

Teaching Self Efficacy Development Initiative

by

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ABSTRACT

More and more, colleges and universities across the United States and throughout the world are relying on adjunct instructors (sometimes called casual academics or part time instructors) to teach classes in their field of expertise. Often, those classes require a blending of theory into practical application, such as in business, accounting and other career focused classes. Previous literature has shown that adjunct instructors often have little formal preparation for teaching, and even when some preparation is offered, it is often insufficient to establish confidence, or teaching self-efficacy, in the classroom. This study examined changes in teaching self-efficacy after adjunct instructors were provided information (articles) around constructivist teaching strategies within collaborative Community of Practice (CoP) meetings to discuss those strategies. The study was conducted at a small private college, which relied heavily on adjunct instructors to conduct classes. A quantitative pre-post survey, and qualitative comments throughout the intervention sessions were used to examine changes. Participants reported a significant increase in teaching self-efficacy, which was especially prominent amongst new instructors compared to those with more experience. There was also a self-reported increase in the use of more constructivist strategies within their classes over the course of the intervention. Finally, participants also rated the components of the intervention (articles and the CoP meetings) and while they rated them similarly in terms of impact, the CoP meetings were discussed as critical to both learning and application of strategies in practice. Future studies should examine how these strategies could be used in wider groups of instructors and how the effects might be enhanced if a longer program were

used, but it is clear that providing opportunities for adjunct faculty to come together and discuss new strategies can help improve teaching self-efficacy in higher education.

DEDICATION

For the Noel Macks of the world, who do the best they can with what they have and do even better when given a little bit more.

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Completing this project has been equal parts a dream come true and a challenging task to be endured, and I could not have done it without the help of a strong and encouraging support team. Some of them know how critical they were to the process, and some of them may have no idea how much they gave me along the way. I will endeavor here to make my appreciation specific and public.

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CHAPTER 1

INTRODUCTION AND PURPOSE OF STUDY

John had received a telephone call inviting him to join the adjunct faculty at a local career college. It was a small college, providing associate and bachelor's degrees in business, accounting and computer science. He had been a guest speaker for a couple of classes in the previous year and had been asked about his interest in working as an adjunct faculty member. When he said he was interested, he was told that someone would contact him to work out details.

John was contacted by Amy who said that she had materials for him to use in his first class. He was also told that, since the class started on the following Monday, he could come in that day, a Thursday, to pick up the materials. John said he couldn't make it, but Amy asked if the two of them could meet somewhere on Saturday to exchange the materials. John agreed to meet at a local shopping mall parking lot where he received the materials and was told by Amy, "You'll do great, I'm sure. See you Monday!" He was left with a box of books and papers and a lot of questions.

Luckily John had taught before. He had been a teaching assistant at a major university. He understood a lot about the teaching and learning process, but he didn't see himself as a collegiate instructor. He was not confident that the techniques he had learned elsewhere would apply to this new teaching experience. All those things together made John very apprehensive about his first day as a college adjunct instructor.

This is an extreme example, but it is also based on a real situation and highlights an important question that must be asked and answered by every institution of higher

education which chooses to employ adjunct instructors: How can the institution best prepare adjunct instructors to effectively engage their students?

Larger Context

Across the United States and internationally, more teaching is being performed by adjunct faculty (Baik et al. 2018; Thirolf 2013; Flaherty, 2018; Shattuck et al. 2011).

While there have always been adjunct faculty (sometimes referred to as contract teachers and casual academics) participating in the teaching activities in higher ed, the 21st century has seen this role expanded significantly. The increased reliance on adjunct faculty brings with it both benefits and questions for the colleges and universities where they teach and for the students taught by them.

One particular benefit accompanying the utilization of an increased number of adjunct instructors is the increase of time allowed to full-time faculty to conduct research and advise students in their studies, especially graduate students (Thirolf, 2013).

Increasing the number of adjunct faculty can also result in unique learning opportunities for students. Many adjunct instructors are working professionals in their fields of instruction; daily they practice the disciplines they teach (Morton, 2012; Bautista & Cipagauta 2019). As a result, the adjunct instructor can help students understand more clearly how concepts and theories are put into practice in real world situations. However, when employing adjunct faculty, the college or university implicitly accepts the responsibility of providing appropriate teacher training programs which appropriately prepare instructors to effectively engage students in the classroom (Morton, 2012; Bautista & Cipagauta 2019).

The rise of adjunct faculty use may be traced in part to the increase in student enrollments, both in traditional and online course settings (Levin, 2005). As demand for classes increases, schools naturally look for creative ways to fill the demands and desires of students. The rise of alternative education programs can satisfy some of these demands. For instance, [udemy.com](https://www.udemy.com/) is a website that hosts courses created by educators and field professionals. The courses range in subjects from personal development to computer programming languages to business and have been used by over 49 million learners (Udemy, n.d.). However, when employers demand a college degree as part of the requirements for particular positions, nothing short of a college degree will suffice, and enrollment in collegiate programs grows, often beyond the ability of existing full-time faculty to meet. Consequently, colleges and universities turn to employing more adjuncts to fill the classes that students need (Levin, 2005).

Finding and hiring new faculty is only one step in the process. In order for new adjunct faculty to be successful, some sort of training is necessary. Many institutions have a form of training in place, but frequently those programs fall short of providing a rich and varied exposure to the foundations of sound teaching, including a background in pedagogy, andragogy, teaching techniques and engagement strategies (Maksymchuk, 2018; Bautista & Cipagauta 2019; Paul, 2015). Instead, adjunct faculty must enter the classroom with minimal to no formal training and limited access to ongoing professional development programs (Paul 2015; Thirolf 2013; Morton 2012).

Some institutions implement mentoring programs for new faculty. These programs, when well-structured and thoughtfully administered, can be of enormous benefit to new adjunct faculty in their first forays into collegiate teaching. However, it is

worth noting that these programs also take significant time for both the faculty mentors and the new adjunct faculty receiving the support (Morton 2012; Shattuck et al. 2011; Baik et al. 2018). Sometimes the time demands are so high that the programs become a burden themselves, stealing time away from other critical aspects of an adjunct's work, such as course preparation, lesson planning and grading. As a result, the well-intentioned mentoring program may be abandoned or seen as one more thing to do rather than the enriching and empowering program that it was intended to be. Clearly, for any program to be deemed useful it must provide high value in terms of immediately perceived benefit to the instructor while simultaneously not overwhelming the participants it purports to be helping.

