs to have had the class fairly recently.

T. held her ground and was able to explain and prove to the S. that she wasn't correct.

*If T. was not competent S. probably would have discredited T. and would have left or possibly never returned. T. was taken back a little. T. then said "why don't you show me how it's done since you've proved to me that I'm wrong." *It started to get a little heated.

Tutors are giving S. advice as to what she'll most likely need to know for the upcoming test. S. read a passage and asked "who are we talking about?" Tutors help give S. clarity on who is who etc. S., is writing something down and is writing frantically. *S. "this is the part I don't understand" T. jumped in and offered help. T. told S. "basically, all you need to get from this paragraph is..." He went to summarize it.

T. references Hunger Games, T2 goes on to summarize more passages. T. uses a lot of teenage-appropriate slang while they are tutoring.

T. explains a problem (say angle b is congruent to angle c...) T. asked "what postulate would you use to...?" T. is doing a great job of asking S. questions and getting S. to explain how she should solve the problem.

I heard T. say that she didn't know an answer/problem and they had to skip it and move on.

T."I don't know." "I don't think..."

S. asked another question and T. didn't know what the answer was. *Why don't tutors ask other tutors for help!?!

As soon as T2 came over, T1 immediately told T2 that she didn't remember any of this.

Tutors who do not have a good understanding of the material are pretty much of no use to be quite blunt. This is the same thing as having a teacher that does not have a sound understanding of the material. A tutor might be nice, friendly, and even charming, but that will only work for the first minute or two.

I heard T. say "My first instinct is to..."

T. "the word is the actual word" → he was trying to guess the word adverb. t. "It adds to the verb." Great tip! T. asked "does this work for you, going word by word?" S. answered "yeah" "what did we say adds to the noun?" S. was able to get one right and that was an adjective. T. followed up and asked "why is it an adjective?" T. "what it 'to'" S. "a preposition" T. "why would you say that?" S. didn't know T. asks another question to get at the heart of it. *T. had S. do another one for prep.

T. looks over the problems and says that he can help with #12.

S. input the answer and finds that the T. is incorrect one section. T. changes the answer and is incorrect again. T. and S. are still trying to figure it out. 5 minutes or so have gone by. T. tries something else and is still not correct.

*another pairing → T. is doing a great job at explaining things in simple terms. He speaks slowly and clearly.

I asked them who could tutor for algebra 3-4 and they were confused somehow. I guessed some of them skipped algebra 3-4 or they had taken it a long time ago.

This T. is really good because he gives S. additional problems to work on. S. seems to enjoy the conjugate challenge.

*T. needs to know how things work, this helps.

Resources

Do you have your notes?

T. is looking over the book.

Another tutor comes over and T. Says “I’ve never learned this before.” 2nd T. explains how two substances with varying densities... *I hear a lot of “I’m bad at chemistry” 2nd tutor was able to figure it out after 5 min or so and with the help of the original tutor. *They seem to construct knowledge over time. Both tutors came up with the wrong answer and then they realized this and later discovered the correct answer.

S. asks the T. how he should cite a few pages of a book and the T. suggests that he go to our school website.

T. asked another T. to come over and help with a question.

I – S. the notes were helpful. They were able to explain it which was helpful.

A T. gets a little confused so T. asks another T. to come over and answer a question.

Ask T. for help with a graph and T. immediately asked for notes.

S. is showing his work on a blank piece of paper – he was working out the problem before entering it in web assignment (online).

S. is also using a calculator.

t. has his calculator out during the same time S. has his out.

Do you even wonder how to do something? Look it up.

T. is stuck on a problem and the T. asks the teacher-supervisor for help. Teacher teaches upper division math.

Importance of having an expert teacher in center?

Teacher was able to give some clarification on a few problems.

T. is looking over the textbook and is reading over some problems and some instructions.

T. is reading the problems and is looking in the back of the book to make sure the answer is correct.

Come to find out T. was incorrect after consulting the back of the book.

See how the teacher has been teaching it. Don't want to teach it differently and get them more confused.

What do you do when you get stuck?

-notes

-book

-ask a tutor

-explain the more basic concepts

T. is using a whiteboard to show the work.

T. is trying to explain things and is attempting to help S., T. is holding up his pen and is trying to show what he is saying.

T. is writing down the work/calculations and is even using the calculator.

T. Copied down the problem on a separate sheet of paper

S. asked for a calculator

S. is going online to look at Web Works (online homework sight)

S. went online to check Web Works but the internet is not working so she is looking on her phone.

Web Works

S. is pulling up the online math work, Web Works didn't work- it's down

Packet of sorts.

T. "Whenever you get stuck, your textbook is your best friend." *there is also a website called quizlet.

T. is using a little whiteboard to show work.

textbook is in the middle of the two desks. T. is using a whiteboard. T. and S. are working on Web Works.

Come to find out that the answer was wrong because they put the answer into Web Works. S. said "see, I told you it wasn't right."

Book so that S. can see the problems etc.

S. started the session saying that they've been given a practice test and S. is not sure what to do.

In the calculator

This S. seems to have benefited from the visuals- I gave T. a whiteboard but she is not using it. We are having more and more S. come in for homework only. * This may be important!

We have 3 T. here this morning and it appears they are all working on school work. These types of students are very involved in school and stay very busy.

S. uses her phone to check the answer → T. is correct again!

*The other pairing→ T. is holding up the book to allow S. to see what the problem was.

Responsibilities

One student staring at page while tutor is explaining/showing math problem.

He was able to show me step by step how to solve a problem.

Looking over the problem and is talking to himself and is going over the steps out loud.

S. How do you know its complementary? T. ... it adds up to 90 degrees...

2nd T. explains how two substances with varying densities...

T. "I'm learning while I'm teaching.

T. gave an example (real-world example) of when you get into the bathtub the water rises.

The words used are difficult to understand so they are able to help me “simplify them?” “make them simple?” S. Yes

S. asks the T. how he should cite a few pages of a book and the T. suggests that he go to our school website.

T. was able to give me some suggestions – I need to use quotes.

T. is explaining.

They were able to explain it in a different way, different than the teacher.

I – S. the notes were helpful. They were able to explain it which was helpful.

T. explains and tells S. how to solve a problem.

Ask T. for help with a graph and T. immediately asked for notes.

T. is checking over S. problems in Math – checking S. steps taken.

T. is giving S. some practice problems “Let’s do $5x + 6x\dots$ ”

T. seems to do a lot of “I would do this and this…” It appears that the S. is being treated almost like a robot. T. “Let me show you how to set up a box/table.”

S. – T. “Do I do this?” T-S. “Yea, that’s how you do it.”

T. corrected S. by pointing out an error/mistake in S. work.

S. is trying to solve the problem and the T. tells S. you need to find the slope...

S. "You graph it right?"

T. "On the test you do/don't have to..."

Remembering what steps to take in the equation. Doesn't know what to do until the first step is given.

S. asks the tutor for help on a problem.

T. "It's addition not subtraction" S. "So I'm going to do this first." S. is working on the problem and it verbally talking about it. T. "Just like this one, how would you start?"

S. is working on problem and T. is looking over the work, step by step. T. "Good".

T. "That is good that you are careful about the signs. " "If you mess up on the signs then the whole thing is wrong." "You need to remember this for the test."

T. went on to explain that there are more than one ways to solve math problems. T. said something to the effect on "That's what's cool about Math."

T. started to explain it incorrectly.

T. is trying to explain this and he related it to a clock. T. "Which would this one be?" S. "Odd?" T. "Are you sure?"

T. asked S. to do a problem. T." Do you know what this would be?" S. "...". T. "Yes, I thought I'd confuse you."

S. asks "How would you do this?" T. "What is the opposite of multiplication?" S. "Division." T. asked a question and S. didn't know what to do. T. asked S. if she has learned cross-multiplication and S. said she had. T. went on to show S. that there is another way to get the answer besides the way she had just shown her.

T. is using a whiteboard to show the work.

T. asks “How are we going to get Y?” T. is showing S. the equation and is explaining/showing how to do this.

T.-S. “what is the opposite of division?” S. “multiplication” T. “-3 divided by what is going to get you?” “We want to get rid of the 3 and get Y by itself “ $4x=2$ “We want to get rid of four” S. answers incorrectly and T. says “Almost” “remember...”

T. insisted they do additional problems

T. is trying to explain things and is attempting to help S., T. is holding up his pen and is trying to show what he is saying.

T. is East Indian + S. is white

T. showed S. a simple form of the problem they are looking at and S. was able to answer it correctly.

T. is writing down the work/calculations and is even using the calculator.

T. - S. “Do you know the easy way to....?” S. “No.” T. “Let me teach you.”

T. “I’m going to write it out this time and you’ll try it.

S. is working through the problem and T. is right there double checking things. T. just interjected “...” and corrected her.

S. just did a section of the problem correctly and T. reinforced S. and said “exactly”.

T. “I think you forgot to multiply by?” T. “Make sure you don’t get your operations confused with...”

T. Copied down the problem on a separate sheet of paper and asked “What would be the first step?”

S. did it correctly and the T. said “You’re good, I was trying to trick you!”

T. “You really want to watch for negatives.

T. “Good job.”

T. gave S. a high five.

T. “You should move this (clicks) point B. to the 4th paragraph because it helps prove your point about...” They are now looking at an article from which she retrieved information. T. “I would mention this incident in an upcoming paragraph instead of right now.

T. is giving her opinion about a certain passage. T. “The paragraph needs to flow.” T. “I’m not sure if this (points) ties in with these sentences?” T. is asking S. question about the content of the...

T. “Make sure you have internal citations.” In S. paper, T. typed in a comment - S. needs to double check with teacher to see if S. needs to cite paraphrasing or is it just direct quotes.

T. realized and said as she was typing in some comments “Why don’t you add these in?” “That would make more sense.”

S. wrote down an answer and T. quickly told S. to put equation in brackets. T. “How would you un-square something?” T. “It’s nice to write down the steps. T. “The whole thing equals zero, right?” S. says thing like, “Oh yeah” *Does he really know?” S. “Do I subtract this ___?” T. Responds, “Actually...”

T.” you said it right but you wrote it wrong.”

T. "when a line is parallel, does it intersect or run side by side?" S. "side by side" T. "That's your line! You found it!" T. "when you have a formula it helps."

T. was able to explain what a reciprocal is. T. explained that you flip the fraction like a $\frac{7}{5}$ to $\frac{5}{7}$

T. is looking over S. work and it is pretty silent. It appears that work has a lot of steps. S. had completed the assignment ahead of time. T. is looking over a graph and checking the answers. T. is not asking any questions while she is looking over the answers. Now it appears that T. has circled some questions. S. is now going over. T. asks what is $-X^2$ times... T. "whenever you multiply a neg. with a neg. you get what? S. is asking clarifying questions along the process. S. "so this matches the positive?" T. "yes"

T. remembered that S. should use an open bracket instead of a closed one

S. has the English she wants on top and the T. is translating it into Spanish. T. asks S. to figure out how to conjugate a verb. T. "what would ser (verb to be) be in the preterite form. S. didn't know. T. helped S. look in the notes.

I overheard T say "you can do it! you are really smart! you did this."

T. "it has to be a membrane" "do you know why?" T. is trying to simplify this concept. S. had review guide with blanks that need to be filled in. T. "do you know why though?"

S. after hearing T. explanation said "okay" and wrote down the answer.

T. was able to offer S. another way to solve a particular problem.

T. the formula for slope is

S. graphed a problem and did it incorrectly. T. told S. that it needed to be above and below- S. sighed

T. held her ground and was able to explain and prove to the S. that she wasn't correct. *If T. was not competent S. probably would have discredited T. and would have left or possibly never returned.

*this is such an important concept! guided guidance, step-by-step process.

Back to first pairing: T. asks “where is it increasing?” “where is it decreasing?” T. asked “are you 100% sure?” “are you 150% sure?”

S. asked what a sentence meant from the book. T. is giving S. her interpretation of the passage.

“what was the first part you said?” T. gave S. an idea of how to begin his concluding sentence. Earlier S. asked T. something like “What is that word for a word for a word that is similar to another word?” T. responds “synonym.”

T2 summarized another paragraph for S. T. are able to give her a lot of it.

T. references Hunger Games, T2 goes on to summarize more passages. T. uses a lot of teenage-appropriate slang while they are tutoring.

T. explains a problem (say angle b is congruent to angle c...) T. asked “what postulate would you use to...?” T. is doing a great job of asking S. questions and getting S. to explain how she should solve the problem.

S. explained to me what the assignment is. S. has to state a claim and give evidence to support the claim by using quotes from the book. S. cannot use the same word again (that was used in the original claim)

T. helps S. know what the next step would be and that was able to do some log/ calculations in the calculator

S. is able to do more and more work independently, but the T, is still able to give guidance/direction.

T. is able to give some clear direction.

T. “Do you know what a direct object is?” S. doesn’t know. T. explains it “object acted upon” S. guessed and was not able to answer it correctly. in response, T. says “it’s okay.”

T. is rambling on and on. To me, it doesn't look like he's getting it- S. is just starting. T. "which type is look?" S. "Action"

S. "A verb" T. in a nice tone "not a verb, it's not an action."

T. "the word is the actual word" → he was trying to guess the word adverb. t. "It adds to the verb." Great tip! T. asked "does this work for you, going word by word?" S. answered "yeah" "what did we say adds to the noun?" S. was able to get one right and that was an adjective. T. followed up and asked "why is it an adjective?" T. "what it 'to'" S. "a preposition" T. "why would you say that?" S. didn't know T. asks another question to get at the heart of it. *T. had S. do another one for prep.

T. gives S. some instruction on how to complete the problem. T. does not ask any questions, he just goes right into S. what to do. T. is explaining to S. and all of a sudden, he says he isn't quite sure what to do after all. T. figures it out and S. goes online to double check the answer *It is correct! T. looks over another problem and he tells S. what she needs to do. S. uses her phone to check the answer → T. is correct again!

another pairing → S. come in for 2-3 minutes and only needed help with one thing. S. was like "oh, that's how you do it" "wow" "is that all?"

I heard a T. say "I'd recommend doing this to get ready for the test"

Training – Tutor

I suggested that another tutor help out.

Came in for English help – have our tutor edit his paper. T. "I would write about the event..." T. How many quotes do you need? S. She didn't say to use quotes. T. I would probably use a couple quotes.

T. shows the S. the worksheet so that the S. can see what they are doing. T. is explaining.

T. using words like squared, factor that, distribute the x and the y, x to the 1st power – DOES S. UNDERSTAND THESE TERMS?

T. corrected S. and said .06 not .6 this a great strategy! S. talking though problems etc. T. is able to see the rationale and process and knowledge the S. takes. I WONDER IF THERE IS RESEARCH ON THIS TECHNIQUE?

T. is giving S. some practice problems "Let's do $5x + 6x...$ "

T. seems to do a lot of "I would do this and this..." It appears that the S. is being treated almost like a robot. T. "Let me show you how to set up a box/table."

Helpful for S. to write it out and verbally say what they are doing.

S. is looking at the screen, kind of with a blank look. T. chimes in "So you..." S. "That's right." S. is trying to solve the problem and the T. tells S. you need to find the slope...

T. is going very quickly through the problem. Is T. going too quickly? Is the S. following it?

T. is letting the S. work on the problem before giving advice. I just heard "That should be 6."

S. is working on problem and T. is looking over the work, step by step. T. "Good".

T. explains something and asks "Does this make sense?" S. stated "Yes" but does it actually make sense?

S. asks "How would you do this?" T. "What is the opposite of multiplication?" S. "Division."

T. is conversational and speaks with S. in a natural way.

T. allows S. to show work, try problems before T. shows how to do things.

Knew what areas they needed help. What do they do? S.

- notes from class
- specific questions
- admitted they need help
- open to share.

See how the teacher has been teaching it. Don't want to teach it differently and get them more confused.

What do you do when you get stuck?

- notes
- book
- ask a tutor
- explain the more basic concepts

T. is showing S. the equation and is explaining/showing how to do this.

T-75. "what is the opposite of division?" S. "multiplication" T. "-3 divided by what is going to get you?" "We want to get rid of the 3 and get Y by itself" $4x=2$ "We want to get rid of four" S. answers incorrectly and T. says "Almost" "remember..."

What do T. need to keep in mind when tutoring remedial students?

S. is saying "yes" but I'm not sure he is actually understanding things T. "are you confused at all?" S. "No, I'm good."

T. insisted they do additional problems. Did he sense that S. didn't actually know what was going on?

T. "I'm going to write it out this time and you'll try it.

S. is working through the problem and T. is right there double checking things. T. just interjected "... " and corrected her.

S. asked “How do you do?” - referring to working the calculator. T. didn’t tell her what to do he just took over and used the calculator for her.

T. “You should move this (clicks) point B. to the 4th paragraph because it helps prove your point about...” They are now looking at an article from which she retrieved information. T. “I would mention this incident in an upcoming paragraph instead of right now.

S. wrote down an answer and T. quickly told S. to put equation in brackets. T. “How would you un-square something?” T. “It’s nice to write down the steps. T. “The whole thing equals zero, right?” S. says thing like, “Oh yeah” *Does he really know?” S. “Do I subtract this ___?” T. Responds, “Actually...”

T. “If I asked you to find (0,5), where would it be?”

Does S. really know this?

T. “when a line is parallel, does it intersect or run side by side?”

T. is trying to explain some things and is using some big words. Is S. understanding what T. is saying?

T. is asking a lot of closed-ended questions

T. constantly asks S. if he understands it but doesn’t ask to show that he does

S. has the English on top and T. is translating it to Spanish. T. asks S. how to conjugate a verb. T. “What would ser be in the preterite be?” S. didn’t know. T. helped S. look in the notes 3 times

S. kept asking her “how do you conjugate?” T. felt like S. wanted her to translate the whole thing

T. is working with S. on math and T. is looking over S. work as she is working on it. T. is able to follow along and see steps. S. is speaking out and is verbally talking T. through each of the problems. *importance of verbally explaining steps? research this!

*Is it worse / detrimental to S. if T. is a bad T.? Does this adversity affect S. does it confuse S. more?

Not good! Not right! This tutor needs to go! (Senior assignment due today)

*It seemed to me, based off of what happened this morning, that it is more important to be knowledgeable than personable.

*A tutor session ends immediately if a tutor is not competent. A tutor session does not end immediately if the tutor is not personable.

*Ideally, tutors knowledge should be just enough ahead to be able to fully grasp the concept, by=but tutor needs to have had the class fairly recently.

T. is asking S. to write down the material/ problems

*There is a back-and-forth dialogue between T. and S.