Institutional support of adjunct faculty is critical to adjunct faculty success (Baik et al. 2018; Paul, 2015; Thirolf, 2012). Institutional support is more than just a welcoming gift, a cubicle to do grading and a slot to pick up mail. Institutional support must address the variety of factors that must be managed by adjunct faculty. Training around policies, procedures and expectations certainly makes up some of this, but it must not stop there. In-service meetings and professional development opportunities must be provided and in a way that allows the adjunct to take advantage of them (Thirolf, 2013). If the separation between adjunct faculty and full-time faculty is obvious, adjunct faculty may feel undervalued. This may lead to poor reviews on faculty satisfaction surveys and lower job satisfaction which generally lead to reduced student engagement (Thirolf, 2013).

Adjunct faculty are a major resource, helping solve some of the problems of increased need and demand facing colleges and universities, especially in career-

connected education. Successful utilization of adjunct faculty requires careful recruiting, training, mentoring and support from the institution. Anything less may result in failure to meet the needs of students and thereby the needs of the institution.

Local Context

This action research (AR) study was conducted at a small, not-for-profit private college in the western United States. The college focused on providing career specific education leading to certifications and associate degrees in the health sciences, computer science, graphic arts and business and accounting and bachelor's degrees in business. The college delivered education primarily via face-to-face instruction with Canvas being utilized for turning in assignments. Courses were built centrally, so adjunct instructors were not responsible for book selection, syllabus creation or assignment development. The adjunct instructor's role in course development was extremely minimal. The college delivered education in a traditional semester system, with each semester consisting of 14 weeks.

The existing training program for new adjunct instructors was facilitated through a Canvas course supplemented with a website providing non-course specific information and a two-hour face-to-face orientation. This was to be completed prior to courses being assigned, so it did not interfere with other responsibilities. The Canvas course was focused on helping instructors learn to navigate Canvas, provide students with timely grading, and make necessary adjustments to course assignments and documents. The college's website and Canvas course contain information around the institutional objectives and college wide outcomes that all instructors were expected to support. There was some information in the website about the importance of using constructivist

strategies, but no specific training was built around the material; it was entirely up to the instructor to decide if and when to engage the material.

The ongoing faculty development activities consisted of regular faculty meetings scheduled by each department and annual “all hands” meetings held prior to the start of each school year. The faculty meetings were typically scheduled during the early afternoons, which made it difficult for most adjuncts to attend. The “all hands” meeting was typically held in the evening and included breakout sessions within each program area.

The institution provided opportunities for new adjunct instructors to be observed at least three times each semester while veteran instructors were observed once per semester. At the conclusion of the observation, the observer's notes were made available to both the instructor and the program director. The notes may provide a framework for remedial training for the instructor, but this was typically only provided for instructors who performed poorly and was not necessarily designed to catch all opportunities for improvement.

During the time of this study, the researcher was an adjunct instructor and had served in that capacity for seven years with the business department and two years with the general education department. The researcher had attended several “all hands” meetings and several departmental faculty meetings but received no additional training outside of those meetings.

Problem of Practice

The problem of practice revolved around adjunct instructors' confidence in using constructivist strategies in the classroom. This sense of confidence was referred to as

teaching self-efficacy or TSE throughout this study. At the time of this study the new teacher orientation and training program presented information around constructivist ideas but allowed for little time for active discussion or practice of specific strategies. This format was unlikely to allow instructors to feel confident in their competence or mastery of these strategies. In this context, competence referred to the instructors “having sufficient knowledge, judgment, or skill” in the use of constructivist strategies while mastery referred to the “possession or display of great skill or technique” (Merriam-Webster, n.d.). It is unlikely that competence and mastery could develop in two hours of face-to-face instruction. Further, unsupported time with a website was unlikely to provide sufficient practice for the development of a sense of competence, let alone mastery.

An instructor’s confidence in his or her competence and mastery of a skill can be described as a sense of self-efficacy in teaching. Self-efficacy can be described as an individual’s belief in his or her ability to successfully take particular action within a specific framework of expectations (Bandura, 1997). In the context of this problem of practice, the particular actions were the regular use of constructivist learning strategies such as posing questions, assisting students in discovering answers, allowing students time to compare answers and adjust understanding based on conversation with other students and the instructor. Many of these actions can be challenging for the best of instructors, especially when students may be uncomfortable using activities that are primarily student led vs activities that are primarily teacher led. It naturally follows then that new instructors would likely struggle with these skills even more, especially if they had not been able to develop confidence in their ability to do those tasks well. That

confidence is what self-efficacy is all about. Self-efficacy develops best when opportunities are given to reflect, discuss and practice, and at the time of this study those opportunities were somewhat lacking in the existing adjunct instructor supports.

The current new instructor training did not support the development of teaching self-efficacy in new adjunct instructors because of three key factors. First, there was insufficient time spent helping the instructors develop a strong sense of self-efficacy in their new role of collegiate instructor. Second, there was insufficient opportunity to practice the skills that are connected with constructivist strategies. Third, there was little to no time spent addressing the ideas of pedagogy and andragogy and the ways that instructors could use these insights when using constructivist strategies with their students. The critical nature of each of these aspects is discussed below.

The opportunity to practice skills is a foundation of most, if not all, training and development programs. Gladwell (2008) popularized the idea that 10,000 hours are necessary for mastery of a set of skills and the idea that practice of skills in small sets can yield significant skill improvement. While that specific time frame has come under scrutiny and question in recent years (Macnamara et al. 2014) there is no resistance to the idea that deliberate practice makes a difference in developing skills. As the orientation and training program provided limited instruction and guided practice for all policies, procedures and institutional practices covered, it was natural to conclude that the critical skills connected to the use of constructivist learning strategies were not being practiced enough to yield understanding and competence, let alone mastery. Providing a focused period of practice of these skills could not only assist in preparing new adjuncts for the

necessary work of the position of instructor, it could also assist in the development of a sense of TSE more broadly.

Concepts of pedagogy are a staple of many teacher training programs (Maksymchuk, 2018), but individuals who do not go through such programs are frequently unfamiliar with even the most basic concepts. Additionally, frameworks for pedagogy, such as Bloom's Taxonomy (Bloom et al. 1956) were originally developed for educators working with k-12 learners. These concepts then are foundational for educational professionals, but those working with adults may also find the principles of andragogy (Smith, 2002) to be equally useful. New adjuncts prepared with these concepts could use them to strengthen their use of constructivist learning strategies with students and may also have found that the information gained in such a training process may have contributed to their sense of TSE.

Early Reconnaissance

Early reconnaissance around the problem of practice was conducted by way of interviews with three members of the faculty and staff with the college. All members agreed that the training provided was good with regard to policies and procedures, but more time was desirable in the development of TSE and the use of constructivist strategies by new adjunct instructors.

Purpose of this Study

This study was intended to discover whether a training program that included focused training around constructivist teaching strategies within the context of a Community of Practice could result in greater TSE among the participants. The training was designed to provide experiences in all factors that support the development of TSE

with the intent of helping instructors feel more confidence in their ability to use the selected strategies in real classrooms with real students. The primary research question was framed to observe self-reported changes in TSE and the use of constructivist strategies while the second research question was concerned with identifying which aspect or aspects of the program were most useful in creating any observed changes by the participants themselves.

Research Questions

- 1) What impact did the T-SEDI program have on:
 - a) Teaching self-efficacy or TSE?
 - b) Self-reported use of constructivist strategies?
- 2) What did participants find to be the most effective aspects of the T-SEDI program?

Conclusion

In a collegiate setting, training of new instructors plays a critical role in the success or failure of the instructor. The more carefully thought out the instructor support program, the more likely the instructors that go through such a program will feel and act with confidence in their new roles. This confidence is at the heart of TSE, and helping instructors develop a sense of TSE makes a difference in setting the stage for frequent use of constructivist learning strategies.

CHAPTER 2

THEORETICAL PERSPECTIVES AND RESEARCH GUIDING THE STUDY

Adjunct instructors are among the most critical assets for many of the universities and colleges in the United States and around the world, yet they are also frequently overlooked with regards to training, development, and inclusion in the community of the university (Baik et al. 2018; Bautista & Cipagauta, 2019; Morton 2012; Paul, 2015). This chapter will review relevant literature around the adjunct instructor role at institutions of higher education, the critical role TSE plays in instructor success and some common adjunct instructor training practices in current use. Following that, a review of pedagogical, andragogical and constructivist principles and their application in higher education will be provided. Finally, the critical role that communities of practice can play in the development of teaching self-efficacy will be explored.

Adjunct Instructor Role

Ensuring successful instruction at the collegiate level is no small task, and upon its accomplishment hang the hopes and dreams of students, their families and the businesses in which they will eventually work. The delivery of that instruction rests more and more frequently on the shoulders of adjunct instructors, sometimes referred to as part time instructors or casual academics, who often teach at more than one institution and in many cases have full time jobs outside the university (Baik et al. 2018; Flaherty, 2018; Thirolf, 2012). As was noted earlier, the use of adjunct instructors can provide students with unique insights in how concepts and theory are applied in the non-academic world (Morton, 2012; Bautista & Cipagauta 2019). The use of adjuncts also allows higher education institutions to positively respond to increased enrollment and increased

demands on full-time faculty for service activities like advising and program development (Levin, 2005). However, as Thirolf (2012, 2013) has noted, simply hiring an individual and calling them an instructor may not be sufficient to create an effective instructor. Instructors need foundational knowledge of teaching principals and a strong sense of TSE to fully engage in this role.

Self-Efficacy and Teaching Self-Efficacy

Bandura (1997) in his landmark work *Self-Efficacy: The Exercise of Control* posited “self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p 3). Self-efficacy then forms the foundation of all achievement within any endeavor. For Bandura, the principle of self-efficacy was tied to four specific factors, namely *vicarious experience*, *social persuasion*, *mastery tasks* and *emotional and physiological states*. Each of these four principals will be described, and the ways in which they can be used to foster teaching self-efficacy will be examined. Building on the definition of self-efficacy developed by Bandura (1997), TSE is particular to the individuals’ belief that she or he can organize and execute courses of action to teach successfully. Said another way, if an individual is hired as an instructor, the first thing that must be done to set the stage for success in the role of instructor is to find ways to positively increase the new instructor’s sense of TSE.

Thirolf’s (2012; 2013) research demonstrated these principles. Using this view on Bandura’s work to examine the role that TSE had in the effectiveness of adjunct faculty teaching in institutions of higher education, Thirolf (2012; 2013) studied adjunct instructors at or near the beginning of their work as instructors. She concluded that an adjunct’s sense of TSE was critical to the successful application of teaching techniques

and pedagogy. Both classroom performance in the short term and integration in the institution and the profession in the long term were shown by Thirolf (2012) to be impacted by the strength of the instructor's sense of teaching self-efficacy.

According to the theory of self-efficacy, when the sense of self-efficacy is well developed, the individual is able to do difficult and challenging tasks (Bandura, 1997). In terms of teaching self-efficacy, these challenging things could include learning to successfully use sound pedagogical, andragogical and constructivist instructional methods (Paul, 2015; Morton, 2012).

Vicarious experience is the first principle of self-efficacy. In the case of an instructor, this *vicarious experience* could be obtained through a combination of watching an experienced instructor using sound teaching methodologies during an instructional period and following that demonstration with conversation in which the experienced instructor explains how and why the strategies were used the way they were. The new instructor might begin to understand how the skills demonstrated and explained could be applied to a new and unique instructional setting. The *vicarious experience* would provide some support in the process of developing TSE

Social persuasion can come in a variety of forms as well. Staying with the example of our new instructor working with an experienced instructor, after demonstration and explanation the new instructor may still be somewhat hesitant to engage in using the instructional strategy. However, the experienced instructor can provide *social persuasion* in the form of verbal encouragement directly to the new instructor. This encouragement provides further support in the development of TSE and may help the new instructor decide to engage in utilizing the new strategy. *Social*

persuasion can also appear in other forms of communication, such as a written note of encouragement, an email or text or a phone call from the experienced instructor encouraging the new instructor to take action and make attempts.