Tutors are giving S. advice as to what she'll most likely need to know for the upcoming test. S. read a passage and asked "who are we talking about?" Tutors help give S. clarity on who is who etc. S., is writing something down and is writing frantically. *S. "this is the part I don't understand" T. jumped in and offered help. T. told S. "basically, all you need to get from this paragraph is..." He went to summarize it.

*tutoring English is so much different than the other disciplines like math. It is so subjective rather than objective. there is still the element of wanting to solve the problem/figure things out/understand things.

T. references Hunger Games, T2 goes on to summarize more passages. T. uses a lot of teenage-appropriate slang while they are tutoring.

T. explains a problem (say angle b is congruent to angle c...) T. asked "what postulate would you use to...?" T. is doing a great job of asking S. questions and getting S. to explain how she should solve the problem.

*This is a very real emotion that we may need to address with the club. *When the frustration hits, it's easy to just want to give S. the answer.

* Thoughts: S. without guidance are not able to do as well, of course. the goal, I assume, is to get the S. to a point where he/she is able to do the work without assistance of the T.

Maybe make this part of our training/ motto!

S. is able to do more and more work independently, but the T, is still able to give guidance/direction.

T. gives S. some instruction on how to complete the problem. T. does not ask any questions, he just goes right into S. what to do.

T. writes down a formula on his paper and she must solve it or simplify it. S. does this by verbalizing what steps to take.

APPENDIX H
IMPROMPTU INTERVIEWS CODEBOOK

01. Benefits – Tutee

- 01. BENTUTE – SLO.01 = Slower Pacing
- 01. BENTUTE – ONE.02 = One-on-one assistance
- 01. BENTUTE – IND.03 = Individualized pacing
- 01. BENTUTE – DIF.04 = Different approach
- 01. BENTUTE – STE.05 = Step-by-step
- 01. BENTUTE – INC.06 = Increased understanding
- 01. BENTUTE – REL.07 = Relatability
- 01. BENTUTE – AVA.08 = Availability
- 01. BENTUTE – CAT.09 = Catch up
- 01. BENTUTE – LES.10 = Less intimidating
- 01. BENTUTE – LESS.11 = Less stressful
- 01. BENTUTE – ADD.12 = Additional practice
- 01. BENTUTE – CON.13 = Confidence booster

02. Benefits – Tutor

- 02. BENTUTO – INT.01 = Interpersonal skills
- 02. BENTUTO – SYN.02 = Synthesis
- 02. BENTUTO – COO.03 = Cooperative learning
- 02. BENTUTO – COM.04 = Compassion
- 02. BENTUTO – CRI.05 = Critical thinking
- 02. BENTUTO – REF.06 = Refresher
- 02. BENTUTO – RES.07 = Resourceful
- 02. BENTUTO – PER.08 = Personable
- 02. BENTUTO – DEE.09 = Depth of knowledge
- 02. BENTUTO – PAT.10 = Patience
- 02. BENTUTO – MUL.11 = Multi-task

03. Dependency

03. DEP – ADD.01 = Additional assistance

03. DEP – LAC.02 = Lack of parental help

03. DEP – ANO.03 = Another option

03. DEP – LOS.04 = Lost

03. DEP – SEL.05 = Self-awareness

03. DEP – ABS.06 = Absenteeism

04. Different Pairing

04. DIF – HEL.01 = Helpful

04. DIF – DIFP.02 = Different perspective

04. DIF – AVA.03 = Availability

05. Group Tutoring

05. GRO – DIF.01 = Different levels – learning

05. GRO – TIM.02 = Time to process

05. GRO – VAR.03 = Variations

05. GRO – RES.04 = Resources needed

06. Ideal Session

06. IDES – VOL.01 = Voluntary – tutee

06. IDES – WIL.02 = Willing – tutor & tutee

06. IDES – LIM.03 = Limited distractions

06. IDES – VER.04 = Verbalization

06. IDES – REC.05 = Receptive – tutee

06. IDES – NEE.06 = Needs met

06. IDES – ACT.07 = Active participation

06. IDES – INT.08 = Interaction

06. IDES – KNO.09 = Knowledgeable – tutor

06. IDES – PRE.10 = Preparation – tutor & tutee

06. IDES – ENV.11 = Environment – conducive

- 06. IDES – ONE.12 = One-on-one
- 06. IDES – ASSE.13 = Assessment – ongoing
- 06. IDES – TRA.14 = Transparency
- 06. IDES – QUE.15 = Questions
- 06. IDES – NEE.16 = Needs assessment
- 06. IDES – NON.17 = Non-punitive
- 06. IDES – LEA.18 = Learning – focus
- 06. IDES – RES.19 = Resources
- 06. IDES – POS.20 = Positive environment

07. Ideal Tutor

- 07. IDET – PAT.01 = Patient
- 07. IDET – POS.02 = Positive
- 07. IDET – INV.03 = Inviting
- 07. IDET – RES.04 = Resourceful
- 07. IDET – WIL.05 = Willing
- 07. IDET – CAR.06 = Caring
- 07. IDET – RES.07 = Responsible
- 07. IDET – COM.08 = Compassionate
- 07. IDET – KNO.09 = Knowledgeable
- 07. IDET – INT.10 = Interpersonal
- 07. IDET – ART.11 = Articulate
- 07. IDET – CHA.12 = Charismatic
- 07. IDET – HUM.13 = Humble
- 07. IDET – CRE.14 = Creates – ability
- 07. IDET – EXP.15 = Explanation – elicits
- 07. IDET – UND.16 = Understanding
- 07. IDET – CRI.17 = Critical thinker

07. IDET – REL.18 = Realistic expectations

07. IDET – OPT.19 = Optimistic

07. IDET – UNDL.20 = Understands learning

07. IDET – LIS.21 = Listens

07. IDET – OBS.22 = Observant

07. IDET – FOS.23 = Fosters learning

08. Lacking Fundamentals

08. LAC – REC.01 = Recognized by tutor

08. LAC – REV.02 = Review needed

08. LAC – NAT.03 = Nature of learning

08. LAC – PRE.04 = Preparation – tutor

08. LAC – DEE.05 = Deep knowledge – absence of

08. LAC – LOS.06 = Lost – tutee's perspective

09. Overall Experience

09. OVE – UND.01 = Understanding – better

09. OVE – DIS.02 = Disappointment

09. OVE – SKE.03 = Skepticism – peer tutoring

09. OVE – WOR.04 = Worthwhile

09. OVE – CON.05 = Content

09. OVE – EQU.06 = Equality increased

09. OVE – DEP.07 = Dependency

09. OVE – CON.08 = Consistency

09. OVE – POS.09 = Positive experience

09. OVE – ENJ.10 = Enjoyable

10. Preference – Peer Tutor

10. PRE – CLA.01 = Class pacing – fast

10. PRE – INDP.02 = Individualized pacing

- 10. PRE – EMB.03 = Embarrassed – less
- 10. PRE – INDM.04 = Individualized modeling
- 10. PRE – NER.05 = Nervous – less
- 10. PRE – TEAB.06 = Teachers busy
- 10. PRE – TEAU.07 = Teachers unavailable
- 10. PRE – INT.08 = Intimidating – less
- 10. PRE – TEAC.09 = Teachers inability to connect
- 10. PRE – INC.10 = Increased understanding – peer tutor
- 10. PRE – SIM.11 = Simplicity

11. Same Pairing

- 11. SAM – STE.01 = Stewardship
- 11. SAM – CONN.02 = Connectedness
- 11. SAM – CONS.03 = Consistency
- 11. SAM – SMO.04 = Smooth session
- 11. SAM – EFF.05 = Efficiency
- 11. SAM – SEC.06 = Security

APPENDIX I
IMPROMPTU INTERVIEWS CODE SHEET

Benefits – Tutee

“He helped me learn how to do it. He connected the last problem. I needed to learn that so ... He helped with the rest. He taught me which formula to use.”

“He explained it in a way that made sense,…”

“Yeah, probably three because a couple times for math and this time for science, so, yeah, probably three, three-ish.”

“Yeah, the effects of it, and so, I'm catching up with school work and stuff, and I'm in marching band, so last week, I got called into athletics office, because of all the school work I missed, I had an incomplete in one of my classes, and you can't participate in athletics with an incomplete.”

“Yeah, that's what this packet was, so I need to take it as soon as possible, so I don't have an F in that class.”

“Well, she taught me how to actually go through the book, like I normally go through the book, but ... I don't know how to describe it. She taught me how to go through the book in a different way than I normally do, like I guess teachers organize the study guides.”

“Based off of the book, and I didn't realize that.”

“Then, I did notice she did mention the whole Quizlet thing. Was that helpful tip, do you think?”

“Yeah, that's definitely going to help me, because I'm more of a visual learner, so that'll help me a lot.”

“I overheard you say this is the first time in a long time that I actually understand the material.”

“If I was not understanding she would go step by step to just get me through the problem. She was great at it.”

“She’s I was getting stuff right she’d be like yes, that’s good. She’ll see how I was processing things and I would tell her what I was thinking. She was all right, that was good. When I would get stuck on something she like point first and she’s like well you have to do this. If I was still not comprehending it then she would get my notebook and she’d be like, “Oh can I use your pencil. Then I’d be like all right and she point out things more specifically and go through it slower. That helped a lot too. Just her make – we were doing geometry so just her showing that; oh that’s congruent and pointing out things and just being like that teacher, kind of like an actual teacher.”

“It’s the Iliad. It’s Greek writing. It’s supposed to be a story, an epic poem. I read well. I just didn’t understand it. I felt it was really helpful that I would read a stanza by stanza and they would help me explain each one of them.”

“Eventually, what kind of assessment or test will you have?”

“It’s going to be a test. It’s going to be, normally it’s on quotes, and I have a hard time with quotes.”

“I needed help to identify the irony in the short story that I read.”

“No, that’s wrong. He was like, well you know you forgot the negative sign. Just circle it remember to put it down and stuff like that. That was helpful.”

“Well I have a test today so I just came in just to kind of like solidify my understanding and make sure that I know what I was doing. So yeah.”

“It was ... Even you bringing up, it’s like really because it felt a lot slower than usual. It was a lot better.”

“I felt great because I learned a lot, and it was just one on one attention and that was great. Yeah, and I could just kind of relax and we didn’t have to go at a set classroom pace. We had to go on with our own pace. He was really nice, and he went over a lot of things and he helped me out on fields I haven’t been helped out on, it was great.”

“He helped me manipulate the problems so that I could use more positives and he also gave me, he also gave me that power to manipulate the problem. I thought that was really good.”

“Because I understood the problems more, than before and it's actually explained more better to me.”

“I have more like private.”

“She like told me like better like method, instead of doing like ...”

“No there was just like easier ways to solve the problem, instead of doing it all hard and different. Actually helped me shorter ways to solve the problem.”

“Yeah just her explaining, she's good at explaining... and she kind of went slow then she kind of help me more.”

“Math... at the beginning of the year; I had some problems with some of the stuff between the beginning of the year and now. There was that section in the middle that I had some issues with.”

“Math, I had, I don't remember his name, he did a step-by-step thing with me and he went over it.”

“With English it's sort of a step-by-step. I'm doing it myself but they are explaining to me this is how you do it. Like a step-by-step thing, but I'm doing in on my own. They are just guiding me through it.”

“If I come in with a really good idea for something, then they'll be like, "Oh, write that down." Or I'll come up with an idea and I don't know how to phrase it. I can explain it to them...”

“It's like one to one thing.”

“Yeah; She helped me with the formula things, formulas and she's like totally do step through step, so I mean like ...”

“So you have to work in differently, give different examples and talk through them.”

“What do you think would have happened had you become discouraged or had you become a little short with him or...?”

“I think that would have been a really bad impression. I think he would have himself been discouraged. I think he wouldn't be as encouraged to continue learning and continue trying to grasp the concept. It would probably be a bad tutoring experience overall for him and might not even want to come back in general.”

“Yeah, I tried to re-teach those, kind of go back a little bit and then move forward, and then try to make sure that at each point, they're like, “Oh, did you get this? Okay, it's fine, let's move on.” Then we redid a problem the same exact way, and all this re-teaching her those kinds of ways. Yeah, that was my strategy”

“When she said, “Do not repeat claiming...” He thought that you couldn't repeat the general ... anything to do with the first claim, to do with the claim. But you know how concluding sentences sum up the entire thing, or sum up the main point. Like, be a claim, not that ... His claim was, Scout is smart. He thought that the concluding sentence shouldn't have anything to do with her smartness. Just because she said, “Don't repeat claims.”

So I had to explain to him you can. The whole point of the concluding sentence was to mention her smartness and how smart she was. Just don't repeat anything where that you said the claim. That was his question.”

Benefits – Tutor

“Yeah, you know like sometimes, it's like, ‘Okay, let's start with a couple of homework or something that you are doing recently, because probably it's a lesson more recent, because this is the first time you're coming in here,’ or something. I guess they...”

““What do you do at that point, if you don't mind me asking?’ ‘Basically, I would just say, Take out the notes you have.’ Then, usually, they have a couple of worksheets or something with them to help them, and that's like, ‘Okay, let's do the worksheets together,’ and then, we'll go over it and then, as you go along, you know what they get and what they don't get now, and so you can help.”

“Then from my perception, it kind of seemed like she didn't really understand the term intervals. I think it looked like you explained it in simpler terms.”

“Yeah, because I feel like they maybe feel like they’re on my time even though I’m spending my time to help them. So, in a way, maybe she thought she was taking up the time that I was helping her, but really I’m there to help her so whatever she needs help with is entirely time she doesn’t need to apologize at all for it. She’s using whatever she uses that time for with my help.”

“I guess two people who are, I guess, in a way working together to understand the topic better, and is actively putting input and ...”

“Well, if they’re really compassionate, they would try to learn about the subject more so that I guess as an equal, but at that moment, they don’t know much about it, I don’t think it would go that well.”

“Yeah. I think you’re right, or what about the opposite side of that, very knowledgeable and not too compassionate?”

“I think they would just come off as a little bit stand-offish. I guess it would be partially beneficial for the tutee, because academically, they know what’s going on, but then I guess they might not feel as if they’re getting much help if the person isn’t trying.”

“What are some benefits that you found or that you can think of in terms of how you benefited by tutoring someone else?”

“I think you get a refresher on the subject that you’re tutoring, and then you get that sense of helping somebody out.”

“Someone who can ... doesn’t necessarily have to be the smartest person but someone who’s good at explaining things or can do it in multiple ways so that anyone can understand what they’re talking about.”

“Yeah. I usually have to because it’s like the first time you sit ... You want to explain things in multiple ways to give them a choice of how to remember it, because if you just tell them one way and they don’t really know how, their brain doesn’t work like that. They can’t really think like that like you do. Then you want to give them some other way to be able to remember it, because everyone’s different.”

“Hopefully it would look like a study session, where both parties are interactive and talking back and forth about a problem and both of them are working on it, or maybe the tutor is helping to explain a problem to the tutee through the problem, but there's communication back and forth; they're not just sitting there working on something. There is papers and notes out on the desk, and they are writing down. It's not just talking; there's actually writing going on so that they can have notes for later reference. They are more isolated, like they're not talking to their buddy across the room or something. They're focused on each other, getting through the problem.”

“He seemed to understand it when I explained it to him, so he seemed to get it after that.”

“I guess like ... I guess kind of like he easy to talk to I guess, like getting to the point like fast and like not saying unnecessary things to confuse the tutee. Just understanding what their teaching in general.”

“That's the quickest most efficient way for the tutor. Also, for it's ... It be like the perfect case man, as if the tutor knows the subject as well like he can even like come up with their own problems. For example, for Math, or some subjects English you can't really do that. Then the tutor also ... If the tutor doesn't understand stuff, he or she can ask other tutors because I've done that before for some subjects. I guess the most important thing is interaction with the tutee”

“For example for Math like, the tutee would like ... I tell him usually it's like homework. The tutor would start there going through a couple of problems and then they have the tutee mark through them, and kind of talk to them back to the tutor. If they can explain that back the tutor they'll know it. Then also the basics, when you introduce yourself and say... make the tutee feel comfortable and also pulling that closer if you ask. That's also like just on the person, the person”

“One, he use his resources. Honestly the first person I tutored, Algebra three/four and then the stuff show me I kind of freaked out from them "Holy cow I don't remember how I do this." Then there're resources available so I went to the math book, one of the chapter. I look over the stuff, and I just quickly refreshed my memory. That let me tutor. You can just the resources again.”

“He had a sentence that he had already had during class, so we just went through that and I then I started making up my own and kind of we went through it word by word to see which one, and during that ended up explaining each part of speech.”

“I usually don’t like giving them an answer. I like them coming to that answer themselves so they remember it more that way. They also feel that they’re starting to understand it and they’re starting to actually get it themselves. When I ask questions it’s because I don’t want to go out and say, ‘No. This is wrong. This is adverb.’ I want them to understand why it’s an adverb, and why in this case, why, what it’s functioning as and what it usually functions as and how you could identify it in this case. If I keep on asking the same questions, he kind of starts to associate oh, this goes with this and this goes with this one and therefore since this is doing this then this is this.”

“It’s easy to get discouraged, but I think that if you keep on asking ... I don’t think it’s a hopeless case. I think you can get discouraged if you start thinking it’s a hopeless case, but I don’t think it ever is. I think if you repeat it a certain number of times ... It may not be in one tutoring session, it may not even be in two, but eventually it’ll stick. Eventually they’ll answer to that question. Eventually they’ll figure it out. Like even I think by the end he was starting to actually get the hang of it and say okay ... I even saw him going through it like oh, it’s not this because it’s not doing this, and it’s not this because it’s not doing this. I think eventually, if you just keep in mind that eventually they’ll get there, it’s not really discouraging.”

“The perfect tutor would know every little detail about what you're trying to learn, but then, it's really hard, because sometimes it's like, "Oh, I learned that 2 years ago. I have to refresh my brain, or something." Another aspect is like a perfect tutor would always be as if this isn't the first time you're meeting the person, as if you've been friends for years and picking up where you guys left off. Like, "Oh, okay. Well, let me just help you a little." Instead of just, "Okay. Well, this is the first time we're meeting. This is kind of awkward." I want more friendly and more courteous to each other or something that would be perfect.”

“The perfect tutoring would be like as I'm speaking, you understand every little word I'm saying, but you know, that's not every single time. The perfect tutoring would probably be that I go over the problem a couple of times with you, and then, if I give you a question, you should be able to answer it, or you would only need help in a couple of steps or something after I've gone over it.”

“Then, after we move on to a different subject, we would be able to come back to the subject before, and then, you'd still be able to, you know what I'm talking about, instead of just forgetting in the last 5 seconds or something.”