Participation in *mastery tasks*, or the activities critical to the outcomes that one is attempting to develop self-efficacy in, is a powerful part of the process of developing self-efficacy. This occurs when an individual undertakes the process of doing what was previously demonstrated and described. Staying with the new instructor example, when the new instructor builds a lesson plan, prepares instructional notes, writes down possible resources and questions to use during the instructional period and spends time reviewing student submissions, the new instructor has engaged in the connected *mastery tasks* of teaching. The presence of the experienced instructor during any of these actions may provide an opportunity for further *verbal persuasion* and feedback as well as opportunities for fine tuning the performance of the *mastery tasks* themselves.

Emotional and physiological states refer to the individual's affective responses to the presence of the other factors. When the experienced instructor provides *social persuasion* along with clear encouragement about the new instructor's ability, it is likely that the new instructor may feel a sense of anticipation and excitement regarding implementing the strategy. Also, when the new instructor utilizes the new instructional strategy successfully it is likely that the new instructor will feel a sense of pride and accomplishment. The sense of anticipation and accomplishment may both increase the new instructor's sense of TSE.

Existing Training/Support for Adjunct Instructors

It is not uncommon for institutions to provide new employees, including adjunct faculty, with a form of onboarding or orientation (Wicks et al. 2020; Paul, 2015). Usually such an experience includes significant time devoted to covering policies, procedures and familiarity with internal communication systems, like email and the learning management system in use with the institution. As Morton (2012) suggests, training around policies, procedures and technology is appropriate for any and all employees, but may be wholly insufficient to provide a new adjunct instructor with a strong enough sense of TSE to allow the instructor to successfully do the work of instructing in meaningful ways. After all, being a confident teacher is much more than knowing when to submit grades and how to log-in to email.

Ongoing professional development opportunities that address the various factors that contribute to the development of a strong sense of TSE exist in many institutions, but the simple availability of such programs may not be enough. The content, context and delivery plan for these opportunities must be evaluated around the ability of the adjunct faculty to participate and benefit. Thirolf (2013) suggested that programs and events that bring faculty, both adjunct and full-time, together for training and development may be the best way to assist in helping adjuncts develop a strong and resilient sense of TSE. Other considerations may be finding times or methods that are more flexible so as to provide adjuncts with an ability to attend the events without interfering with their work responsibilities at their second and sometimes third place of employment.

Another factor institutions must address involves finding ways to involve both adjunct faculty and full-time faculty together. Workshops can address *mastery tasks*, peer

presentations can provide new instructors with *vicarious experiences*, and open discussions between new and experienced instructors can provide opportunities with *verbal persuasion* and can certainly influence *emotional and physiological states* for both new and experienced instructors, all of which provide opportunities to connect the two groups together and strengthen teaching self-efficacy in all that participate (Thirolf, 2013). Morton (2012) specifically advocated mentoring programs as opportunities to increase TSE in adjunct faculty as such programs have been shown to have some success. Clearly, efforts for strengthening instructor self-efficacy for adjunct instructors may take multiple forms, but they must exist in a way that is planned and consistently executed so as to be available for the adjunct instructor.

Obviously, institutional imperatives exist for training, especially for training new faculty. Policies, procedures and expectations must be discussed. New faculty must learn and become familiar with the legitimate business requirements of the institution. But if those are the only things covered in training sessions and no time is provided for discussion of *mastery tasks*, *vicarious experiences* or for providing ongoing *verbal persuasion* regarding the development of the skills, knowledge and craft of teaching, the likelihood of the new adjunct instructor ever developing a strong sense of TSE is questionable. And without the development of TSE, the ability of the instructor to be successful, both in the long term and the short, is in question.

Pedagogy, Andragogy, Constructivism and Successful Instruction

Successful engagement with students in the higher education setting is most likely to occur when instructors understand and apply sound pedagogical and andragogical principles including an understanding of constructivism (Merriam et. al., 2007). The

Merriam-Webster online dictionary (2022) defines pedagogy as “the art, science or profession of teaching.” In order to obtain a teaching license, K-12 teachers must complete a university degree program in teaching, often referred to as pedagogy. Collegiate and university instructors are not required to go through such programs, particularly when those instructors are adjuncts. As a result, their understanding of the art and science of teaching is often understandably incomplete.

Closely related to pedagogy is andragogy, which is defined as “The art or science of teaching adults” (Merriam-Webster, 2022). Andragogy in the United States was championed by Malcolm Knowles beginning as early as the 1950’s. Andragogy posits that adults are able to approach learning differently than children as a result of several key factors, including a more mature self-concept, increased experience and readiness to learn, and a change in orientation toward learning activities and motivations to learning (Smith, 2002). These concepts can inform the way that higher education instructors engage with their students.

Constructivism as an educational philosophy suggests that students develop, or construct, personal meaning about concepts and ideas as they apply the concepts and ideas to specific challenges (Derry, 2013). Piaget and Vygotsky, two key figures in the development of constructivism, studied two different aspects of constructivism. Piaget was most concerned with how the individual constructs meaning while Vygotsky was more concerned with how social interaction shaped and contributed to the construction of meaning (Derry, 2013). Vygotsky suggested that, while the presentation of information may set the stage for learning, learning happens when the individual engages others in conversation and more deeply when the individual uses information in everyday living

(Derry, 2013). This is a central theme of constructivism, that presentation of material by an experienced instructor is useful but meaning is created through active engagement. In fact, successful instruction in a higher education setting has often been described as student centered, which is typified by instructors employing constructivist strategies and empowering students to take an active role in the creation of their own learning processes and even providing assessments which respect the same (Klemenčič, 2020).

In formal educational settings, meaningful engagement can come from solving problems and building artifacts (such as works of art, literature or papers) and also from conversation with others, including peers, significant others and instructors (Crawford-Ferre & Weist, 2012). This understanding has led educators to develop strategies and tools that take advantage of the insights provided by constructivism.

Among the constructivist tools frequently used are Problem Based Learning (PBL), Cooperative Learning and Inquiry Based Learning (IBL) (Buffalo, n.d.). While related, these concepts are subtly different. In PBL learners are presented with real world situations and allowed to work on their own to find, create and propose solutions. For instance, in a business class learners might be provided with a prompt such as, “You have been assigned the responsibility of evaluating employees in a department for work success and the potential of receiving bonuses. How will you proceed?” Learners presented with a problem like this are then allowed to explore resources available in textbooks, the internet and other research material and then could be guided in preparing a full set of responses and instructions as artifacts for the solution.