“I’ve experienced that where I’m tutoring him to get every single word I’m saying and I’ve experienced where it’s just like, “I don’t understand what you’re saying” or it’s just I’m saying it and it seems as if they’re not responsive. I think it’s 50-50. I think it depends on the type of person you’re tutoring, because they can either get distracted easily or it’s a little harder for them to learn what you’re trying to go over with them. There is faster learners where it’s like I tell you once and you already know what I’m talking about. I can give them the worksheet that they didn’t do, and they know how to do it now.”

“ I think it just depends on the tutee, yeah.”

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“It went pretty much like they were all working on the same assignment but I said, “Okay, which question do you have” and then I helped them with that. Then I went to the next person and helped them with that and then the next person and like that. By the time I had helped with other people the person I had first started helping at the beginning had already done a couple questions using what I taught them the first time. That worked relatively well I think.”

“Okay. This one went all right. It wasn’t too bad. I just had to... She had notes written down for class, and she wasn’t sure what was going on. So I just said, ‘Let’s do homework problems, and I’ll teach you as we go.’ That’s basically what I did. I had to re-explain some things that were probably previous concepts than the concept that they want to learn. Additionally, there was some disconnections from what teachers had previous taught her that kind of blocked her from getting this concept down.”

“Yeah, I tried to re-teach those, kind of go back a little bit and then move forward, and then try to make sure that at each point, they’re like, ‘Oh, did you get this? Okay, it’s fine, let’s move on.’ Then we redid a problem the same exact way, and all this re-teaching her those kinds of ways. Yeah, that was my strategy”

“Be patient, I guess. There are some kids that just ... they don’t know what a thesis statement is, they don’t know how to find evidence, and you might think that’s all really easy because you might be in a higher English class or whatever. But there are still a lot of kids who have real difficulty with that. So I would say be patient, and like coach them through it.”

Dependency

“Yeah. I was able to get two and three columns on the [inaudible 00:00:38] I had today, and then [I’d say 00:00:42] one more done. I was like; I can’t go, be a part of the group quiz.”

“Oh, so you have to go and get some help.”

“Oh, I just came here because the math lab is full.”

“Yeah. Well, I missed a month of school, because I have a concussion, so I’m kind of like catching up with school work.”

“No. I was picking up chapstick, and I hit my nose on a chair, and yeah, I broke my nose, which led to a concussion that happened 3 months ago, so I’m still dealing with I guess the repercussion.”

“Well, I actually don’t know what they did. I just kind of was handed the study guide and said, ‘Here.’”

“Well, the study guide was just for like a test that they took, I think it was last week. I honestly have no idea what's going on in class right now. I'm so behind, because I missed so much school, but yeah.”

“Yeah, there's a competition this Saturday, and in order to do that competition, I have to get my grades back up, and I'm like a straight A student. This has never happened to me before.”

“Yeah, I missed a month, so this is really stressful, and what are you going to do, you know?”

“You know, I have no idea, honestly”

“I'm new to this school so it's kind of difficult for me to grasp on to the new material. How they do things is kind of difficult because they're going at a pace where they think oh you guys were freshman last year, you guys should know how things are. Still I'm coming from a school where they didn't perform that high and they didn't have the kind of concepts that they have here. Going to this school's a huge change.”

“Oh, yes, for sure. I was in all honors classes and AP class my freshman year and taking all honors and AP class here is totally different. It's so different.”

“Yes. I read them in class, and had no idea what was going on.”

“Obviously, I needed to come here.”

“This is just a question. Let's say you're in class. The teacher's explaining, because I teach Spanish myself, here on campus. Let's say you just had a lecture or something, and you don't understand it. What are your options to understand it, if the teacher is unavailable or schedules conflict?”

“You can go and search and try to find information, or a concept, or try to get help through a friend, or maybe from the DVPT, I guess.”

“I go home and ask my mom and my mom doesn't know. I ask other people and they don't know.”

“She was like, ‘I have these notes. I don’t know what’s going on at all.’”

“English is more subjective. Math, everything ... you know the equation, you plug it in, you get the right answer. It’s really black and white. But in English, there’s different point-of-views. You have to make a claim, you have to support it. There’s all these different points that a lot of people don’t get sometimes. They have trouble understanding it. I think that would be the main difference, that there’s just so many more different aspects to English.”

“He said like he missed a couple days.”

“He just said he missed a couple days of class so he wanted to go over that material,”

Different Pairing

“How was it having two? Was it helpful having two?”

“Yes. It was a lot helpful for me, having two, and having each people giving me their opinions on what happened.”

“What happened was that in the beginning. One tutor came. They weren’t trying to do it. The second one came. The third one came. I thought that was different. I thought that was odd. I’m like, ‘What the heck is happening?’”

“Was it helpful having more than one perspective, or did it get confusing, having more than one tutor?”

“It was helpful. They all had different views.”

“Because like different people like do things differently. Maybe if there's another person that would explain it differently I like the way that he kind of explains it.”

“I thought they were both really good. They both did things differently. It's always good to get another perspective on how to do a math problem. I thought that was helpful.”

“Yeah. That could work, but I don’t know if it would be, because sometimes I think it would be good also to get introduced to the new teaching method. Of course, if, that’s the point of the website, you can select the tutor, but, yes, of course if you feel comfortable with a tutor, then yes, of course that works because once I see her, I know that I’m tutoring her. I don’t even have to ask. I can just do it. “

Group Tutoring

“Was this your first time doing a group tutoring?”

“This was my first time doing it.”

“I’d say it went pretty well. My technique was like going from one person to the next and then to the next. Maybe I should’ve worked all three of them that may have been better. I’m not so sure.”

“They were all on the same assignment but they had different speeds of working so it was hard to work all at once.”

“It went pretty much like they were all working on the same assignment but I said, ‘Okay, which question do you have’ and then I helped them with that. Then I went to the next person and helped them with that and then the next person and like that. By the time I had helped with other people the person I had first started helping at the beginning had already done a couple questions using what I taught them the first time. That worked relatively well I think.”

“It kind of gave them sometime between me teaching them a new concept to work and understand the concept I guess. I’d say that it worked well. Also, what I experienced was like they really didn’t know even the basics of what they were trying to do so I had to teach them basic math just to do what they need to do.”

“After having this experience what suggestions could you give someone that is going to do a group tutoring session? What are some things that were helpful, maybe things that you would do differently?”

“First I’d try to assess the extent of their knowledge of what they’re working on. Based on that, if they don’t know anything then maybe just working individually and take a couple of minutes for each individual. If they do have a general grasp and they just have specific questions, you can work on the question together and they’ll say hey what does this mean, just a small thing and then they’ll answer it. If it’s like they don’t understand anything then you probably need to go one at a time.”

“Yes, exactly. How many would be too much to handle if you had to put a number on it in terms of group tutoring?”

“It depends on the resources I guess. If you had a big whiteboard and you were in front of them, I guess you could do multiple. Especially if they don’t know much then it’s probably better to keep it to like three I guess would be the max.”

Ideal Session

“Was he able to help you with some of it? The second one that came?”

“Oh, yeah.”

“Yeah because it was easy to understand what he was talking about.”

“He said what was great is we need to have students come in like yourself where you have a desire to learn and you know what you want, so accomplish.”

“I think my biggest problem for me is that I do have to have my pride down and ask for help and she made me feel like I wasn’t stupid and that’s a thing that I feel like a lot of honor students do have is that oh we’re in honors club we should get this. We feel like we’re not catching on right. She just helped me through every problem. If I was not understanding she would go step by step to just get me through the problem. She was great at it.”

“Okay, well first off when she came up to me she was very personable. She was like hi name is Erica and I’m doing this and I can help you with this. Even though I didn’t know her, she still was still personably and she tried to talk to me. It wasn’t like that awkward stuff too like I’m here to help you. It wasn’t awkward, it was just like okay she’s going to help me do this because I need help on doing this. She didn’t make me feel like I was an less than she was. She made me feel like it’s okay to ask for help and that you can go through this while getting help from others and that was great.”

“I think the fact that she just went step by step with me is the biggest thing because I think when try, if someone’s helping you and they just kind of give you the answer or they just give you a concept or here, this is what it’s supposed to me now you do it. No, she went through each step with me. She was okay, now you do this and now you do this and you can do this with this.”

“Yes, and I wrote some notes. I will have them.” “Yes. I will be back on Thursday.”

“Do you have a test today, or quiz?”

“Not today”

“When's your next ... Is it this week?”

“I think it might be next week.”

“Would you say that number one, she wants to learn?”

“Yes”

“What else? Why do you think it went so smoothly?”

“It helps if you write stuff out because if you bring your own piece of paper, bring your own ... You're ready to teach them too. Then, also, the very important thing is have them repeat back what you are telling them to make sure they know how to do it. Also, you keep repeating yourself because somehow that helps.”

“...he should like, he or she should ask questions, like how that works or why that happens.”

“To tell you the truth, I would love it if they would come in knowing what they were trying to get accomplished, because someone will just come in here and it's just like, "I just need help with math." I'm like, "Okay. Is there a certain subject?" They're like, "No, just everything." I'm like, "Oh, okay," so it's like umm.... “

“I think it went really well because I think my tutee was receptive. She understood what I was telling her. At the very least, I hope she got my explanations. She seemed like she was getting it. When I explained it, it seemed like she understood the concepts and she could apply them in later problems. She was very nice as a person as well. Overall, I think the session went very well.”

I think what it was I was asking her is she had learned that before and I think she had learned that before. She didn't understand that it was interval notation that she had learned.

“Yeah, because I feel like they maybe feel like they’re on my time even though I’m spending my time to help them. So, in a way, maybe she thought she was taking up the time that I was helping her, but really I’m there to help her so whatever she needs help with is entirely time she doesn’t need to apologize at all for it. She’s using whatever she uses that time for with my help.”

"I'm going to write that down. Sorry. I need to write that down so that I don't forget it." Why do you think she said the word sorry? That just kind of struck me. "Sorry. I got to write ..."

“I would have to say when your tutee, I guess completely gets as much help as they need and they’re able to leave the room knowing they understand the subject more.”

“I guess two people who are, I guess, in a way working together to understand the topic better, and is actively putting input and ... “

“The tutor would know all the material that they’re talking about and maybe be in the same class or something to be able to help them along with it. The tutee would be prepared for the class and have their notes and their homework or something like that to go over. A good environment would be a classroom, kind of quietish, so that you can be more one-on-one and not have to talk over some background noise or something. I’d say that would be pretty good. The tutee would have to want to be here and have to be trying to learn. The same with the tutor; they’d have to want to be here and want to help us ... help the person.”

Have you had a tutee that didn't really want to be here?

“It's hard, because you're trying to explain it to them. They don't really want to listen, so ...”

"I'm going to do it, but I'm not going to full-on pay attention."

“Hopefully it would look like a study session, where both parties are interactive and talking back and forth about a problem and both of them are working on it, or maybe the tutor is helping to explain a problem to the tutee through the problem, but there's communication back and forth; they're not just sitting there working on something. There is papers and notes out on the desk, and they are writing down. It's not just talking; there's actually writing going on so that they can have notes for later reference. They are more isolated, like they're not talking to their buddy across the room or something. They're focused on each other, getting through the problem.

“What would the ideal tutoring session look like, or what would intel.”

“For example for Math like, the tutee would like ... I tell him usually it's like homework. The tutor would start there going through a couple of problems and then they have the tutee mark through them, and kind of talk to them back to the tutor. If they can explain that back [to] the tutor they'll know it. Then also the basics, when you introduce yourself and say... make the tutee feel comfortable and also pulling that closer if you ask. That's also like just on the person, the person”

“Then, let's say Dr. Battle or someone walked in. What would she see from her perspective, like the perfect turning situation; maybe she's not able to listen in at per say but she was able to be seen from afar. What would she be seeing?”

“I guess she would be seeing like them like the tutee like listening I guess. Then like the tutor talking of them, tutee responding back to questions and stuff. His ... It's good that's the attraction I guess, she wants the interaction. Interaction helps him understand.”

“It's easy to get discouraged, but I think that if you keep on asking ... I don't think it's a hopeless case. I think you can get discouraged if you start thinking it's a hopeless case, but I don't think it ever is. I think if you repeat it a certain number of times ... It may not be in one tutoring session, it may not even be in two, but eventually it'll stick. Eventually they'll answer to that question. Eventually they'll figure it out. Like even I think by the end he was starting to actually get the hang of it and say okay ... I even saw him going through it like oh, it's not this because it's not doing this, and it's not this because it's not doing this. I think eventually, if you just keep in mind that eventually they'll get there, it's not really discouraging.”

“Ideal tutee. You know what? A lot of tutees, they may come with friends or whatever, but I think if you come alone, you're more focused than like, "Oh, I got this one right. I need to tell my friend," walk across the room, tell them, and then, come back. Something like that, you know. Just let them be more focused in on what you're doing.”

“Those two are ... because those are the two that I, well, the first one is one that I really saw the most often.”

“The perfect tutoring would be like as I'm speaking, you understand every little word I'm saying, but you know, that's not every single time. The perfect tutoring would probably be that I go over the problem a couple of times with you, and then, if I give you a question, you should be able to answer it, or you would only need help in a couple of steps or something after I've gone over it.”

“Then, after we move on to a different subject, we would be able to come back to the subject before, and then, you'd still be able to, you know what I'm talking about, instead of just forgetting in the last 5 seconds or something.”

“I've experienced that where I'm tutoring him to get every single word I'm saying and I've experienced where it's just like, "I don't understand what you're saying" or it's just I'm saying it and it seems as if they're not responsive. I think it's 50-50. I think it depends on the type of person you're tutoring, because they can either get distracted easily or it's a little harder for them to learn what you're trying to go over with them. There is faster learners where it's like I tell you once and you already know what I'm talking about. I can give them the worksheet that they didn't do, and they know how to do it now.”

“ I think it just depends on the tutee, yeah.”

“Do you think something like a punitive thing, a mandatory thing, do you think that would affect the experience of the session at all?”

“I think it would, because it's not as if they're coming here by their own choice. If they're forced to come here, it may not be as interesting or it's like, "Okay, I'm forced to be here. I really don't want to be here now," but if they come by their own will, probably be more open to the tutor or something, but I think as long as they're through the door, the experience that they have depends if they're going to come back again or if they are really enjoying their time here, so I think it doesn't matter if they're forced to come here, because if the tutor is that great, then it wouldn't be a problem.”

“I guess the most important thing is interaction with the tutee.”

“For example for Math like, the tutee would like ... I tell him usually it's like homework. The tutor would start there going through a couple of problems and then they have the tutee mark through them, and kind of talk to them back to the tutor. If they can explain that back [to] the tutor they'll know it. Then also the basics, when you introduce yourself and say... make the tutee feel comfortable and also pulling that closer if you ask. That's also like just on the person, the person.”

“Then, let's say Dr. Battle or someone walked in. What would she see from her perspective, like the perfect turning situation. Maybe she's not able to listen in at per say but she was able to be seen from afar, What would she be seeing?”

“I guess she would be seeing like them like the tutee like listening I guess. Then like the tutor talking of them, tutee responding back to questions and stuff. His ... It's good that's the attraction I guess, she wants the interaction. Interaction helps him understand.”

“I think what was important is that she came there voluntarily. She wasn't forced into it. She was very open to letting me tutor her. She was willing to have a conversation with me so I know what exactly it was that she needed and what sort of methods she wanted me to use to explain the process to her better.”

“Do some students not talk very much maybe?”

“They say, “Okay, okay, I get it.” But then when you ask them, “Okay, do you know how to do this?” they say, “No.” They don't. Instead, she said, “How did this happen? How did you go from here to here?” That's very helpful because then I can explain it further to her, then I can go into detail. It's good when they talk back to you, then you can understand what they really need.”

“She didn't have her phone out. She wasn't trying to talk with the other tutees around. She was just focused on her work and she was willing to communicate so I could understand what she needed.”

“In addition to that, how did you tailor your tutoring for him? In addition to what you just said, how did you change it up a little bit for him to ...?”

“My thing is, I just assumed that he knew algebra concepts. I was like okay, so if we were to do this, you can go on to this step. But, that transition from that one step to another, I had to go back and try to ... So I was like okay, I need to reteach him some algebra concepts so he can understand it. I had to go back and retrace my steps and not just assume he knows how to solve it. I just went back to algebra concepts, did that, did that, did that.”

“I tried to just make him think that okay, this is exactly what you’re doing. Know what you’re doing. Don’t just like randomly do it. That’s kind of my idea. That’s kind of what I try to get across.”

Ideal Tutor

“You’d ask the question and the tutor was like, “Yeah, I don’t know about that one” or ... Do you feel like she didn’t really know some of ...?:

“Was he able to help you with some of it? The second one that came?”
“Oh, yeah.”

“Yeah because it was easy to understand what he was talking about.”

“... and then she's like, "I don't know," so what are some things that she couldn't help you out with?”

“Complex number is one of them that we had a hard time with, in completing the square with another one that we couldn't do. I don't know she was able to do a lot of it, so that was good.”

“...she made me feel like I wasn't stupid and that's a thing that I feel like a lot of honor students do have is that oh we're in honors club we should get this. We feel like we're not catching on right. She just helped me through every problem.”

“Okay, well first off when she came up to me she was very personable. She was like hi name is Erica and I’m doing this and I can help you with this. Even though I didn’t know her, she still was still personably and she tried to talk to me. It wasn’t like that awkward stuff too like I’m here to help you. It wasn’t awkward, it was just like okay she’s going to help me do this because I need help on doing this. She didn’t make me feel like I was an less than she was. She made me feel like it’s okay to ask for help and that you can go through this while getting help from others and that was great.”

“Exactly, how she approached me, how she came up and introduced herself to me at first. Then she was just like hi. She’s very friendly and so just kind of she really opened up to me and she helped me out and I think that’s what made me feel a lot comfortable. That’s why I asked if she was going to come again because I was like oh, she seems nice and she seems like she can help me. Maybe I’ll come back to her again and I can see and I can do other stuff with her.”

“I think the fact that she just went step by step with me is the biggest thing because I think when try, if someone’s helping you and they just kind of give you the answer or they just give you a concept or here, this is what it’s supposed to me now you do it. No, she went through each step with me. She was okay, now you do this and now you do this and you can do this with this.”

“She didn’t assume that you knew ...”

“Right, exactly”

“That helped a lot. It helped a lot. Just here being patient helped a lot too. She saw that I was struggling with something and then she’d be like all right. She’ll go back and then ask smaller questions and be like okay well what does this mean. If this means that what does this mean. I think what also helped too is that if I did get something right and I was catching on she was like, “Oh my god, good job”. She was encouraging me while I going though, so that was great too. She was awesome.”

“She’s I was getting stuff right she’d be like yes, that’s good. She’ll see how I was processing things and I would tell her what I was thinking. She was all right, that was good. When I would get stuck on something she like point first and she’s like well you have to do this. If I was still not comprehending it then she would get my notebook and she’d be like, “Oh can I use your pencil. Then I’d be like all right and she point out things more specifically and go through it slower. That helped a lot too. Just her make – we were doing geometry so just her showing that; oh that’s congruent and pointing out things and just being like that teacher, kind of like an actual teacher.”

“How did she point it out without making you feel like I missed it, dang it.”

“I think she kind of just did like all right well think of this way. She would kind of redirect me in the right area. If I was steering in the wrong area or going in the wrong, she'd be like yes, but look at it this way. If you do this, wouldn't think equal to this and she was showing me the right way. She was steering me on that to the path where it was obviously the right answer. If I got something wrong, she didn't make you feel bad at all. She kind of just put me in the right direction so that was great.”

“The difference between getting help from a friend versus coming to DVPT? I guess the difference would be if you get help from a friend, you don't know if they know it, but DVPT, they are supposedly one who is assigned to each subject. They say they know it. Maybe you would have a better chance of the person helping you at DVPT, probably”

“Him doing those difficult problems, and all that stuff was that kind of nice?”

“Yes. Because then you can- if it's more difficult then you're like, "OK. I can do the easier ones that we're going to be doing in class. It makes it better”

“Then he would say, "You're going to do it now. You can do it on your own." He'd show me but then he'd have me do it on my own to see if I could do it by myself without him helping.”

“...they're like, "Well, you can write it like this but write it in your own words. This is just an idea. You don't have to write this down.””

“Yeah. I didn't know that she's like, "Let me use it," because you know it's an expensive calculator, nobody has it. It's pretty nice. I think it was good.”

“It helps if you write stuff out because if you bring your own piece of paper, bring your own ... You're ready to teach them too. Then, also, the very important thing is have them repeat back what you are telling them to make sure they know how to do it. Also, you keep repeating yourself because somehow that helps.”

“Well from the tutor's perspective I guess, if you're like nice, you get what exactly do you want from the walk in ...”

“Then when the person is getting tutored, I guess it be nice if tutor understands what they were like, need help with because they cannot help faster that way. Then if they know what they need to know, they can just help them pass and get it done faster I guess.”

“I guess like ... I guess kind of like he easy to talk to I guess, like getting to the point like fast and like not saying unnecessary things to confuse the tutee. Just understanding what their teaching in general”

“Then from my perception, it kind of seemed like she didn't really understand the term intervals. I think it looked like you explained it in simpler terms.”

“She also didn't know how to apply it to that particular problem. I just kind of explained to her what it was, kind of brought in what she had known about it before and tied it to that problem and how you would use it with that problem specifically.”

“I would say the perfect tutor would be someone, who is willing, has the motive to want to help, and care, are responsible and they're reliable and they're ... I think that's about it, yeah.”

“Do you think the academic side of it is almost secondary to the personal side or the willingness to help?”

“I think so, yeah. I think the academic part is important, but so is being motivated to want to help people.”

“Where would you rate that in terms of, "Okay, here you have a really compassionate tutor, and you have a very knowledgeable tutor." Would you rate one above the other in terms of importance?”

“No. I think they're equal, yeah.”

“Maybe a very compassionate one and not a very knowledgeable one. How effective do you think that session would go?”

“Well, if they're really compassionate, they would try to learn about the subject more so that I guess as an equal, but at that moment, they don't know much about it, I don't think it would go that well.”

“Yeah. I think you're right, or what about the opposite side of that, very knowledgeable and not too compassionate?”

“I think they would just come off as a little bit stand-offish. I guess it would be partially beneficial for the tutee, because academically, they know what's going on, but then I guess they might not feel as if they're getting much help if the person isn't trying. “

“Someone who can ... doesn't necessarily have to be the smartest person but someone who's good at explaining things or can do it in multiple ways so that anyone can understand what they're talking about.”

“Yeah. I usually have to, because it's like the first time you sit ... You want to explain things in multiple ways to give them a choice of how to remember it, because if you just tell them one way and they don't really know how, their brain doesn't work like that. They can't really think like that like you do. Then you want to give them some other way to be able to remember it, because everyone's different.”

“Yeah, charismatic is the one you want to listen to or something like that, not like monotone and boring and maybe a little pompous. You don't like to think someone like ... and down to Earth that doesn't make the tutee feel out of place or something. “

“Well from the tutor's perspective I guess, if you're like nice, you get what exactly do you want from the walk in ...”

“Then when the person is getting tutored, I guess it be nice if tutor understands what they were like, need help with because they cannot help faster that way. Then if they know what they need to know, they can just help them pass and get it done faster I guess.”

“I guess like ... I guess kind of like he easy to talk to I guess, like getting to the point like fast and like not saying unnecessary things to confuse the tutee. Just understanding what their teaching in general.”

“Also, for it's ... It be like the perfect case man, as if the tutor knows the subject as well like he can even like come up with their own problems. For example for Math, or some subjects English you can't really do that. Then the tutor also ... If the tutor doesn't understand stuff, he or she can ask other tutors because I've done that before for some subjects.”

“For example for Math like, the tutee would like ... I tell him usually it's like homework. The tutor would start there going through a couple of problems and then they have the tutee mark through them, and kind of talk to them back to the tutor. If they can explain that back [to] the tutor they'll know it. Then also the basics, when you introduce yourself and say ,, Make the tutee feel comfortable and also pulling that closer if you ask. That's also like just on the person, the person”

“One, he use his resources. Honestly the first person I tutored, Algebra three/four and then the stuff show me I kind of freaked out from them "Holy cow I don't remember how I do this." Then there're resources available so I went to the math book, one of the chapter. I look over the stuff, and I just quickly refreshed my memory. That let me tutor. You can just the resources again.”

“Understanding, being friendly and it's always nice to crack a few jokes even if you're pretty bad. Just kind of loosen the tension. You have to make them feel comfortable and the student too it's like studying together I guess. Just to make them feel comfortable, just being friendly.”

“I kind of just went in assuming from the beginning that he didn't know anything and when he did know something that was just a good bonus. I tried not to assume that he knew anything at the beginning since he told me that from the beginning.”

“I started making up my own and kind of we went through it word by word to see which one, and during that ended up explaining each part of speech.”

“Let's say he didn't get it correctly, and then you would ask him a question and then he would try to answer, you'd ask an additional question. I don't know if you have, at this point I don't know if you have a strategy, but what were you kind of thinking in terms of why asking so many questions ... what was your ... in the back of your mind what were you thinking? “Okay, I really want to help this student in this ...””

“I usually don’t like giving them an answer. I like them coming to that answer themselves so they remember it more that way. They also feel that they’re starting to understand it and they’re starting to actually get it themselves. When I ask questions it’s because I don’t want to go out and say, “No. This is wrong.”

“If I keep on asking the same questions, he kind of starts to associate oh, this goes with this and this goes with this one and therefore since this is doing this then this is this.”

“Did you find it was ... It kind of seems like if you ask the same question and he gets it wrong, you ask the same question again and he gets it wrong, is it easy to get a little discouraged or frustrated? What approach did you take? Some tutors might not be as patient as you were or ... you know?”

“It’s easy to get discouraged, but I think that if you keep on asking ... I don’t think it’s a hopeless case. I think you can get discouraged if you start thinking it’s a hopeless case, but I don’t think it ever is. I think if you repeat it a certain number of times ... It may not be in one tutoring session, it may not even be in two, but eventually it’ll stick. Eventually they’ll answer to that question. Eventually they’ll figure it out. Like even I think by the end he was starting to actually get the hang of it and say okay ... I even saw him going through it like oh, it’s not this because it’s not doing this, and it’s not this because it’s not doing this. I think eventually, if you just keep in mind that eventually they’ll get there, it’s not really discouraging.”

“Probably to not give them the answer. Kind of ask the questions. Keep on asking the questions. Because if you just give them the answer, then they can nod and agree with it, but they might not be actually be sticking in their heads. If you keep on asking questions and see what answers they give you, then that gives you a good idea of what they know, if they’re getting to understand it, and also what they don’t know and then you can fill that in.”

“The perfect tutor would know every little detail about what you’re trying to learn, but then, it’s really hard, because sometimes it’s like, “Oh, I learned that 2 years ago. I have to refresh my brain, or something.” Another aspect is like a perfect tutor would always be as if this isn’t the first time you’re meeting the person, as if you’ve been friends for years and picking up where you guys left off. Like, “Oh, okay. Well, let me just help you a little.” Instead of just, “Okay. Well, this is the first time we’re meeting. This is kind of awkward.” I want more friendly and more courteous to each other or something that would be perfect.”

“Also, for it's ... It be like the perfect case man, as if the tutor knows the subject as well like he can even like come up with their own problems. For example for Math, or some subjects English you can't really do that. Then the tutor also ... If the tutor doesn't understand stuff, he or she can ask other tutors because I've done that before for some subjects.”

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“Let's do homework problems, and I'll teach you as we go.” That's basically what I did. I had to re-explain some things that were probably previous concepts than the concept that they want to learn.”

“Yeah, I tried to re-teach those, kind of go back a little bit and then move forward, and then try to make sure that at each point, they're like, “Oh, did you get this? Okay, it's fine, let's move on.” Then we redid a problem the same exact way, and all this re-teaching her those kinds of ways. Yeah, that was my strategy”

“It’s just like, teachers drill different concepts into their mind, and it becomes mechanical. But once they don’t understand, they just do it mechanically. When they go to difficult concepts, they just know mechanically how to do it. When the tricky problems come, that’s when the disconnect happens. So re-teaching it a different way scared her a bit, and it was like, “Oh, this is not really what I’ve done before.” But then she was able to wrap her head around it. That was basically what happened.”

“What are some ... advice you could give to a tutor tutoring writing?”

“Be patient, I guess. There are some kids that just ... they don’t know what a thesis statement is, they don’t know how to find evidence, and you might think that’s all really easy because you might be in a higher English class or whatever. But there are still a lot of kids who have real difficulty with that. So I would say be patient, and like coach them through it.”

“When have you had, when did you have that?”

“Eighth grade we had that because I took a math over the summer.”

“I was trying to go back, go through algebra concepts to see if I could make ... see if he could understand it and then go back to the material we were doing and then apply it. That transition wasn’t really working for him. I was just spending the whole time just going through that.”

“In addition to that, how did you tailor your tutoring for him? In addition to what you just said. How did you change it up a little bit for him to ...?”

“My thing is, I just assumed that he knew algebra concepts. I was like okay, so if we were to do this, you can go on to this step. But, that transition from that one step to another, I had to go back and try to ... So I was like okay, I need to reteach him some algebra concepts so he can understand it. I had to go back and retrace my steps and not just assume he knows how to solve it. I just went back to algebra concepts, did that, did that, did that.”

“I tried to just make him think that okay, this is exactly what you’re doing. Know what you’re doing. Don’t just like randomly do it. That’s kind of my idea. That’s kind of what I try to get across.”

“Slow it down.”

Lacking Fundamentals

“I come here and since I’m having those missing parts from algebra, I come to geometry; I come from a different school. My school was a D level school. I come to a A-plus school is a big difference and I don’t think people understand that. The way they do material here in the grades and that kind of stuff is a lot different. Going from still missing all the algebra parts so a whole other school performs at a different level is really hard for me and I’m trying to grasp on to everything really quickly on the honors pace.”

“Most of the times they're clear, sometimes get unclear.”

“To tell you the truth, I would love it if they would come in knowing what they were trying to get accomplished, because someone will just come in here and it's just like, "I just need help with math." I'm like, "Okay. Is there a certain subject?" They're like, "No, just everything." I'm like, "Oh, okay," so it's like umm.... “

“Yeah. She didn't know the term, but she also didn't know in that problem how you would use that to write the X values.”

“I think it's just maybe earlier on they didn't get some concepts, and then as it, for that time being they could kind of get away with just doing it how they wanted. But as it grows, it's like math is still very cumulative.”

“After a while it kind of caught up to them so they couldn't understand maybe some key concepts and that was stifling what they were doing at that moment. Reviewing those concepts, kind of sometimes going back I think helps them, and lets them understand things that they would have maybe otherwise understood”

“Most of the times they're clear, sometimes get unclear.”

“He basically said that he’d never learned all those different parts of speech,”

“Is this something they learn in the first couple of weeks of class?”

“By this point, they should be doing factoring and stuff, which is definitely harder than what they need help with right now. They’re pretty far behind. I don’t really remember because I took this class a long time ago.”

“They’re pretty far behind.”

“She had notes written down for class, and she wasn’t sure what was going on.”

“She was like, “I have these notes. I don’t know what’s going on at all.””

“She wasn’t taught like the basic mathematics as much as she should have been so then she could have done the harder steps. Then it was kind of harder for me to explain that because she didn’t come with the proper background.”

“...maybe the previous class she wasn’t that well in. Her background information coming from that class isn’t that well-structured.”

“Yeah, yeah, yeah. He’s in the Algebra 3-4 class so he didn’t really get constants from two years ago, which was kind of a thing, like algebra? He was really, really struggling with the algebra.”

“It’s like a foundational kind of concept?”

“Yeah, a foundational thing. Yeah. That was the concern.”

“...so we started doing the homework and I was like, “Okay, I’ll teach you as we do the homework.” Then as we’re going through the problems, as the problems progressed he’s struggling more and more and more. Then, instead of going onto the other problems, I tried to keep in that same section. The problems will just keep on repeating those kinds of concepts. That’s the alternative. I didn’t really want to move on until ...”

“If you had to take a guess, how long until ... Let’s say he came in quite a few times. How long until he would understand this concept? Is he close to understanding it, or do you think he’s still pretty far?”

“He’s kind of progressing really slowly. He’s getting there, but he’s not like at that point where the next time he comes he can get. It might take a few sessions to get past ... those concepts down.”

“You think it’s because he didn’t have that foundation a couple years ago, would you say?”

“Mm-hmm (affirmative). Yeah.”

Overall Experience

“It was cool.”

“I thought it was really good because he knew more or less where I was with understanding the, so we were doing chemical bonds and stuff. He explained it in a way that made sense, It was really cool because I'd been tutored by him before, so it was easier to get in the rhythm of doing the equations.”

“Yeah because it was easy to understand what he was talking about.”

“... and then she's like, "I don't know," so what are some things that she couldn't help you out with?”

“Complex number is one of them that we had a hard time with, in completing the square with another one that we couldn't do. I don't know she was able to do a lot of it, so that was good.”

“I don't know. I guess having my teacher explain it, they're teaching me the way that I have to learn it when she doesn't know the ways. I don't know.”

“Then, was it helpful?”

“Yeah. It was definitely helpful.”

“I mean, was it helpful, like sitting down with a tutor?”

“Oh yeah. It was definitely helpful.”

“Well, she taught me how to actually go through the book, like I normally go through the book, but ... I don't know how to describe it. She taught me how to go through the book in a different way than I normally do, like I guess teachers organize the study guides.”

“Just kind of like understanding the concept more.”

“That'll help me with my other classes, too.”

“I overheard you say this is the first time in a long time that I actually understand the material.”

“I think my biggest problem for me is that I do have to have my pride down and ask for help and she made me feel like I wasn’t stupid and that’s a thing that I feel like a lot of honor students do have is that oh we’re in honors club we should get this. We feel like we’re not catching on right. She just helped me through every problem. If I was not understanding she would go step by step to just get me through the problem. She was great at it.”

“Okay, well first off when she came up to me she was very personable. She was like hi name is Erica and I’m doing this and I can help you with this. Even though I didn’t know her, she still was still personably and she tried to talk to me. It wasn’t like that awkward stuff too like I’m here to help you. It wasn’t awkward, it was just like okay she’s going to help me do this because I need help on doing this. She didn’t make me feel like I was an less than she was. She made me feel like it’s okay to ask for help and that you can go through this while getting help from others and that was great.”

“You felt that way because of how she approached you?”

“Exactly, how she approached me, how she came up and introduced herself to me at first. Then she was just like hi. She’s very friendly and so just kind of she really opened up to me and she helped me out and I think that’s what made me feel a lot comfortable. That’s why I asked if she was going to come again because I was like oh, she seems nice and she seems like she can help me. Maybe I’ll come back to her again and I can see and I can do other stuff with her.”

“I feel like it went really well.”

“Were they able to clarify and give some insight to get better?”

“Yes, and I wrote some notes. I will have them.”

“Yes. I will be back on Thursday.”

“Was it effective, having a peer help you out?”

“It was effective.”

“Advantages of peer tutoring versus going to a teacher?

Maybe the peer tutor is also new to the subject, they would also understand the point what you’re thinking about.”

“Yeah, this is like very good. I like to ... I made some problems based on like my notes and everything. That was really helpful to get it. Just like different problems I guess, and like kind of learn “

“Then you feel that has been kind of helpful? Like having the same tutor kind of thing? Because like different people like do things differently. Maybe if there's another person that would explain it differently I like the way that he kind of explains it.”

“I felt great because I learned a lot, and it was just one on one attention and that was great. Yeah, and I could just kind of relax and we didn't have to go at a set classroom pace. We had to go on with our own pace. He was really nice, and he went over a lot of things and he helped me out on fields I haven't been helped out on, it was great.”

“How do you think it went?”

“Good.”

“Because I understood the problems more, than before and it's actually explained more better to me”.

“No there was just like easier ways to solve the problem, instead of doing it all hard and different. Actually helped me shorter ways to solve the problem.”

“Before, like before you came into the tutoring center. On a scale of 1 to 10. How well did you know the material. 1 being not very much, 10 being ...”

“Yeah seven and a half.”

“Then now?”

“Yeah probably 9.5”

“Yeah just her explaining, she's good at explaining... and she kind of went slow then she kind of help me more.”

“I thought that was helpful.”

“It went pretty good actually. Actually, it was a good tutoring session. I actually liked it. I actually like how it's done.”

“Yeah. It's the first time I actually did this and it actually help us out.”

“Yeah. She helped me with the formula things, formulas and she's like totally do step through step, so I mean like ... Mainly like a teacher really but just one on one. It was a lot more understanding than just in the classroom.”

“Other than that it's pretty fun. I like the tutoring thing it helps.”

Preference – Peer Tutor

“I like going here better than going to like the math department because they're like it's really busy down there, but here you can have like one on one.”

“Oh, okay. Then what do you do ... I'm just curious. Let's say you come here and a tutor's not able to help you with a particular problem or ... What's your next step? What are you going to do from here?”

“What are you going to do right now to figure out those problems?”

“I'm going to go back to my teacher.”