Closely related to PBL is Cooperative Learning in which students are presented with real world problems, as with PBL, but are then placed in groups to work through the process of finding and preparing solutions (Buffalo, n.d.).

In IBL, learners are encouraged to pose their own questions and create insights and connections as they look for and find their own unique solutions and instructors fill the role of guide or designated questioner. For instance, after a learner provides a situation or scenario that they find interesting but do not fully understand, the instructor might ask priming questions such as “What will you do first?” without giving specific guidance as to a preferred order. It is up to the learner to discover that to some extent. An instructor is also likely to ask questions about prior experience, helping the learner be aware of connections that can be made to situations or events experienced before (Buffalo, n.d.).

IBL can be difficult to implement in some situations, especially if learners have particular standards or expectations to meet (WGU, n.d.). Implementing IBL, PBL or Cooperative Learning strategies successfully all require training and practice to maximize the effectiveness of the strategy. For these constructivist strategies (as with all teaching strategies), instructor involvement is critical and necessary (Buffalo, n.d.). Active learning strategies provide ample opportunities for student engagement (WGU, n.d.). These strategies are in harmony with the concept of student-centered learning but are not necessarily familiar to adjunct faculty as they are relatively recent developments in pedagogical strategies (Roehl et al. 2013).

Communities of Practice

Communities of practice (CoP) are groups of individuals who share a desire to deepen understanding around a concept, idea, or body of knowledge (Wenger-Trayner & Wenger-Trayner, 2015). A CoP framework may be extremely useful for strengthening a new adjunct instructor's sense of TSE by providing an opportunity to interact with other new and veteran instructors.

Integrating a CoP to strengthen information being shared with new instructors has been shown to be effective. Baik and colleagues (2018) and Thirolf (2013) separately concluded that if initial didactic training programs were not followed up with opportunities for reinforcement, discussion and further development, the sense of TSE suffers and the success of the instructor begins to diminish. For this reason, formal and informal CoPs may be useful in providing training opportunities, especially in the early months of an instructor's work (Baik et.al., 2018).

CoP meetings could be established with an eye to the intentional development of TSE. For instance, prior to the meeting, instructors could all receive a similar article or reading assignment tied to a particular strategy. During the meeting, veteran instructors could discuss how they have used the strategy in the past, including ideas for how to implement the strategy effectively with the particular students attending the college or university. Allowing veteran instructors to share with novice instructors in this way supports both the *verbal persuasion* and *vicarious experience* aspects of self-efficacy development. During the meeting participants could be invited to share ways in which upcoming lessons could be augmented with the particular strategy being implemented, providing an opportunity for *mastery task* practice. Finally, time could be made during

the meeting to “Return and Report” the outcomes of the successful use of the strategies. Sharing with peers’ information regarding successful implementation provides an opportunity for the experience of positive *emotional and physiological states* which further strengthen the instructor's sense of TSE.

Conclusion

As more institutions utilize adjunct instructors across their programs, it becomes critically important that training programs do more than address the technical aspects of communication and recordkeeping. Training must be provided that addresses the complex process of teaching, including time spent helping new instructors develop a sense of instructor self-efficacy.

This action research study proposes an innovative training framework that utilizes constructivist principles to address pedagogical, and andragogical teaching techniques. It also provides opportunities for new instructors to connect with others and learn from *vicarious experience* and *verbal persuasion* from others as well as opportunities to learn from *master tasks* in both individual learning materials, and classroom instruction.

CHAPTER 3

METHOD

This action research project sought to improve instructors' sense of TSE and their ability to successfully engage with students in meaningful ways. Action Research (AR) differs from theoretical research in that the intention of AR is to solve problems appearing in the regular practice of the researcher (Mertler, 2020). AR projects also differ from theoretical research in that they are cyclical in nature (Mertler, 2020), with the results from one cycle becoming the beginning point for further refinements in the next step. This project's primary goal was the improvement of the TSE of new adjunct instructors within one specific higher education setting.

Setting

The current cycle of this AR project took place in the business department of a small private college in the mountain west. The college enrolls just over 2000 students, many of whom are international students. In the business department, approximately 4 out of 5 instructors were considered adjunct, voluntary or some other non-full-time compensated designation. Each semester as many as five to fifteen new adjunct instructors were hired to teach in the business program.

Current Program

The college had a New Instructor Training Program (Program), which all new faculty, both adjunct and full-time, were required to complete. The Program included training around College Wide Capabilities, the Mission and Vision of the college and the utilization of Canvas in connection with assignments, attendance, grading etc.

The Program consisted of not less than two hours of face-to-face interaction with a member of the college community (trainer, program director or veteran faculty member) and not less than five hours of online training consisting of units delivered through the college's LMS program. The online units detailed expectations of new instructors regarding contact with students, grading, classroom decorum, utilization of the LMS for assignments, attendance, grading etc., and college policies and compliance requirements, such as FERPA training. Participants could progress as quickly as individually desired through the LMS delivered materials, but all materials were to be completed prior to the first day of classes for any semester. At the conclusion of the orientation program, veteran faculty members and academic administrators reviewed at least one course per semester to provide coaching and feedback for improvement.

With regard to ongoing professional development, each program director within the college was expected to convene regular opportunities for faculty to refresh their understanding of policies, procedures and expectations within the college and was allowed to include additional professional development as deemed useful for the faculty group. Additionally, the college held one training event at the beginning of each academic year to introduce new adjunct faculty to the college and existing faculty. The event was held in conjunction with a dinner, a keynote speaker and a ninety-minute break out session conducted by each program group.

The innovation used in this study was used in conjunction with the orientation and ongoing professional development activities used by the college at the time the study was conducted. The orientation program is described below, as well as the additional training components that were added for this innovation.

Participants

All new Instructors hired from the fall of 2021 through the fall of 2022 were required to participate in the Teaching Self Efficacy Development Initiative (T-SEDI) as part of their preparation for accepting teaching responsibilities for the college. New instructors were hired due to their expertise in their field of applied knowledge (accounting, human resources, business management, etc.) and many had previously earned master's degrees, though few had formal teaching or training experience. As terminal degrees were not required to teach in the applied science programs of the college, no participants held terminal degrees.

Four new instructors were hired during the period of time covered by this research project, and a total of ten instructors participated in the study with one requesting to drop before the study was completed. The participants included new adjuncts, experienced adjuncts and full-time instructors.