“How many people are in there would you say, on average?”

“20 or a lot of people.”

“Then do you have to wait sometimes ...”

“Yeah.”

“... to get help?”

“Like 15 minutes.”

“I took Algebra 1 last year and I had one of those teachers where – I'm in honors classes so it was one of those honors classes where he would say the material but he wouldn't go back and help you through it. If you were lost, you were lost on your own and the other kids didn't understand it. When you went back to ask the teacher he would be rude to you and kind of just not help you. I didn't go to this school; I went to a different high school.”

“I just switched over here. I’m still kind of barely getting algebra, barely getting it since I had that teacher who wouldn’t help me. They were rude, they were kind of saying why don’t you know this, you’re in honors you’re supposed to catch it quickly.”

“I like it better when I have one-on-one help.”

“Advantages of peer tutoring versus going to a teacher?

Maybe the peer tutor is also new to the subject, they would also understand the point what you’re thinking about. The teacher already knows it. They have already known it for years. The first knowing, it’s like they understand what you are having problems with.”

“Someone would come to peer tutoring if they wanted a different approach, if they wanted somebody they knew, or somebody that was younger. I don’t know.”

“Like I think it's like better like for peers. Because sometimes they explain it like differently than the teachers do, and that makes it easier just to ... yeah.”

“He was a lot slower than my teacher. That helped a lot too.”

“I felt it, I thought it felt great.”

“Just like a teacher and to that actually ask questions in just like private, not in front of the cool class. I don’t like doing that.”

“Let's say you went to your teacher, for example. The type of assistance that he'd be able to give you, how would it compare with the type of help that she's able to give you ... the feedback.

How does it vary? Have you been to see your teacher at all this year?”

“Yes. I've been to see my teacher. He'll explain it but he doesn't understand ... I feel like working with someone closer to my age, they understand what I'm saying. They also know how to explain how to get better. I feel like teachers, they explain in this super complex way and I don't understand what they're saying at all. I just nod my head. I'm like, "Yeah, I understand." I really don't . I go home and ask my mom and my mom doesn't know. I ask other people and they don't know. When I go to someone my age, I feel like I understand it more because they understand where my brain is as far as understanding goes.”

“Do you ever feel embarrassed going to a teacher? Let's say your teacher helped you one day, and then the very next day you're still not getting it. Would you feel hesitant at all?”

“Yes. A little bit. Maybe they didn't think that I wasn't paying attention during class. But I was. I just didn't get it when they were doing it. I feel like the tutors slow it down a little bit. They explain it a lot slower. But I can understand it better.”

“I'm a teacher myself, I teach Spanish. Do you ever find that some teachers seem to be pretty busy. It's almost like, (snap, snap, snap).”

“It's kind of a rush in and out, yeah. It takes ... if feel like that tutors take ... they're like, “Oh, we can be here all day. We can do this as long as it takes.” The teachers are like, “I'm supposed to be out of here at 3 something. That's my set time. That's how long I'm supposed to be here.” You have to rush through this.”

“I just have more with my age group, so I was like a lot, I can understand and see more. Instead of being in class and I can ask questions like for myself, so if I need help then I got a question to ask.”

“Mainly like a teacher really but just one on one. It was a lot more understanding than just in the classroom.”

“...there was some disconnections from what teachers had previous taught her that kind of blocked her from getting this concept down.”

“It's just like, teachers drill different concepts into their mind, and it becomes mechanical. But once they don't understand, they just do it mechanically. When they go to difficult concepts, they just know mechanically how to do it. When the tricky problems come, that's when the disconnect happens. So re-teaching it a different way scared her a bit, and it was like, “Oh, this is not really what I've done before.” But then she was able to wrap her head around it. That was basically what happened.”

“Are a lot of students just writing down stuff...?”

“Yeah, so they can learn it later.”

“Okay. Is that pretty common?”

“Yeah, it's pretty ... That's what she did, at least.”

“Are there times ... Does the teacher pause enough to take questions and all that kind of stuff, or at times is it almost like, “Here's the material. Write it down, and then make sense of it”?”

“For math, at least, I've noticed when you get to the harder concepts, the teachers I've had actually stop and say, “Oh, do you guys get this? Are you sure?” And then move on.

With easier... past teachers, they just like, "Oh, here's some notes. Let's go through it." And not really understanding what's going on. That's what I've noticed."

"Hmm. That's interesting. You think maybe she's one of the students that maybe she's really not getting it in class, per se, and then she's just writing down the notes, and just hoping that she'll make sense of it at some point?"

"Yeah, that's what I saw, at least."

Same Pairing

"Yeah, so, what I saw was you walk in and then he's there and you're pretty much on the same wavelength already where he knows what you need, you know what you need. You guys sat down and it was this seamless ... it was just amazing."

"I thought it was really good because he knew more or less where I was with understanding the, so we were doing chemical bonds and stuff. He explained it in a way that made sense, It was really cool because I'd been tutored by him before, so it was easier to get in the rhythm of doing the equations."

"There was no taking a while, "Oh, what do you need?""

"It seemed like you guys were dancing in a way. It was just like, he would and then it was just like a flow thing. "

"I don't know because he's tutored me before. So, we just know the flow of things, I guess. It was helpful."

"Yeah, yeah exactly, exactly. I think that's what I need like every problem I go for the majority of right, and I make one wrong turn and throw my whole problem off. That would happen every time and I get so frustrated because I knew I was so close, and then right when I got to that point, I would just turn wrong. When I look back I couldn't find it, because I didn't know that point. Even though I look overall my points. This all looks right. Even though it's something, minute and or maybe I left. Maybe it's not even something extra on the paper, maybe I left off something and that's even harder for me to find. Him just kind of like aligning that one little tweak that I got wrong, was fabulous and that's pretty much all I needed, and now I have that recording of me doing that correctly in my head and on paper."

“No. It's easier because the tutor can point out the specific things that you didn't do right or that you forgot to do.”

“In the end, he did say something to the effect of, "I'll give you one more. If you can get it correct, I'll let you go." How did you feel from that statement?”

“Yes. He wanted to know that I know how to do it. That I can do this right.”

“Yes. There's some things that I was like, "Oh, I'm probably not going to move that." But then there's some things that I was like, "That just truly doesn't make sense." Maybe I didn't realize that and I needed somebody else to read it for me and tell me did this make sense.”

So, what I saw was as soon she walked into the room, it was like you guys were on the same wavelength already. “Well, yeah, because I've tutored her before.” “That was my question, how many times have you tutored?”

“I want to say the third time”

“What I saw, it seems like you guys have a connection ... if you will.”

“The smoothest tutoring session. We went through the whole worksheet, 60, 40 problems really quickly.”

“Why do you think it went so smoothly in addition to she's wanting to learn? Do you think it's the familiarity of the two of you?”

“Yeah. That's one of the things that helps. If you're familiar, if you're comfortable with each other, then it goes very smoothly, because especially what happens with a lot of new tutees is that they don't really know how you work, right? Then they're nervous too and they're afraid to speak up, but we've already established before that, in our previous ones, that I told her ask any questions that you want and then we've work together. Honestly, being familiar, experience, that's what helps make it run so smoothly.”

“Do you think something like having a fixed tutor and tutee dyad, if you will, that would be beneficial where it was a constant? Once a tutee found a tutor who he or she really liked that is was a constant pairing, do you think that would be beneficial in the long run if a tutee needed a lot of help? Do you know what I mean?”

“Yeah. That could work, but I don’t know if it would be, because sometimes I think it would be good also to get introduced to the new teaching method. Of course, if, that’s the point of the website, you can select the tutor, but, yes, of course if you feel comfortable with a tutor, then yes, of course that works because once I see her, I know that I’m tutoring her. I don’t even have to ask. I can just do it. “

“What do you do at that point, if you don't mind me asking? Basically, I would just say, "Take out the notes you have." Then, usually, they have a couple of worksheets or something with them to help them, and that's like, "Okay, let's do the worksheets together," and then, we'll go over it and then, as you go along, you know what they get and what they don't get now, and so you can help.”

“I think so, because there was one person, who, they weren't doing factoring. They couldn't figure out how to do the factoring as the teacher taught her, so I helped give another way to get to the ... to do factoring that I was taught, so I taught it to him, and he seemed to understand how to do it better, so I told him to use that as a check when trying figuring out through the way the teacher gave you, but use the method I gave to check your answer.”

“I usually don’t like giving them an answer. I like them coming to that answer themselves so they remember it more that way. They also feel that they’re starting to understand it and they’re starting to actually get it themselves. When I ask questions it’s because I don’t want to go out and say, “No. This is wrong.”

APPENDIX J
TUTOR QUESTIONNAIRE CODEBOOK

Why did you decide to be a tutor?

01. Help Others

01. HEL – ENT.01 = Entitlement

01. HEL – COM.02 = Community service

01. HEL – SHA.03 = Share knowledge

02. Self-promotion

02. SEL – VOL.01 = Volunteer hours

02. SEL – SELF.02 = Self-gratification

02. SEL – COL.03 = College application

02. SEL – DEP.04 = Deepen own knowledge

03. Friends

03. FRI – JOI.1 = Joining club

04. Time – Value of

04. TIM – EXT.01 = Extra time

04. TIM – CON.02 = Convenient

Do you believe your tutoring has helped those you have tutored? If so, give a specific example.

05. Evidence

05. EVI – GRA.01 = Grade

05. EVI – CORA.02 = Correct answers

05. EVI – CORE.03 = Correct explanation

06. Belief

06. BEL – FEL.01 = Feeling

06. BEL – SUB.02 = Subtleties

07. Hope

07. HOP – NON.01 = Non-evidentiary

When should students seek tutoring from a peer and when should they seek tutoring from a teacher?

08. Peer

08. PEE – REL.01 = Relatable

08. PEE – DIF.02 = Different viewpoint

08. PEE – CLA.03 = Clarification

08. PEE – UNC.04 = Uncomfortable with teacher

08. PEE – MIN.05 = Minor necessities

09. Teacher

09. TEA – ABS.01 = Absenteeism

09. TEA – FUN.02 = Fundamentals

09. TEA – SEC.03 = Secondarily

09. TEA – LOS.04 = Lost

09. TEA – IMP.05 = Important assignments

What are some challenges of being a tutor?

10. Tutee

10. TUTE – COM.01 = Communication – lack of

10. TUTE – MUL.02 = Multiple explanations – need of

10. TUTE – UNW.03 = Unwillingness to learn

10. TUTE – PUR.04 = Purpose – answers only

10. TUTE – UNP.05 = Unpreparedness

10. TUTE – UNM.06 = Unmotivated

10. TUTE – HOP.07 = Hopeless – feeling of

11. Tutor

- 11. TUTO – ANS.01 = Answers – not knowing all
- 11. TUTO – ASSI.02 = Assistance – lack of
- 11. TUTO – LEA.03 = Learn on spot
- 11. TUTO – UNS.04 = Unsure if tutoring is helping
- 11. TUTO – HEA.05 = Heavy weight of task
- 11. TUTO – EXP.06 = Explain – ability to

What does it take to be a good tutor?

12. Qualities

- 12. QUA – PAT.01 = Patience
- 12. QUA – FRI.02 = Friendly
- 12. QUA – INT.03 = Interdependent
- 12. QUA – CAR.04 = Caring
- 12. QUA – ENC.05 = Encouraging
- 12. QUA – COM.06 = Communication skills
- 12. QUA – PER.07 = Persuasive

13. Cognitive Skills

- 13. COG – CON.01 = Content knowledge
- 13. COG – CRI.02 = Critical thinking
- 13. COG – UND.03 = Understanding – teaching/learning
- 13. COG – TUT.04 = Tutoring techniques
- 13. COG – SEL.05 = Self-learning

14. Relationship

- 14. REL – FAM.01 = Familiarity – student
- 14. REL – TRU.02 = Trust – build

14. REL – TIM.03 = Time – amount of

What does it take to have a good tutoring session?

15. Tutor – Responsibility

15. TUTR – FRI.01 = Friendly

15. TUTR – OPE.02 = Open communication – fosters

15. TUTR – COM.03 = Committed

15. TUTR – PRE.04 = Prepared

15. TUTR – ACT.05 = Active participation – fosters

15. TUTR – ENE.06 = Energetic

16. TUTE – Responsibility

16. TUTE – OPE.01 = Opening communication

16. TUTE – QUE.02 = Questions – asks

16. TUTE – MOT.03 = Motivated

16. TUTE – PRE.04 = Prepared

16. TUTE – ACT.05 = Active participation

17. Learning

17. LEA – ACQ.01 = Acquisition – level of

18. Center

18. CEN – RES.01 = Resources

18. CEN – ENV.02 = Environment – quiet

APPENDIX K

TUTOR QUESTIONNAIRE CODE SHEET

01. Help Others

“I like to help people and tutor my friends on a daily basis.”

“I want to be able to help other students. Also, they deserve to be helped and I love volunteering. I find it fun to help people and see the effects of it. I believe that everyone should have access to help but not everyone can afford a paid tutor and peer tutoring is a good cause.”

“I wanted to help students who needed it.”

“I personally saw it as a way to help other kids. Ever since I was younger I have always enjoyed community service and DVPT was a great way of fulfilling my goal.”

“I also like to help other students who are struggling in their classes.”

“I joined peer tutoring because I like to help students who were struggling. I felt like I could make a difference in a tutee’s studying and ultimately, grades.”

“I decided to become a tutor because I believe that everyone learns in a different way. meaning that some students may need further instruction than others. Being a tutor allows me to not only help someone understand a concept.”

“I decided to be a tutor to help others

02. Self-promotion

“Allows me to know myself that I know the subject well and am able to explain it to others.”

“An extra perk is that I get volunteer hours for it...”

“I also love to talk about what I have learned and explaining what I understand. It’s a good opportunity to contribute to the community as well.”

“I decided to be a tutor because I needed some volunteer hours.”

“I also thought that this could help my own studies because I would be reviewing things I learned before.”

“It has helped establish my own character.”

“I also believed that it would help me look more appealing on a college application.”

“At first one of the main reasons I joined was because I was looking for more clubs to join.”

Help myself understand topics and obtain community service hours.”

03. Friends

“On the day of the club fairs, me and my friend were passing by the DVPT table when we took a second glance.”

“My friends were also joining this club so that helped as well.”

04. Time – Value of

“I believe that sense I can help, I will.”

“I decided to a tutor because I was at a school in the morning every day at zero hour with nothing to do.”

“I had some time that would use and I didn’t want to waste it.”

05. Evidence

“Yes, I helped a girl understand a few problems she had on her test and when she retook the test she texted me saying: “Thanks for helping me with math! I got an A on the retake :).”

“One time I was tutoring calc 3 and the student had absolutely no idea how to solve the problem or start.” “After he was able to do a few, we did the homework, and by the end of the session, he was able to do most of the problems himself.”

“I once tutored this girl named Sophie. She would come in once a week and I would help her with math. One day she stopped by just to say thank you because she got an A on her test. She was really thankful and when I see her in the halls she always says hello.”

“No one has told me about my tutoring either. However, I have tried to get students to do their homework/ classwork/ studying by themselves and work out problems instead of just getting the answers.”

“I suggested to make a song out of it. . although it was a silly method, it stuck with the tutee.”

“I believe that I have helped people, there was a group of students who failed their geometry test and were being able to re-take it. One of the students told me how they did on the next test and he said he got a high B, that made me feel relieved and justified that I’m actually helping those who came in seeking my help.”

“I do believe that I’ve helped those I’ve tutored, I can usually tell when they get it because they can explain it back to me. For example, there was this girl I helped and after I went through a couple homework problems with her, she was able to efficiently go through the rest of her homework herself while explaining it to me.”

06. Belief

“Yes, I believe most of the time”

“I do think my tutoring was helped.” “I feel like she had a better understanding of the language and how to write a letter for AIMS.”

“I think so”

“I believe that my tutoring has helped, but I only tutored them once so I don’t know exactly how they are doing in their classes after I tutored them.”

“I believe my tutoring has helped those I have tutored. For instance, when tutoring, I saw the tutee had a hard time grasping the concept. Instead of repeating the concept in a monotone voice, I suggested to make a song out of it. . although it was a silly method, it stuck with the tutee.”

“I believe that I have helped people, there was a group of students who failed their geometry test and were being able to re-take it. One of the students told me how they did on the next test and he said he got a high B, that made me feel relieved and justified that I’m actually helping those who came in seeking my help.”

“I do believe that I’ve helped those I’ve tutored, I can usually tell when they get it because they can explain it back to me. For example, there was this girl I helped and after I went through a couple homework problems with her, she was able to efficiently go through the rest of her homework herself while explaining it to me.”

“Most times, I believe that my tutoring has helped. However, on the occasion I feel that I can’t find the words to explain the topic in a way that is easy for students to understand.”

07. Hope

“I would hope so”

08. Peer

“Students should seek tutoring from a peer first, because since we are closer in age the tutor can better understand what the tutee is not understanding.”

“Students should seek tutoring for peers when they have assignments or need to study for a test. They should somewhat know the subject before they come in b/c [because] it is hard for a tutor to start from scratch since the tutor does not know how to help. If the questions are a homework assignment not extra credit, the student should seek a peer tutor. Also, if they are scared of asking questions, they should seek a peer.”

“Student-to-student tutoring allows the student to get the viewpoint of their peer in the lingo they understand because they might have gone through similar struggles when they were learning the concept.”

“Students should seek tutoring from students if they need clarification of a concept or a re-explanation .”

“When you seek tutoring from a peer it should be because you don’t understand a homework assignment., or concept of part of a unit.”

“Students should seek tutoring if they are struggling to grasp any concept, It doesn’t always have to be formal tutoring it could just be a friend trying to explain something. The important thing is that if they don’t understand something to ask someone for clarification.”

09. Teacher

“Students should seek help from a teacher when their peers don’t understand either.” “To seek help from a teacher, the student may not be able to understand the subject at all, or the assignment may be extremely important or weighed to their grade, such as an essay.” “It is more appropriate to seek a teachers help when you are struggling on tests and quizzes.”

“A student should seek a teacher if he was absent and missed a lesson or if he couldn’t get an answer from his friends, also if he still doesn’t understand a concept after asking a tutor.”

“I think that teacher can only explain concepts in a certain degree.”

“They should seek tutoring from the teacher if they already tried asking a peer for help.”

“If the student missed a lesson or has no clue what is going on in class, then the student should seek help from a teacher.”

“Although, a concept might be understood through the words of a peer, students should seek tutoring from a teacher when the concept remains unclear or the student has fallen way behind.”

“It’s best to seek tutoring from a teacher to master fundamental concepts. For adv. concepts it just depends on who the students would rather go to.”

“...unless it is subjective to the teacher, the requirements are unclear, or students are unable to answer the question or help.”

10. Tutee

“The biggest challenge is getting the tutee to open up to and tell you everything that they don’t understand. It is also hard to explain some things, because every person learns differently.”

“Some challenges are having tutees that are unwilling to tutor & only come because they are forced to. It is hard to motivate these students to want to actually learn and not get the assignment done.”

“Sometimes the tutee doesn’t know where to begin or gets stressed easily. Also sometimes they can lie to you on whether they understand or not. It becomes a struggle to get the truth from the tutee.”

“Also, students always just want answers, which won’t help them on tests or quizzes. They usually aren’t interested in understanding the concepts they are learning.”

“Some challenges of being a tutor is to keep the tutee motivated. Self-motivation is the key to learning, but after constant bad grades and endless trying that motivation dries up like a raisin. Building up the confidence in a tutee is one of the hardest challenges to do because he/she might not be willing to listen.”

“Second, is making sure that your tutee wants to be there & that they’re listening & asking questions.”

11. Tutor

“The biggest challenge is getting the tutee to open up to and tell you everything that they don’t understand. It is also hard to explain some things, because every person learn differently.”

“Also, sometimes , as a tutor, you may come across a question that you do not know the answer too, and there is no one else to help you. You face the conflict of telling the tutee you don’t know the answer or creating up a likely answer. Lastly, you never know how

well you helped your tutee, and that is a question that you want to know the answer to; too improve yourself.”

“Sometimes a student will have been required to get help from you, but they are not interested in listening. It can also be frustrating when someone just doesn’t understand how you explain a concept.”

“Some challenges are being able to explain things in a way that everyone will understand. It is also a challenge to figure out what they are learning. Sometimes I don’t remember how to do the thing they are seeking help for and have to re-learn it on the spot.”

“Some challenges of being a tutor are that I don’t remember all of the material that they are learning, and making sure that they are learning and not just me doing the work for them.”

“Some challenges of being a tutor are that I may not remember what the tutee is asking me even though I have taken and passed the subject. Also, students always just want answers, which won’t help them on tests or quizzes. They usually aren’t interested in understanding the concepts they are learning.”

“Some challenges of being a tutor is to keep the tutee motivated. Self-motivation is the key to learning, but after constant bad grades and endless trying that motivation dries up like a raisin. Building up the confidence in a tutee is one of the hardest challenges to do because he/she might not be willing to listen.”

“The first challenge of a tutor is making sure you understand what you’re tutoring. Many times it will be material from past years that you need a textbook to jog your memory. “Third, is getting tutee to understand the material.”

“Every once in a while I find problems with explaining the topics in words that can be easily understood.”

12. Qualities

“You need to be self-motivated, knowledgeable and especially willing to help and be patient because those students coming in for help not understanding the subject and you can explain it quickly. You also need to be friendly because often, the tutees are either scared or embarrassed to come in for help and you need to build a trust relationship.”

“You also need to be able to acknowledge your flaws and take constructive criticism because you need to be able to admit that you do not know the answer and learn how to improve.”

“In order to be a good tutor you have to be patient and a little persuasive.” “It’s easy to lose your patience when nothing you say seems to be clicking with the tutee.”

“It takes patience with the tutee if they don't get it right away. A tutor needs to be able to teach a concept in many different ways because everyone learns differently.”

“I feel that to be a tutor you need to be patient, caring, encouraging” “But most of all patience is necessary to ensure the best tutor and best tutoring session.”

Patience to teach students. If they don't understand something the first time, you have to explain it until they fully understand.”

“Patience” “Communication” “First and foremost, the tutor has to be patient because without patience, nothing can be explained properly, without frustration.”

“Communication is also essential because the tutor and tutee both have to understand each other.”

“You cannot give up. To be a good tutor you need to be patient and understanding towards the person being tutored” “Through encouragement”

“It takes patience” “Also some people skills. you want to be friendly but professional. But patience is key, it can be frustrating when your tutee gets it but then they don't.”

“Also don't be afraid of admitting that you made a mistake if you make one.”

“It takes friendly personality”

13. Cognitive Skills

“You need to be self-motivated, knowledgeable.”

“Have an open mind.” “being open-minded can help enormously when trying to explain concepts; different analogies and examples can really help.”

“To be a good tutor it takes an ability to self-learn sometimes when you do not remember a concept. “

“Knowledgeable”

“It takes confidence in the knowledge you know”

“Who knows the topic very well and is reasonably good with words to be a tutor.”

14. Relationship

“All it takes to be a good tutor is to get to know your tutee. The more you know your tutee, the better you can help them because they will feel more comfortable to tell you what they are struggling with.” “you need to build a trust relationship”

“Time” “Also, the more time a student spends with the tutor the easier it is for the tutee to understand the tutor because they will understand how the tutor likes to explain and review concepts.”

However, you have to realize that it takes time for the tutee to open up and ask questions.”

15. Tutor – Responsibility

“To have a good tutoring session, you have to make sure the tutee feels comfortable with you. Also communication is a huge part of tutoring. You have to talk to and figure out where the tutor went wrong.”

“You first have to be friendly as a tutor and encourage your tutee to talk and be open and free. This allows them to be more willing to ask questions. Next you need to know what questions to ask to get the tutee to participate and respond and actively try to solve some of the problems.” “Lastly, the tutor needs to give the tutee many practice problems and always be energetic and encouraging to be friendly and nice. The tutor also needs to know the subject

“A good tutoring session means both the tutor and the tutee are prepared.”

“The tutor needs to be able to understand the questions and figure them out. Both tutor and tutee need to be active participant with communication and practice.”

“It takes cooperation between tutor and tutee to have a good tutoring session”

“Sense I have only tutored math, a good tutoring session is when the tutee can solve a problem correctly by themselves. This tells me that they understand the concepts.”

“It takes a tutor with aforementioned qualities, or doesn’t and makes it up with creativity. Also there is nothing wrong with asking another tutor for help. If it takes 2 tutors =, then that’s fine.” “Finally for an extremely successful session, you need that familiarity and experience for each other. The right chemistry between tutor and tutee is sometimes what’s most important.”

“A topic the tutor knows well to have a good tutoring session.”

16. TUTE – Responsibility

“Tutee to talk and be open and free.” “The tutee needs to be motivated and willing to ask questions and learn problems, and often times it helps if the tutee knows what they need help with.”

“A good tutoring session means both the tutor and the tutee are prepared.” “the tutee listens and understands, asking questions when they are confused and walking away with a better understanding of the subject they need help with.”

“The tutee needs to be prepared for the session with materials and questions.”

“The tutee has to be prepared for the session with materials and questions “ “Both tutor and tutee need to be active participants with communication and practice.”

“It takes cooperation between tutor and tutee to have a good tutoring session. If the tutee doesn’t want to learn, then it will be the tutor doing all the work.”

“Sense I have only tutored math, a good tutoring session is when the tutee can solve a problem correctly by themselves. This tells me that they understand the concepts.”

“On the tutee’s side, they need to be proactive and ask a lot of questions. They have to want to be there. They should go along with the tutor’s techniques and see if they work for them, keeping an open mind.”

“It takes a motivated student.”

17. Learning

“Walking away with a better understanding of the subject they need help with.”

“Tutee can solve a problem correctly by themself. This tells me that they understand the concepts.”

“A good tutoring session is not when a tutee finishes his or her homework, but when he/she understands the overall concept.”

18. Center

“It should be relatively quiet to promote focus.”

“I believe that to have a good tutoring session, the right tools must be used to ensure that even after the session, the student knows what he/she is doing. Tools can include textbooks, whiteboards, and other online tools.”

APPENDIX L
TUTEE QUESTIONNAIRE CODEBOOK

Why have you needed peer tutoring?

01. Academic Assistance

01. ACA – LAC.01 = Lack of understanding

01. ACA – UND.02 = Underperformance

01. ACA – HOM.03 = Homework

Why did you decide to receive tutoring from a peer instead of a teacher?

03. Teacher Unavailability

03. TEAU – ABS.01 = Absent

03. TEAU – LIM.02 = Limited office hours

04. Preference

04. PEF – APP.01 = Approachability

04. PEF – COM.02 = Comprehensibility

04. PEF – PAR.03 = Parent recommendation

Has peer tutoring helped you? If so, how? If not, why?

05. Affirmative Response

05. AFF – HIG.01 = High percentage

06. Improvement

06. IMP – UND.01 = Understanding

06. IMP – EFF.02 = Efficiency

06. IMP – TES.03 = Test score

06. IMP – ABI.04 = Ability

What did your tutor(s) do that helped you the most?

07. Individualized Assistance

07. IND – PAC.01 = Pacing

07. IND – EXP.02 = Explanation

07. IND – STE.03 = Step-by-step

What did your tutor(s) do that helped you the least?

08. Confusion

08. CON – DET.01 = Detail – too much

08. CON – REL.02 = Reliance on textbook

What advice would you give a brand new tutor on how to be a good tutor?

09. Prepared

09. PREP – SUB.01 = Subject area

09. PREP – ANS.02 = Answer all questions

09. PREP – DED.03 = Dedicated to help

10. Pacing

10. PAC – SLO.01 = Slow

11. Friendly

11. FRI – PER.01 = Perception

APPENDIX M
TUTEE QUESTIONNAIRE CODE SHEET

01. Academic Assistance

“Last year I was having trouble with Algebra ... I would go into tutoring every other week.

I needed help with grammar and writing in my English class because my grade wasn't up to par.”

“I needed help on a subject that I didn't understand.”

“To get help with some of my subjects because I was confused.”

“I've needed peer tutoring because of low test grades.”

“To do my homework”

02. Study Hall

“I just went so I could get my homework done.”

03. Teacher Unavailability

“Teacher resources aren't always available to students...”

“Because she [the teacher] wasn't in class after school.”

“Because I think peer tutoring is open longer than my teacher's office hours”.

04. Preference

“Approaching a peer tutor was easier to me than approaching a teacher.”

“My parents suggested for me to get tutoring from a peer.”

“Because I understand better when peer tutor me.”

“My teacher wasn’t available at the time.”

“My teacher was able to help me a lot more and the tutor kind of confused me.”

05. Affirmative Response

“Yes” (6 out of 7) – peer tutored helped”

“Kind of” – 1 response

06. Improvement

Yes. When I started peer tutoring, my test taking skills improved.

Yes it has helped me, because now I can write essays better and get more work done.

Yes, by explaining and showing examples on the subject I needed help on.

Yes, it helps with understand my math better.

Yes, it higher test scores.

Yes it has, I began to finish my homework faster than usual.

07. Individualized Assistance

I really like how the tutors will help me go at my own pace.

Guide me through my final draft and teach me how to avoid flaws and errors.

The most a tutor did was show examples and explain step by step the subject.

Show me how to do it.

Explained it better.

Explain to me what I was confused about.

Explained how everything works (depending on what subject). And the tutors will explain at my own pace.

08. Confusion

My teacher was able to help me a lot more and the tutor kind of confused me.

I don't like that the tutors have to use the book for everything.

One did a "trick" in math [that] would be rather learned in the book that made the [illegible] subject kind of confusing.

Teach me in a way that I couldn't understand.

09. Prepared

...be prepared to answer a lot of questions.

The make sure that they know what they are doing and have a least received an B or A in the grade and knows a 100% that they can teach the subject.

To answer my questions.

Try your best to help the most.

I think tutors should keep up the good work and practice more subjects to become a better so that you can answer almost any question a student has.

10. Pacing

Remember to go at a slow pace and be prepared to answer a lot of questions

11. Friendly

Make the person your tutoring think your friends with them.

APPENDIX N
FOCUS GROUP INTEVIEWS CODEBOOK

01. Benefits – Tutee

- 01. BENTUTE – SLO.01 = Slower Pacing
- 01. BENTUTE – ONE.02 = One-on-one assistance
- 01. BENTUTE – IND.03 = Individualized pacing
- 01. BENTUTE – DIF.04 = Different approach
- 01. BENTUTE – STE.05 = Step-by-step
- 01. BENTUTE – INC.06 = Increased understanding
- 01. BENTUTE – REL.07 = Relatability
- 01. BENTUTE – AVA.08 = Availability
- 01. BENTUTE – CAT.09 = Catch up
- 01. BENTUTE – LES.10 = Less intimidating
- 01. BENTUTE – LESS.11 = Less stressful
- 01. BENTUTE – ADD.12 = Additional practice
- 01. BENTUTE – CON.13 = Confidence booster

02. Benefits – Tutor

- 02. BENTUTO – INT.01 = Interpersonal skills
- 02. BENTUTO – SYN.02 = Synthesis
- 02. BENTUTO – COO.03 = Cooperative learning
- 02. BENTUTO – COM.04 = Compassion
- 02. BENTUTO – CRI.05 = Critical thinking
- 02. BENTUTO – REF.06 = Refresher
- 02. BENTUTO – RES.07 = Resourceful
- 02. BENTUTO – PER.08 = Personable
- 02. BENTUTO – DEE.09 = Depth of knowledge
- 02. BENTUTO – PAT.10 = Patience
- 02. BENTUTO – MUL.11 = Multi-task

03. Dependency

03. DEP – ADD.01 = Additional assistance

03. DEP – LAC.02 = Lack of parental help

03. DEP – ANO.03 = Another option

03. DEP – LOS.04 = Lost

03. DEP – SEL.05 = Self-awareness

03. DEP – ABS.06 = Absenteeism

04. Different Pairing

04. DIF – HEL.01 = Helpful

04. DIF – DIFP.02 = Different perspective

04. DIF – AVA.03 = Availability

05. Group Tutoring

05. GRO – DIF.01 = Different levels – learning

05. GRO – TIM.02 = Time to process

05. GRO – VAR.03 = Variations

05. GRO – RES.04 = Resources needed

06. Ideal Session

06. IDES – VOL.01 = Voluntary – tutee

06. IDES – WIL.02 = Willing – tutor & tutee

06. IDES – LIM.03 = Limited distractions

06. IDES – VER.04 = Verbalization

06. IDES – REC.05 = Receptive – tutee

06. IDES – NEE.06 = Needs met

06. IDES – ACT.07 = Active participation

06. IDES – INT.08 = Interaction

06. IDES – KNO.09 = Knowledgeable – tutor

06. IDES – PRE.10 = Preparation – tutor & tutee

06. IDES – ENV.11 = Environment – conducive

- 06. IDES – ONE.12 = One-on-one
- 06. IDES – ASSE.13 = Assessment – ongoing
- 06. IDES – TRA.14 = Transparency
- 06. IDES – QUE.15 = Questions
- 06. IDES – NEE.16 = Needs assessment
- 06. IDES – NON.17 = Non-punitive
- 06. IDES – LEA.18 = Learning – focus
- 06. IDES – RES.19 = Resources
- 06. IDES – POS.20 = Positive environment

07. Ideal Tutor

- 07. IDET – PAT.01 = Patient
- 07. IDET – POS.02 = Positive
- 07. IDET – INV.03 = Inviting
- 07. IDET – RES.04 = Resourceful
- 07. IDET – WIL.05 = Willing
- 07. IDET – CAR.06 = Caring
- 07. IDET – RES.07 = Responsible
- 07. IDET – COM.08 = Compassionate
- 07. IDET – KNO.09 = Knowledgeable
- 07. IDET – INT.10 = Interpersonal
- 07. IDET – ART.11 = Articulate
- 07. IDET – CHA.12 = Charismatic
- 07. IDET – HUM.13 = Humble
- 07. IDET – CRE.14 = Creates – ability
- 07. IDET – EXP.15 = Explanation – elicits
- 07. IDET – UND.16 = Understanding
- 07. IDET – CRI.17 = Critical thinker

07. IDET – REL.18 = Realistic expectations

07. IDET – OPT.19 = Optimistic

07. IDET – UNDL.20 = Understands learning

07. IDET – LIS.21 = Listens

07. IDET – OBS.22 = Observant

07. IDET – FOS.23 = Fosters learning

08. Lacking Fundamentals

08. LAC – REC.01 = Recognized by tutor

08. LAC – REV.02 = Review needed

08. LAC – NAT.03 = Nature of learning

08. LAC – PRE.04 = Preparation – tutor

08. LAC – DEE.05 = Deep learning – absence of

08. LAC – LOS.06 = Lost – tutee's perspective

09. Overall Experience

09. OVE – UND.01 = Understanding – better

09. OVE – DIS.02 = Disappointment

09. OVE – SKE.03 = Skepticism – peer tutoring

09. OVE – WOR.04 = Worthwhile

09. OVE – CON.05 = Content

09. OVE – EQU.06 = Equality increased

09. OVE – DEP.07 = Dependency

09. OVE – CON.08 = Consistency

09. OVE – POS.09 = Positive experience

09. OVE – ENJ.10 = Enjoyable

10. Preference – Peer Tutor

10. PRE – CLA.01 = Class pacing – fast

10. PRE – INDP.02 = Individualized pacing

- 10. PRE – EMB.03 = Embarrassed – less
- 10. PRE – INDM.04 = Individualized modeling
- 10. PRE – NER.05 = Nervous – less
- 10. PRE – TEAB.06 = Teachers busy
- 10. PRE – TEAU.07 = Teachers unavailable
- 10. PRE – INT.08 = Intimidating – less
- 10. PRE – TEAC.09 = Teachers inability to connect
- 10. PRE – INC.10 = Increased understanding – peer tutor
- 10. PRE – SIM.11 = Simplicity

11. Same Pairing

- 11. SAM – STE.01 = Stewardship
- 11. SAM – CONN.02 = Connectedness
- 11. SAM – CONS.03 = Consistency
- 11. SAM – SMO.04 = Smooth session
- 11. SAM – EFF.05 = Efficiency
- 11. SAM – SEC.06 = Security

APPENDIX O
FOCUS GROUP INTERVIEWS CODE SHEET

Challenges – Tutee

“Their goal is not to learn the material, but to finish the assignment that’s due tomorrow. Like most ... and if you struggle with a particular class or assignment, you’re just thinking short-term, “This is what I’ve got to get.”

“I’ve had only one of those bad tutees before, and she just wanted to get the worksheet done.”

“Regarding the problem of them not knowing even the basics, though, I think we should probably just like combine it with their teachers. We don’t really have enough time to teach them everything, from the start.”

“Embarrassed.”

“I think if they can put their ... like, themselves in the other person’s shoes; they can figure out in their head, what will best help the other person. It takes some time, but if someone can really know multiple ways of describing things, and be able to tell which one will help the tutee best.”

“Not knowing anything. Not knowing what to do.”