Role of the Researcher

The researcher was the primary developer of the T-SEDI program. Members of the college's business department reviewed and provided feedback during the creation of all materials to ensure consistency in messaging with existing orientation program materials. In addition, the researcher distributed all materials, administered all data collection measures, conducted and observed meetings, and completed all data analysis and interpretation of results.

Procedures

The innovation, described below in detail, consisted of a focused TSE instructional unit developed during the summer of 2022 and delivered during fall

semester of 2022. Participants were recruited from the pool of all instructors, both adjunct and full time, teaching in the business department at the institution during fall semester 2022. Email invitations were sent to all business faculty, with new adjunct faculty informed of the requirement of their participation as part of their first year of teaching as an adjunct. Accompanying the email was a link to an electronic version of the informed consent document hosted on JotForm, a free electronic service, which allowed participants to review the informed consent documents and provide electronic signatures. Participants were also allowed to provide wet signatures on hard copy informed consent documents prior to participating in any surveys or meetings if they preferred.

Data for surveys was collected via SurveyMonkey for pre- and post-intervention survey instruments. Data from survey instruments was grouped into specific constructs of TSE, consistent with the survey instrument. Data was also analyzed by demographic groups (new adjuncts and experienced instructors) within those constructs. Paired sample t-tests were performed by demographic groups to identify any change in expressions of TSE from pre-innovation survey to post-innovation survey. Data for the post-innovation survey instrument also requested feedback from participants regarding overall impressions of the program.

Meetings were recorded via audio device and, in some cases, zoom. All meetings were transcribed for qualitative data analysis. Qualitative data analysis of the content of the meetings was performed using HypreRESEARCH.

Data was kept on a password protected cloud-based server with participant names changed to code. The code key was housed in a separate password protected document.

Innovation

The T-SEDI program was designed to directly address all four aspects of self-efficacy development, namely working with *master tasks* and providing opportunities for *verbal persuasion*, opportunity to reflect on *emotional and physiological states* brought about while working with the development process and *vicarious experience*. T-SEDI added the following activities to the existing orientation and professional development program: A pre- and post-innovation survey, two online articles which addressed using Problem Based Learning (PBL) and Cooperative Learning (CL) in the instruction of collegiate students, and two short CoP sessions to discuss the insights and opportunities for implementing the article insights. Participants included a mix of new and veteran faculty in all CoP meetings. The innovation was prepared with regard to the factors that are necessary in developing TSE. The articles provided an opportunity for *vicarious experience*. The CoP meetings provided a place for *verbal persuasion* and an opportunity for participants to reflect on and discuss their *emotional and physiological states* relative to implementing the suggested strategies. Time was provided in the CoP meetings to discuss how the instructors could integrate the insights into existing lesson plans, thereby providing some opportunity to practice *mastery tasks* during the meeting. Time was also allowed during the second meeting to discuss any results noted by instructors when they implemented the suggested strategy after the first CoP meeting, allowing for more time to process *emotional and physiological states* relative to using the strategies. The two CoP sessions were conducted as follows:

Session Group 1: This session lasted 30 minutes. Three separate meetings were conducted to accommodate individual instructor schedules, with no meeting comprising less than 3 active participants, including the principal researcher. Two meetings were conducted as face-to-face meetings and recorded via an audio device and a third was conducted and recorded via zoom. Prior to the session, an article was delivered to all participants via email addressing the use of PBL strategies in a face-to-face instructional environment. Twenty (20) minutes was dedicated to discussing the insights from the article, possible applications in the classroom (both face to face and virtual) and results that have been noticed in the event that instructors have implemented the strategy at some time in the past. The remaining 10 minutes of the meeting allowed for housekeeping items, relevant college business and some light socializing. Instructors were invited to write down a major takeaway from the conversation and how they anticipated they might use the information in a specific future lesson.

Session Group 2: This session lasted 30 minutes. Two separate meetings were conducted to accommodate individual instructor schedules, with no meeting comprising less than 3 active participants, including the principal researcher. One meeting were conducted as face-to-face meetings and recorded via an audio device and another was conducted and recorded via zoom. Prior to the session, an article was delivered to all participants via email addressing the use of Cooperative Learning (CL) strategies. Five (5) minutes at the beginning was devoted to discussion of outcomes from the previous session, soliciting feedback from participants as to planned activities. Fifteen (15) minutes was dedicated to

discussing the insights from the article, possible applications in interactions with students (both face to face and virtual) and results that have been noticed in the event that instructors have implemented the strategy at some time in the past. The remaining 10 minutes of the meeting allowed for housekeeping items, relevant college business and some light socializing. Instructors were invited to write down a major takeaway from the conversation and how they anticipated they might use the information in a specific future lesson.

Teaching Self-Efficacy Survey

Before and after the innovation, participants completed an adapted form of the Teacher's Sense of Self Efficacy Scale Short Form, hereafter referred to as the Scale. (Tschannen-Moran & Woolfolk Hoy, 2001). The Scale consisted of 12 questions, though for the purposes of this study, one question addressing work with families was removed, as participants' students were all adults. Examples of questions from the scale included "How much can you do to motivate students who show low interest in schoolwork?" and "To what extent can you craft good questions for your students?" All questions can be found in Appendix A. All questions were scored using a 9-point Likert scale. Adjustments were made to the wording of the questions to make it applicable to a collegiate setting. For instance, the word *children* in the original scale was replaced with the word *students*.

The scale was designed with questions in three constructs. Each construct addressed specific master tasks connected with TSE, namely instructional strategies (questions 5, 9, 10 and 11), student engagement (questions 2, 4 and 7) and classroom management (questions 1, 3, 6 and 8). All questions were connected to the goals of

preparing an individual to be an instructor and of determining a sense of TSE (Bandura, 2005; Tschannen-Moran & Woolfolk Hoy, 2001).

In addition to the scale, the pre-innovation survey instrument included additional questions to identify the degree of previous teaching experience each participant had in the number of years teaching along with where that teaching experience was gained, i.e., public or private institutions, online or face-to-face, k-8, secondary or post-secondary experience.

Upon signing the consent form, each participant was either provided a hard copy Pre-Innovation Survey or emailed a link to the Pre-Innovation Survey instrument. The Survey included instructions for establishing a participant code which was used in connection with all data analysis and reporting. All consent forms, hard copy and soft copy, and surveys or links to surveys were provided or sent from August 30, 2022, through October 15, 2022.

The post-innovation survey instrument

link was provided to all participants during the final CoP meeting. Links were also emailed for the convenience of the participants, allowing them to complete at their leisure. All surveys were completed on or about December 22, 2022.

Session Transcripts

All T-SEDI training sessions were recorded via audio device or zoom and were later transcribed for analysis in HyperRESEARCH. Transcripts were evaluated using a Grounded Theory approach. A set of 10 initial codes were selected as A Priori codes while others were included according to standard qualitative analysis protocols (Saldana, 2021).

Analysis

This study aimed to answer the two stated research questions. The first being “What impact does the T-SEDI program have on: a) Teacher self-efficacy? and b) Self-reported use of constructivist strategies?” To answer the first question, pre- and post-innovation survey scores were compared individually, in the established constructs and across the survey in its entirety. Additionally, meeting notes were coded and compared across sessions to identify any changes in participants’ comments related to TSE over the course of the intervention. Codes and comments from early and later sessions were compared to identify possible changes in the ways that participants discuss their instructional strategies, student engagement, and classroom management.

To answer the second research question, “What did participants find to be the most effective aspects of the T-SEDI program?” two questions were added to the post-innovation survey. One asked participants to indicate their opinion as to the impact of the different training modalities employed (specific articles or CoP discussion meetings) while the other was an open-ended question encouraging participants to share additional perceptions of what they found to be the most helpful and influential components of the T-SEDI program. Meeting notes were also coded and evaluated with regard to identifying participants’ statements regarding aspects of the innovation they found to be particularly impactful. In analyzing both questions, participants’ responses were also compared with years of experience and type of teaching experience participants identified themselves possessing in the pre-innovation survey instrument.

Measures

Both quantitative and qualitative data collected were used to evaluate the efficacy of T-SEDI in increasing the TSE of those instructors who participated in the program. Data for this project included responses on pre- and post- innovation survey instruments through which participants assessed their sense of TSE before the innovation and at the conclusion. These were analyzed through paired samples t-test analyses.

Session recordings during all CoP innovation meetings were converted to written transcripts and uploaded to HyperRESEARCH for Qualitative Analysis.

Threats to Validity

Threats to validity of this project fell into two categories. These categories can loosely be referred to as participant driven threats and institutional threats. Participant driven threats included a lack of participation, pre-existing teacher self-efficacy that was pronounced and concern over candor or potential lack of candor in responses. Institutional threats included a change in priorities for the institution and a reduced emphasis on recruiting in the time frame of the study. The decision to add veteran instructors to the participant pool also carried the threat that they already possessed a well-developed sense of TSE and that little or no change may have been perceived by the participants or shown by the methods employed.

There was also a possibility that new instructors may have participated in other training programs prior to this innovation that provided them with significant TSE. In this case, the outcomes of the innovation may have been more modest owing to the strength of the pre-existing levels of TSE. To address this threat, demographic information from instructors was obtained as part of the Pre-innovation survey. There was some possibility

that candor in the answers of participants might have been impacted by fear that their answers will reflect negatively on them. Participants were encouraged to respond honestly to the survey questions with anonymity protected by code numbers instead of names. In CoP meetings, the emphasis was placed on learning together, rather than testing or evaluating individuals as a means of minimizing possible negative perception of any participant by any other participant.

In fact, the institution did not recruit as many instructors during the time the study took place which made recruiting new instructors for the study difficult. In response to this lack of new instructors, experienced instructors were added to allow for enough participants in the study to obtain informative data. In this case, the qualitative data from the limited number that participated provided additional insights as to the usefulness of the innovation.

CHAPTER 4

RESULTS

Both qualitative and quantitative analyses were used to evaluate changes as a result of the T-SEDI program, and which aspects of the program participants found most useful. Survey instruments provided quantitative results and meeting notes and observations were analyzed for qualitative findings. This chapter provides a review of the research questions that guided the study with subsequent results. For each question the relevant data is presented along with rationale for evaluation and concludes with a summary of research findings across data sources.

The T-SEDI program was intended to enhance the teaching self-efficacy of adjunct teachers in a small collegiate environment. The research questions that drove the study were as follows:

- 1) What impact did the T-SEDI program have on:
 - a) Teacher self-efficacy?
 - b) Self-reported use of constructivist strategies?
- 2) What did participants find to be the most effective aspects of the T-SEDI program?

Research question 1a was addressed through quantitative analysis of mean scores on both the pre- and post-innovation surveys. Mean scores were compared for the entire survey as well as the individual constructs of classroom management, student engagement and instructional strategies. Mean scores were also compared between new instructors and experienced instructors on the same constructs. Research questions 1b and 2 were examined through qualitative data analysis of participant comments during the

innovations CoP meetings, as well as through analysis of researchers notes and journal entries.

Question 1a: Did T-SEDI Improve Teaching Self-Efficacy?

Examining the first part of Research Question 1 required obtaining information as to the participants’ self-reported levels of teaching self-efficacy prior to the innovation and again at the conclusion of the innovation. Participants were asked to rate their sense of teaching self-efficacy on a 9-point Likert scale for each item.

Responses were analyzed using a paired samples t-test for each question individually, and on the composite average of responses. An alpha level of .05 was used to determine significance. These results are displayed in table 1.

Table 1

Paired Samples t-test for All Participants by Question

Question	Pre-Innovation M(SD)	Post Innovation M(SD)	<i>p</i>
Controlling disruptive behavior	7.78(.97)	7.56(1.01)	.26
Motivating students showing low interest	6.22(1.72)	6.22(1.56)	.50
Calm disruptive students	7.67(1.23)	7.11(.78)	.07
Helping students value learning	7.11(1.57)	7.00(1.58)	.30
Crafting good questions	7.78(.83)	8.11(.78)	.20
Getting students to follow classroom rules	7.44(1.13)	7.44(1.81)	.50
Getting students to believe they can do well	7.33(.71)	7.22(1.39)	.36

Establish a classroom management system*	7.88(.84)	7.88(.64)	.5
Using a variety of assessment strategies	7.22(.83)	7.44(1.59)	.35
Providing alternative explanations or example	7.67(1.00)	8.11(.60)	.17
Implementing alternative teaching strategies	7.00(1.00)	7.44(1.51)	.24
Entire Survey Average	7.34(.57)	7.40(.80)	.42

* one instructor left the question unanswered

No statistically significant change was seen in any questions on the survey instruments from pre-post innovation for the larger sample. However, during the sessions, it was observed that instructors who were newer to teaching appeared more receptive to the strategies. Therefore, a second post-hoc analysis was conducted, comparing new instructors and experienced instructors on all items. A dichotomous variable for instructor experience was created with a cutoff of three years. Five instructors had more than three years' experience teaching in a higher education setting and were considered "experienced." The remaining four instructors had less than three years' experience and were considered "new." Paired samples t-tests were then conducted within each group. The results are shown in tables 2 (experienced) and 3 (new).