“Some people just go like, ‘Here’s my notes.’ Some people just go like, ‘I missed a day,’ and something. You don’t know what to start from exactly. You go like, ‘OK, fine. Take out your homework. Do this; let’s do that.’ Instead of, they’re not ... some of them are forced to go. They’re not really sure what they want to get help in, I guess. If they know what they want to get help in ... if they know what to actually ... what they want to get accomplished in the tutoring session and stuff, instead of the tutor establishing what is going to get accomplished. It’s what the tutee wants to get done in that session. That would be a help”

“I think a good tutee is one who asks questions whenever they don’t understand something. Then, like you said, you’re like 5 to 10 minutes into something, and all of a sudden they say that they don’t understand it. Maybe they’ve already lost the concept like 5 minutes back.”

“One who continues to ask questions, who has a specific idea of what they don’t understand, and at least can specify once it’s presented. I think that would be like ... is a very good characteristic of a tutee.”

“I felt that they didn’t know exactly what they were doing.”

“but still I couldn’t understand the concept of what they were coming from.”

“The person that I was with didn’t explain how I was messing up, so I was kind of going on, but it wasn’t necessarily helping me because I didn’t understand completely what I was supposed to do.”

“Well, besides not knowing anybody in there, it was also kind of weird, like awkward, because it’s like a random person. When I was trying to ... for example, she was helping me with my homework. We were learning something and I asked could she explain how to do it and it wasn’t clearly enough, so it didn’t necessarily help that much.”

“Well, I had practice so I couldn’t necessarily go back even if I wanted to.”

“Some people come in before school. I would ... sometimes I come up before school. Freshman athletes, like myself, we can’t go in because we have our stuff right after school, but JV and Varsity will probably go after school because they start after we’re finished doing ...”

“Yes, but I kind of had to leave early because I also had practice for Cross Country. We can’t be too late. We could just text the coach telling that we’re going to be late and it gives us 40 minutes or so.”

“...depends on what person helps me really. This one guy that helped me, he was really, really good at it and he helped me a lot. Then this other girl, she didn’t explain it well enough.”

“The teacher teaches it to you in class ... I can see how it kind of goes by it really fast, so you kind of just say it like, “Okay, now I have to do this.” It’s not all laid out for you, you just have to practice, practice, practice.”

“I would say some advice for tutors would be ... Say it’s a subject we’re learning about ,they could go and learn about that subject over again. They probably know that subject, but they haven’t had it in such awhile. They could review that, and then they could help the student with that subject again. Things like fractions or inequalities, they can review that and can help a student.”

Challenges – Tutor

“It’s not bad. It’s pretty good, I guess. It’s fine when they actually want to learn. It’s not so good when they just don’t want to listen.”

“Sort of like, either they don’t want to listen, or they think that they don’t know it, therefore they can’t learn it, so they don’t want to actually start trying to figure it out. If you can explain to them like three different ways ... because they keep telling themselves they don’t know it; they’re not going to figure it out.”

“I kind of had to re-learned the stuff.”

“From a personal viewpoint, as being the tutor, it’s kind of hard when someone calls the room and they’re like, ‘Yes, we need a tutor for algebra III/IV.’ You sit there and go, ‘Well, I’m pretty good at algebra III/IV. ‘Then you go over, and they want you to teach them the one thing that you had like the most trouble with last year. You’re just like, ‘Umm, I don’t know how to teach you in a way that you can understand.’”

“Sometimes, I’ve noticed that some kids ... they’re not coming for help on like, a certain topic. They’re coming for help on how to do math in general. They haven’t learned anything since like sixth grade, say, and it’s kind of hard to start tutoring them at this point, when they haven’t even learned the basics.”

“They’re asking, for example, to graph a line, but they don’t even know how to solve a simple thing like X plus 2 equals 3. It’s kind of hard to tutor them on that, when they need help in other things.”

“It’s also kind of hard when they have so much problem ... so many problems, with all those basic things, and they want to finish like one math assignment, and they’re not going to come back after that. It’s like, the damage has been done, and they can’t do much past the basic, basic stuff they have.”

“You can’t help them, because they’re never going to come back, or you’re never going to see them again, and you’re not going to get to know their learning strategies, and how their brain works, and how they figure it out.”

“Their goal is not to learn the material, but to finish the assignment that’s due tomorrow. Like most ... and if you struggle with a particular class or assignment, you’re just thinking short-term, “This is what I’ve got to get.”

“Not all the students, but some of them. I know of others that want to study for tests also; they actually do want to learn it. Others just want to finish the assignment.”

“That is like the hardest place to be in, when you go there. Then you’re kind of like, “Well, you are only interested in doing this one assignment,” and then you don’t know how to do everything before it. You kind of take half an hour to do one problem, and then you have to go over problems like that, like more and more times.”

“They kind of get the basic steps, and so I think if you just spend a lot of time on one thing, they finally get it down. Then there’s the problem of the rest of the worksheet that they have to get done. You kind of just have to make sure that they enjoy it, so that will come back, so that they can learn more.”

“It’s just frustrating when you don’t know the material. Like, I tried doing chem/phys once, and I had to ask my friend, and use the Internet.”

“For me, probably the most unpleasant experience is when I realize I don’t know the material. I know I can’t help them in something. I, myself, haven’t had one of those students that hasn’t been willing to learn. I can imagine, like last year I know, I had some of those students, where they don’t want to learn. I think that’s one of the most difficult, along with what you were saying before; like, if they don’t know all the things before, then you don’t know where really to start tutoring them at,”

“I had one thing that I did not understand, and to get around that, I kind of worked on the rest of the worksheet. Sometimes if we do that. The problems with the worksheet do help you out in understanding the rest of the worksheet, so I kind of got that and worked around it, so ...”

“Probably, I’ve tutored like three people before. They needed help on like web works and such. The most awkward part is when you know like half of the material, but the other half you don’t know. Like he said, it helps to do that half, and then use the things that are coming back to you; you start to remember the material better.

“You go out there, and most of it ... I think there were like one or two problems that were left out, that we had to ask someone else for help.”

“I think one of the most challenging things is like ... I haven’t tutored a lot of people, but the four people that I have, they all have this problem, where either they thought it was really confusing, and they psyched themselves out, and so you had to like start at the beginning.”

“Or, if they didn’t know how to do a math problem, and you would start and be like, “OK, so what do you know?” They would look at it, and they’d be like, “I don’t know.” You’d have to work through every step of the problem, for them. Then you’d go to the next one, and they’d pick up maybe one thing, and you’d have to do it again. I didn’t really know if I was helping them, because I felt like I was doing it, and I didn’t know if they were paying attention.”

“I would have to like pause and ask them questions, and ask them if they were getting it. I was never really sure if they were telling the truth. I had to find little ways to see if they actually got it. I think that was one of the hardest things, was to make sure that they understood what I was saying.”

“My hardest was probably when I had to tutor those three students at once, and all of them were kind of like the students who didn’t really know much of the basics. It was especially hard to teach them that, especially because they kind of had different levels of understanding. One of them was slightly better, but still like a lot behind.”

“I tried helping her a little bit less, and dedicating more time to the other two. In general, it was just kind of hard to teach them the basics, especially with three people. Maybe if there were like three people, but they actually understood it, and they just needed help with certain questions, it would have been easier. I’m not sure if that’s why it was so hard, specifically, or if it was hard because of the fact that there were so many people.”

“The hardest time I’ve had, I guess, is some football players were failing math, and they didn’t really want to get help. They just took the tutoring because they didn’t want to get kicked out of football. That was probably just because they were forced to.”

“The greatest challenge? Well, for me at least, it’s trying to make the student actually focus and understand, and actually understand what they’re doing, and not just to mechanically do what they’re doing. I usually do math. Instead of, “Oh, this is how you do it,” like, “Why are you doing it?” That kind of stuff. I’m trying to get that.”

“They completely ignore you and that kind of sucks, just sitting there trying to teach them, and they do nothing.”

“Kind of making them ... like you show them a method, and then like, “OK, scratch that. Let me try another method.” It’s going to confuse them. Yes, maybe like the way you’re talking.”

“Tutor talk sort of thing?”

“Yes, the way you’re approaching the situation, is kind of leaving the tutee confused.”

“The whole point of them coming to tutoring isn’t to like be met by like friendly people, but just to learn information. The most important thing is probably someone who knows what they’re doing, and is able to articulate it. Otherwise, what’s the point of coming?”

“Be respectful. I know I’ve tutored some of the football players, and they’re not respectful. They don’t listen; they’re just horrible.”

“Some people get distracted. You’re trying to talk to them, and they’re just looking around, that kind of thing; maybe on their phone occasionally, and that kind of thing.”

“They need to be able to make it clear whether they understand something or not. Otherwise, we’ll just be like trying to explain something, like harder questions, like 5 or 10 minutes, and at the end they’ll just be like, “Yes, I don’t understand it.” They need to give you feedback on whether they understand or not.”

“Then you can really accomplish a lot, because then you answer at least question by question, it’s really modeled to what they don’t understand, rather than you just trying to explain the entire concept.”

“I’m going in there to write down my subject that I need help on and I assume that the person that would help me knew exactly what they were doing.”

“Well, besides not knowing anybody in there, it was also kind of weird, like awkward, because it’s like a random person. When I was trying to ... for example, she was helping me with my homework. We were learning something and I asked could she explain how to do it and it wasn’t clearly enough, so it didn’t necessarily help that much.”

“On my math homework, they are telling me this totally different way how to solve a question that is longer than what I learned in my math class, so probably telling them stick with the actual subject of what we’re learning.”

“Yes, because if they know it totally good, they just expect us to know.”

Experience – Tutee

“It was pretty cool. It was pretty cool, easy, because sometimes the teacher can’t really explain it for you to understand, but when it’s somebody else they can probably explain it better.”

“Because you can have a conversation with them to make it understandable.”

“So it’s much different, huh?”

“Mm-hmm (affirmative)”

“It could be good or bad, doesn’t matter.”

“I guess the good thing about it is that you meet a few people that you didn’t know. You can kind of connect with them in a way while you’re learning at the same time.”

“Well, some ways not.”

“I just don’t think it helped as much, because I felt that they didn’t know exactly what they were doing.”

“I’m going in there to write down my subject that I need help on and I assume that the person that would help me knew exactly what they were doing.”

“They helped a lot”

“I’ve went once and it helped. It kind of helped and it didn’t because the thing I was struggling on I didn’t completely understand it in class.”

“It helped.”

“No, probably like three times or something. We took a pretest in math and I didn’t do too good on it, but then I went to tutoring. They helped me and I got a better grade on the actual test.”

“It helped ... I went twice”

“depends on what person helps me really”

“This one guy that helped me, he was really, really good at it and he helped me a lot. Then this other girl, she didn’t explain it well enough.”

“I went there twice too. I went there because I didn’t know what to do on my essay, so it kind of helped, and then the second time it didn’t at all.”

“They didn’t edit it really well. I typed it up and then I went into Peer Tutoring is for grammar mistakes and they couldn’t find anything. I thought I did have some mistakes.”

“It’s not helpful because they told us to go to the computer and go to the website and do the work. I don’t understand what to do, so that I only click until it’s the correct answer.”

“Then the second time, was that more beneficial? Did that help you more?”

“Yes.”

“What did they do that was helpful, would you say?”

“They told me what is wrong and how I fix it.”

“I have two ... I had the AIMS tutoring like her and my tutor is really good, she helped me a lot about math.”

“I have to learn about writing. I write by myself and then they just check and that’s all. I think it’s not good, I don’t know why. It just waste time of me. I can go home and do my homework.”

“When I went to the Peer Tutoring Center, I was half-and-half about math because I didn’t know what the ... As I said, I didn’t know exactly what the person was coming from in terms like ... Because with math, it’s kind of like you know it or you don’t. If you get the concept of math, then you can do it.”

Ideal Tutee

“I’ve only tutored like two people. I’ve been ... it was really easy.”

“What made it easy, would you say?”

“Because they were willing to learn it. I guess how I described it, it was easy for them to get it.”

“Be respectful. I know I’ve tutored some of the football players, and they’re not respectful. They don’t listen; they’re just horrible.”

“Some people get distracted. You’re trying to talk to them, and they’re just looking around, that kind of thing; maybe on their phone occasionally, and that kind of thing.”

“Some people just go like, ‘Here’s my notes.’ Some people just go like, ‘I missed a day,’ and something. You don’t know what to start from exactly. You go like, ‘OK, fine.

Take out your homework. Do this; let’s do that.’ Instead of, they’re not ... some of them are forced to go. They’re not really sure what they want to get help in, I guess. If they know what they want to get help in ... if they know what to actually ... what they want to get accomplished in the tutoring session and stuff, instead of the tutor establishing what is going to get accomplished. It’s what the tutee wants to get done in that session. That would be a help”

“I think a good tutee is one who asks questions whenever they don’t understand something. Then, like you said, you’re like 5 to 10 minutes into something, and all of a sudden they say that they don’t understand it. Maybe they’ve already lost the concept like 5 minutes back.”

“One who continues to ask questions, who has a specific idea of what they don’t understand, and at least can specify once it’s presented. I think that would be like ... is a very good characteristic of a tutee.”

Ideal Tutor

“You need a lot of patience.”

“Knows what they’re doing, understands the material”

“Friendly; able to approach. Friendly. Relatable.”

“To eliminate the awkwardness, and be like, “Hey, I want to learn from you.””

“I think if they can put their ... like, themselves in the other person’s shoes; they can figure out in their head, what will best help the other person. It takes some time, but if someone can really know multiple ways of describing things, and be able to tell which one will help the tutee best.”

“I would say some advice for tutors would be ... Say it’s a subject we’re learning about, they could go and learn about that subject over again. They probably know that subject, but they haven’t had it in such a while. They could review that, and then they could help the student with that subject again. Things like fractions or inequalities, they can review that and can help a student.”

“The same thing he was saying, the people that are in the tutoring center actually know what they are doing, they know what subjects they’re supposed to be helping with.”

“I think that they should explain things more, like step-by-step, because they know it, well, most of them.”

“They need to explain it more to people who don’t know it, which are the people that are going in for help.”

“They need to know the material, is that what you’re saying?”

“Yes.”

“Really well.”

“Yes.”

“explain in the easy way”

“he can explain me for an easy way”

Improvements – Program

“I was just thinking ... You know how they have like ... When you sign up, the tutors sign up, and then they get what they’re good at and they have it. You kind of know which person to go after. I just think that ... just to make sure that they’re actually good at that and they know it by heart, so that when you go in to learn, you can say, ‘Hey, I need help with this.’”

“You can point to that one person and be like he’s the man or woman for like ... the guy to study with. I was thinking ... I was just coming up with an idea ... Do they have like ... You just like ... Do tutors kind of just sign up for it and they just say what I’m good at?”

“The question is, are they really good at that? I mean, something to think about is if they took a test or something to see if they’re actually specialized in that.”

“Probably have more people in there or have a bigger space to have more kids in there. One time I was in there and there really wasn’t that much space. There was like four tutors per student, so they are all going through to different people.”

“Or maybe one tutor for four students, kind of thing?”

“Yes.”

“Either more space or more tutors, and make sure the tutors know exactly what they are doing and they know all of what they are doing.”

“The same thing as Drew said ... I know like half of the people who go to peer tutoring just want hours. You should test them to make sure if they know what they’re teaching, because half of the people would teach something else, but we would want something different.”

Stewardship

“What I’ve done sometimes in the past was ask some of the other tutors that have taken the class previously, and then we have access to computers, so maybe we can like bring the tutees over to the computers and search it out, and look at it together. It kind of helps bond, I guess, also.”

“Sometimes, what I do is I tell them that I’ll get back to them on that. When I have time at home, I’ll work through the problem that we were stuck on, for example. Then like either if I get their e-mail, I can send it to them. If I see them during the day, I can give it to them. I’ve done that several times before, when I either didn’t have time to finish it during the session, or I couldn’t find a way to work it out, that could help them. I just said that I’d work it out at home, and write up an explanation, and give it to them.”

“I just ask a friend, or somebody else who’s there, and they usually can answer the question.”

“It’s nice to know that you can help people when they’re confused. Sometimes, if you don’t know ... or if it’s like, that was hard for you, and you forgot how to do it, then you can just ask somebody and then help them.”

“and you have to keep going back, and further back, and further back in the material, until you find a point where they do know, and then kind of work from there; which takes a whole lot more time, than maybe is available to you.”

“Yes, so like usually, they don’t ... what I’ve experienced at least, since they don’t understand what they’re doing, I try to go back a few steps, re-introduce some concepts from before, and re-teach them in a different way. That might help with what they’re doing now, and stuff.”

Teacher – Best Option

“It’s not bad. It’s pretty good, I guess. It’s fine when they actually want to learn. It’s not so good when they just don’t want to listen.”

“Sort of like, either they don’t want to listen, or they think that they don’t know it, therefore they can’t learn it, so they don’t want to actually start trying to figure it out. If you can explain to them like three different ways ... because they keep telling themselves they don’t know it; they’re not going to figure it out.”

“Kind of not knowing what they want you to teach them before you go in, and being kind of blind to that, is kind of hard.”

“Sometimes, I’ve noticed that some kids ... they’re not coming for help on like, a certain topic. They’re coming for help on how to do math in general. They haven’t learned anything since like sixth grade, say, and it’s kind of hard to start tutoring them at this point, when they haven’t even learned the basics.”

“They’re asking, for example, to graph a line, but they don’t even know how to solve a simple thing like $X + 2 = 3$. It’s kind of hard to tutor them on that, when they need help in other things.”

“It’s also kind of hard when they have so much problem ... so many problems, with all those basic things, and they want to finish like one math assignment, and they’re not going to come back after that. It’s like, the damage has been done, and they can’t do much past the basic, basic stuff they have.”

You can’t help them, because they’re never going to come back, or you’re never going to see them again, and you’re not going to get to know their learning strategies, and how their brain works, and how they figure it out.”

“That is like the hardest place to be in, when you go there. Then you’re kind of like, “Well, you are only interested in doing this one assignment,” and then you don’t know how to do everything before it. You kind of take half an hour to do one problem, and then you have to go over problems like that, like more and more times.”

“They kind of get the basic steps, and so I think if you just spend a lot of time on one thing, they finally get it down. Then there’s the problem of the rest of the worksheet that they have to get done. You kind of just have to make sure that they enjoy it, so that will come back, so that they can learn more.”

“For me, probably the most unpleasant experience is when I realize I don’t know the material. I know I can’t help them in something. I, myself, haven’t had one of those students that hasn’t been willing to learn. I can imagine, like last year I know, I had some of those students, where they don’t want to learn. I think that’s one of the most difficult, along with what you were saying before; like, if they don’t know all the things before, then you don’t know where really to start tutoring them at.”

“The hardest time I’ve had, I guess, is some football players were failing math, and they didn’t really want to get help. They just took the tutoring because they didn’t want to get kicked out of football. That was probably just because they were forced to.”

“Regarding the problem of them not knowing even the basics, though, I think we should probably just like combine it with their teachers. We don’t really have enough time to teach them everything, from the start.”

“They need to be able to make it clear whether they understand something or not. Otherwise, we’ll just be like trying to explain something, like harder questions, like 5 or 10 minutes, and at the end they’ll just be like, “Yes, I don’t understand it.” They need to give you feedback on whether they understand or not.”

“but still I couldn’t understand the concept of what they were coming from.”

“Well, I had practice so I couldn’t necessarily go back even if I wanted to.”

“Some people come in before school. I would ... sometimes I come up before school. Freshman athletes, like myself, we can’t go in because we have our stuff right after school, but JV and Varsity will probably go after school because they start after we’re finished doing ...”

“For me, what I found, is I tried going in early to see my math teacher and do practice problems with him. To me I found that that actually works a lot better because I feel like he understands, and then I become to understand, and it kind of works out together ... in the math office.”

“I kind of like that a lot, so now me and my teacher kind of have a routine. On quiz day we go into the math office, and we just sit down together and do math problems over and over.”

APPENDIX P
SEMI-STRUCTURED INTERVIEW TRANSCRIPTION

Researcher: Tell me if you could ... I guess the first question, is, why did you want to become a tutor this year?

Ben: Why I want to become a tutor? Well, I wanted a zero hour class and I was here in the morning, but there's a schedule mix up, so had to drop the zero hour. I was here in the morning anyway, so something to do with my time. Also, it's just good practice and a good idea to college applications and all that stuff.

Researcher: Okay. Now do you remember the first time you tutored or the first week of tutoring, the first couple weeks of tutoring? Can you explain to me your thoughts and feelings about starting out as being a tutor?

Ben: While I thought I wasn't going to be very good because I'm usually not very good at explaining things. That's why I was skeptical at first, coming into peer tutoring. I'm like, "Eh, do I really want to do it because it's going to be kind of ... because I don't know if I can do it that well." Within the first week, I think, I don't know, I think only like two or three people that week. It was actually easier than I thought it was going to be to be able to explain things. With math, I'm pretty good at math, so I thought I could help more in that area. It was mostly just at first understanding how to go about peer tutoring, because I've never really done it that much before.

Researcher: When you say you've never really done that much before, had you had a little bit of informal experience or ... ?

Ben: I guess like explaining it to friends and stuff. It's informal experience, but never been called a tutor before and actually gone and done that.

Researcher: Okay. Do you find that it's ... Is it different from what you experienced before in a casual, informal way? Or what are the differences between helping your friend out, as opposed to helping a fellow classmate out, a student?

Ben: It's not that different. It's probably a little different on the familiarity level, because you're more familiar with your friends and can more easily talk to them. It's not that different, peer tutoring. It's just slightly more formal, the conversation.

Researcher: Okay. Do you remember what your feelings were other than not quite sure, knowing how well it was going to go? Do you remember your first real ... Obviously you tutored in your experiences at the beginning ... What was your initial thoughts or did you find, "Oh, I can be a pretty good tutor." Did you see it helping the students out or [inaudible 00:03:14] ...

Ben: Yeah, I thought I was helping some of the students out the first week or so. I'm like, "Oh, I can do this. Like it's not that bad." It's like, "Okay, it's not a big deal. I can just help tutor and I can do it, it's fine." Yeah, after the first weekish, yeah, I was like, "Okay, no big deal."

Researcher: How many times do you think it took for you to get, because your first week is you're coming in four days a week, basically. How many times do you think you tutored to you felt pretty comfortable?

Ben: Maybe like two or three, but I'd say different people, mostly, it's if you just have one person, it's like in this thing, where if you just get one person's point of view, it's not comprehensive. If you've tutored multiple people and they understand then you feel like, "Okay, I can do this with anyone."

Researcher: Yeah, that makes sense. How has it been being a peer tutor? Has it been a good experience, if you could talk about that?

Ben: I've liked it. I mean, it's nice in the morning because I'm here anyway, so in the afternoon, I've got other stuff to do. I like being able to do it in the morning. I like being able to help people. I think it also helps me, also, because it's a helpful review because I don't always know they come in, but I have to relearn it on the spot, sometimes. It helps me with that part, where it's like study techniques for me and just like learning how to remember things better and go over notes and stuff like that.

Researcher: How often would you say that you have to relearn things on the spot? I see that quite a bit with our tutors.

Ben: I'd say pretty often, more times than not, more times than not. A lot of people aren't in the same math class or whatever, so you have to think back and look at their notes. Say, "Okay, what are you doing? Okay, let me remind myself how to do this, so that you can help them through it. Other words, your lost, and you don't help them at all, so I'd say more times than not.

Researcher: It's just maybe a refresher? You glance at ...

Ben: Yeah, I'd say pretty much early, because I'd say it's similar people come in, similar classes come in, like pre-Calc comes in a lot. Maybe the first couple times I need to review what they're doing, but then after that it's like, "Okay, what are you doing? Okay, I can know how to do that because I've worked on before." [crosstalk 00:06:13]

Researcher: Okay that makes sense. Then I notice, because right now I'm taking a look at my field notes, because I was in the center a lot and taking notes, whatever. I did notice that many times you and a few other tutors, that you would try to tutor for a subject that was maybe something you had over a year ago or two years ago. What are some challenges that you've found trying to tutor for a class that you had multiple years ago, or even just a year ago?

Ben: Mostly it's just remembering because you can remember the big topics and stuff like that of the class, but then they've got the finite details in there. It's remembering how to do it, because usually you remember what they're doing. You just have to refresh yourself how to get to the steps. Especially in geometry, because they go by steps and they teach them different theorems and stuff at different times. It's kind of hard to be where they're at in that because towards the end they give you better tricks to solve for proofs. In the beginning they want you to prove that these things are congruent. Later they give you that theorem that they are. Usually I'll be like, "Oh, that's just that theorem." [inaudible 00:07:39] We haven't learned that. Like okay, got to go the long way here, so it's difficult.

Researcher: Is a difficult tutoring for class that you had multiple years ago, like two years ago or ... ? When does it become almost, I wouldn't say impossible, but it's really, really challenging to help with class?

Ben: I don't know. It also depends on the subject, because geometry was never my favorite class, so that's usually a little more challenging for me than the pre-Calc. It was two years ago that I took geometry. I'd say it's kind of equal except for the fact that it takes me a little longer to go over the geometry stuff because there's so much memorization in there. Like what proofs you need to use, stuff like that, that it takes a little longer to look that stuff up than with the other one. Other than that, it's similar in time difference.

Researcher: Do you remember what grade you got in geometry?

Ben: I got an A. I got a low A, like a 92 or something, so I didn't do bad by any stretch. It was just more of the struggle than most math classes are to me.

Researcher: What would you say the greatest challenge is being a tutor?

Ben: Trying to get someone to understand what you're saying because sometimes you can explain things a bunch of different ways, and they still might get it, might not get it. It's just kind of like trying to figure out how they best learn and then go after that because everyone's different. It's really the hardest part, is just trying to figure out how they best learn.

Researcher: Then can you take me through an example where you've started out tutoring or maybe you discovered through the tutoring process of a way a student learns. Can you think of an example where maybe it took you multiple times to discover that, or maybe ...

Ben: Usually I do a lot of practice problems, because that usually seems to help, because the application and stuff, but sometimes it's hard because there are students that ... they might forget something. I don't want to do the problem for them, but sometimes I feel it's necessary, because they are really lost on the problem. Then, there's other times where you just say, "Okay." Just tell them generally, the direction they want to go and they'll do it. I think it's more like ... it depends I think on how well they have a grasp of the information.

I'd say that the most common one is that people just need a slight direction and then they can ... Just tell them that theorem or a postulate and explain to them why it's like that, but other people, it's like you need to go more in depth. You need to give them multiple examples of the same thing. Some people just need one. Others need multiple examples to reinforce the idea over and over and over again. I think mostly it's ... Mostly I feel like differences in repetition, depending like how much you need.

Researcher: Do you ever find that you have to teach it in a different way?

Ben: I'll sometimes I explain things in different ways, like in different, say radii example or something like that. If it says like, I'll try and explain it with different theorems, other than just the radii congruent. If I say that and they may not quite understand what that is, I'll being like, "Okay, so you know that the one line is congruent and that's a perpendicular bisector, so you can use the definition of a perpendicular bisector to find it. I try to go about and explain the postulates and theorems in different ways to see if one of them will help them to understand more. Sometimes you have to go more roundabout to get the answer and sometimes it's like ... you can tell them some theorems and postulates and then have them practice it and they get it. Sometimes you have to like, "This is why this is congruent, and this is why, kind of thing."

Researcher: Okay. How would you describe the perfect tutor? Maybe, what qualities does he or she have or what does he or she do, if you had to create the ideal, the perfect tutor? What would it look like?

Ben: I'd say someone that is on top ... Maybe they're struggling a little bit, but they are on top of their notes and on top of the class, so they're not coming in right before the tests, so that ...

Researcher: I mean that, I'm sorry; the perfect tutor.

Ben: Yeah. They're on top of it. They have their notes ready, they have a homework assignment. They have something that ... They don't just come in and say [crosstalk 00:13:18] ...

Researcher: No, no. I'm sorry, the tutor, like you.

Ben: Yeah, the characteristics of it?

Researcher: Yeah, yeah, like the perfect tutor, so like ...

Ben: I would say hard-working.

Researcher: Some ... Like yourself.

Ben: Yeah. I'd say hard-working, eager to learn, someone who's not, doesn't want to be there. See, let's say, someone who's hard-working, wants to be there. They don't necessarily need to be the smartest person that they should be able to ... They shouldn't take like us to pound it into them. We should be able ... Sometimes I feel like if we need to jackhammer it into them, they don't really want to be there, and they're just kind of shaking their head the whole time, not really paying attention to us.

Researcher: What does the perfect tutor do in those instances?

Ben: I think if they don't get it one day, they come back again the next day, and ask similar questions for more reinforcement. Some tutors, I'll see them one time and then they don't come back.

Researcher: I'm sorry. I guess the question is; you're a tutor, so what does a perfect tutor ... You know what I'm saying? You're thinking of tutee. Yea I'm thinking tutee. That's okay. It's early.

Ben: I see, yeah, I'm thinking of tutee.

Researcher: Describe the perfect tutor.

Ben: A tutor is someone who can ... I'd say someone who can quickly figure out, not super quickly, but someone who can understand what they're doing at the time, pretty decently quickly. Like not the whole time, where they sit, sitting there for fifteen minutes [inaudible 00:15:05], so we're like, maybe five minutes, talk it through with the tutee and then figure out what they're doing. Someone who's pretty good at communication, because that's what it takes a little bit. Yeah, communication. Someone who like ... Being able to explain things is big. Someone who can ... [inaudible 00:15:28] you'll need to come up with problems, but be able to help them walk through a problem or two.

You're not just, like, "Here's a problem, try and figure it out on your own." You can say that, but then if they're stuck or something, you want to be able to walk them through. If you need to. Well, someone who's reliable, because I know there's sometimes that people don't show up. That's always a problem. That's probably the most of it, be able to communicate, be able to figure out what you're talking about and be able to convey the message to the tutor well, or tutee well. That would be the best, I think.

Researcher: Perfect. Now if you could, from start to finish, how would you describe the perfect session ...

Ben: The perfect tutoring session?

Researcher: The perfect tutoring session? You're taking in consideration the tutee, the tutor; I mean, what with that perfect session look like?

Ben: The perfect tutoring session would be that tutee comes in with what they want to know and the tutor is like, "I got this," right off the bat and they know what they're doing. It's like a back and forth kind of talking, going over problems, homework or a test or something like that. Then, just going through that and then the tutee coming away completely understanding the thing. Yeah, stuff, something like that.

Researcher: What are some other things that a student can do to help ensure that there's a good experience?

Ben: A good experience ...

Researcher: The tutee, yeah.

Ben: Be prepared would be a big one. I don't expect anyone to come away with a hundred in one hour, a hundred percent knowledgeable, like expect them to be a little more sure. I'm not expecting anyone to go out there and not make a mistake or like ... Because sometimes a negative or something like that, or just a little mistake like ... I don't expect them to be completely perfect.

Researcher: Other than the preparation, what are some things that they could do to help the session go better, even during the session, what have some of your tutees done that help the flow of the experience?

Ben: Like your notes and stuff or ... They can also ... What really shows information is be able to teach it. You can also have them explain it to you as you are trying to figure out what they're doing, so see how much they know as well. Also a willing attitude to be there and to learn, because if they're not ... don't want to be there, it's less likely they're going to actively participate and want to [crosstalk 00:18:46].

Researcher: Have you experienced that a few times?

Ben: Not very often, only once or twice.

Researcher: In those times where you could tell that the student didn't want to be there, how well did the session go?

Ben: It went okay, but I just felt less confident afterwards. In the student's ability, because when the people want to be there, I know they're paying attention. I know they're listening to what I'm saying. With someone who doesn't want to be there, I'm not entirely sure what they are thinking or what they want or what they're doing ...

Researcher: Have they ever said why they're there? [crosstalk 00:19:24] What was that?

Ben: Someone made them or ...

Researcher: Someone what?

Ben: Someone made them be here or something like that.

Researcher: A parent, a teacher or something like that?

Ben: Yeah [crosstalk 00:19:20] stuff like that. There was one guy who ... It was a group, because a group of people didn't do well on their geometry test, or no, not, yeah, it was geometry, like a whole class. The teacher made it mandatory to come and so we got a lot of people that week. Then, a lot of them, I've don't think I've seen again. There's one guy; I'm looking at his name right now, who has kept coming back and I've been happy about that because I think he felt like, "Oh, it really helped me. I want to keep coming back, like do better," stuff like that.

Researcher: Okay. Let me think here. If you had to give advice to a new tutor, what are some things that you would tell that tutor, knowing what you know now, the experiences that you've had?

Ben: I'd say, don't be nervous. Just kind of like talk through with them. Ask to look at their notes, use a textbook to look at stuff. Don't be afraid to not always know the answer, because that happens. Yeah, talk it out. I'd say mostly make sure to go ... You don't always need to know what you're doing. You just need to figure it out. You don't need to come in and know everything about what they're doing. You just need to say, "Okay, this is what you're doing, now let's look at the details of what you're doing." Yeah, that's what I'd mostly say, it's just don't stress over the details.

Researcher: Okay. Then what about for a student coming in for the first time as a tutee? What are some suggestions that you would give him or her?

Ben: Bring your notes, scratch paper, pencil. Just be prepared like that. Be willing to be patient with the tutor, because sometimes they [takes a look a little slow bit 00:21:50] for them to get on to what you're ... get on like, "Okay, this is what you're doing," so just be more patient with them. I've had that where it's ... When they're impatient, but I've had where it takes a little bit for me to know what they're talking about and be able to go over it with the tutee, in a way that makes it sound like I know what I'm talking about. Patience and just be prepared to learn and have what you want to know, before you come in. Don't try and figure it out as you're in there, because that also take some time. If you're like, "Oh, I need help in fractions or I need help in this." Know what you need help in.

Researcher: That's good. I guess in closing, why do you think? . I mean, one of the reasons why I created this thing last year is, I definitely saw on campus and I see it in my own professional life as a teacher, the demands for teachers is just increasing in terms of meetings that we have, in terms of things that we are accountable for. I get the feeling that get the feeling that the teachers aren't always able to be there for their students.

Student schedules are different, and so forth. Have you ever come across a time where you almost felt like your teacher wasn't able to be there for you or do you know of people where they feel like they're having a tough time, they're struggling in class and the teacher, other than what teachers able to give him in class, the teacher isn't able to offer anything more? Have you ever [crosstalk 00:24:08] experienced that or know of anyone?

Ben: [crosstalk 00:24:08] current teacher, Mr. [O'Willis 00:24:10] is an example. He's a good teacher. I feel like he would help you and sit down if he could, but because he's the department chair of the math, he has lots of meetings and stuff, so he's only really available maybe one or two days out of the week. He'll say, "Okay." He has to schedule in advance a couple, a week or so for him to be able to know when he's open. It's kind of hard like that to schedule out in advance to get maybe teacher help.

I think math teachers, a lot ... because they get, they do a lot of meetings. It's hard for them in the mornings to do stuff. Some have zero hour, especially in the mornings, because you don't know what teacher has zero hours. I think, [inaudible 00:24:59] two or three maybe at a zero hours. It's hard to come in the morning. Not everyone can stay after school. Some people have to catch the bus. Some people have extracurricular activities. It's hard for both schedules to meet and have a set date to do something, because sometimes even making up a small quiz for something can be chaotic and it's all over the place.

Researcher: In those instances, what do you students do? If they're not getting the material if they're not understanding it.

Ben: Usually they go, I'd say, go to a friend and ask about it or in class, ask a neighbor. Or, in class, usually, there's sometimes, especially in math, but not always in other classes; it ends early and then you can go ask the teacher then your questions. I know that they do that. It's set review days to go over and ask questions, [likes that 00:26:03]. In Spanish and English, or at least my teacher, because I'm in AP Spanish right now; we're going really, really fast over stuff and sometimes it's like, "Okay, can we, like take a little break to like reinforce what we've learned here?"

We don't have the time for it, so you have to talk through with your friends and go over notes by yourself. It's harder. English; I just generally think English is more difficult, because it's harder; the subject matter. I feel like for me, especially, it's harder to understand the grammar section of it, and also meetings and stuff. It's hard with your teachers to go over that, so unless it's in class going over it, it's hard to do that.

Researcher: Hmm. Then, so Jake, you're a junior, is that right? Then, what classes are you currently taking right now?

Ben: Honors Finite Math and Brief Calc. ... period. I'm taking Engineering 1-2, honors English, Jr. English, so much. Then, AP Chemistry, AP US History, then AP Spanish Language and Culture.

Researcher: Busy schedule.

Ben: Yeah. It's actually the end of the day.

Researcher: Well, I appreciate ...


APPENDIX Q

INSTITUTIONAL REVIEW BOARD APPROVAL



Office of Research Integrity and Assurance

To: David Carlson
FACULTY/AD

From: Mark Roosa, Chair 
Soc Beh IRB

Date: 06/25/2013

Committee Action: Exemption Granted

IRB Action Date: 06/25/2013

IRB Protocol #: 1305009272

Study Title: Peer Tutoring as a School-Wide Resource in Secondary Education:
The Experiences of both the Tutor and the Tutee

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(1) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.