Table2

Paired Samples t-test for Experienced Instructors

Question	Pre-Innovation M(SD)	Post Innovation M(SD)	<i>p</i>
Controlling disruptive behavior	8.00(1.00)	7.40(1.14)	.15

Question	Pre-Innovation M(SD)	Post Innovation M(SD)	<i>p</i>
Motivating students showing low interest	5.60(2.19)	5.80(1.92)	.41
Calm disruptive students	8.20(.83)	7.20(.84)	.05*
Helping students value learning	6.40(1.51)	6.00(1.23)	.09
Crafting good questions	8.20(.83)	7.80(.84)	.09
Getting students to follow classroom rules	7.60(1.14)	7.00(2.35)	.28
Getting students to believe they can do well	7.20(.84)	6.60(1.52)	.10
Establish a classroom management system**	8.00(.82)	8.00(.82)	.50
Using a variety of assessment strategies	7.40(1.14)	6.80(1.79)	.25
Providing alternative explanations or example	8.40(.55)	8.00(.00)	.09
Implementing alternative teaching strategies	7.40(.89)	6.80(1.64)	.21
Entire Survey Average	7.44(.70)	7.00(.72)	.12

* $p < .05$; ** question left unanswered by one participant

As table 2 shows, experienced instructors saw a statistically significant negative change with regard to question 3, “calming disruptive students” at the conclusion of the innovation (M=7.20, SD=.84) as compared to the before delivery of the innovation (M=8.2, SD=.83; $t(4df) = 2.24$, $p = .05$), suggesting that they felt less able to calm disruptive students after the intervention than at the beginning. No other statistically significant change was shown in this comparison of experienced instructors on all questions.

Table 3*Paired Samples t-test for New Instructors*

Question pair	Pre-Innovation M(SD)	Post Innovation M(SD)	<i>p</i>
Controlling disruptive behavior	7.50(1.00)	7.75(.96)	.20
Motivating students showing low interest	7.00(.00)	6.75(.96)	.32
Calm disruptive students	7.00(1.41)	7.00(.82)	.5
Helping students value learning	8.00(1.16)	8.25(.96)	.20
Crafting good questions	7.25(.50)	8.50(.58)	.04
Getting students to follow classroom rules	7.25(1.26)	8.00(.82)	.11
Getting students to believe they can do well	7.50(.58)	8.00(.82)	.09
Establish a classroom management system*	7.75(.96)	7.75(.50)	.5
Using a variety of assessment strategies	7.00(.00)	8.25(.96)	.04
Providing alternative explanations or example	6.75(.50)	8.25(.96)	.05
Implementing alternative teaching strategies	6.50(1.00)	8.25(.96)	.04
Entire Survey Average	7.23(.41)	7.89(.66)	.04

Table 3 shows that new instructors saw several more statistically significant changes in their survey responses about instructional strategies. New instructors showed significantly greater understanding of CRAFTING GOOD QUESTIONS at the end of the innovation (M=8.50, SD=.58) than before the innovation began (M=7.25, SD=.50;

$t(3df) = -2.6, p=.04$). Statistically significant changes for USING A VARIETY OF ASSESSMENT STRATEGIES were seen at the end of the program ($M=8.25, SD=.96$) than before the program ($M=7.00, SD=.00; t(3df) = -2.61, p=.04$). Statistically significant changes were also seen in PROVIDING ALTERNATIVE EXPLANATIONS OR EXAMPLE (Post innovation $M=8.25, SD=.96$; Pre innovation $M=6.75, SD=.5; t(3df) = -2.32, p=.05$) and in IMPLEMENTING ALTERNATIVE TEACHING STRATEGIES (Post innovation $M=8.25, SD=.96$; Pre innovation $M=6.50, SD=1, t(3df) = -2.782, p=.04$). New instructors also saw statistically significant change in their overall composite average score at the end of the innovation ($M=7.89, SD=.66$) vs pre innovation scores ($M=7.23, SD=.41; t(3df) = -2.580, p=.04$).

Conclusion

For Research question 1a, the T-SEDI program did not appear to improve participants teaching self-efficacy as a group. However, it did appear to improve the teaching self-efficacy of new instructors in the areas of crafting good questions, using a variety of assessment strategies, providing alternative explanations or examples and implementing alternative teaching strategies. More experienced instructors only showed improvements in calming disruptive students.

Question 1b: Did T-SEDI Increase Instructor use of Constructivist Strategies?

Research question 1b was addressed through qualitative analysis of comments and researcher observations during the innovation CoP meetings.

CoP Meeting Data

Qualitative data for the CoP meetings were evaluated utilizing HyperResearch. A codebook consisting of 8 a priori codes was utilized in the initial coding pass on the first

CoP meeting from phase 1. That code book was expanded to include an additional 10 in-vivo codes from a second round of coding. This was used as the beginning codebook for evaluation of the CoP meetings. The final iteration of the codebook consisted of 8 a priori codes, 3 pattern codes and 28 in-vivo codes.

After the establishment of the initial codebook, included in Appendix C, proceedings from the CoP meetings were analyzed in three stages. CoP meetings occurred in two groups, as indicated in Chapter 3. Meetings for groups one and two were first analyzed separately and then together to examine codes over time. Comments during the sessions were evaluated for any instances where instructors claimed to use some form of constructivist teaching strategy. Table 1.4 provides an overview of the a-priori codes, the operational definition assigned for use in coding, a quote for each code illustrating how that particular code may have been reflected in the dialogue of a CoP meeting, and the final count of how frequently each of the codes were used across all CoP meetings

Table 4

A Priori Codes and Example Quotations

A-Priori Code	Operational Definitions	Representative Quote	Frequency
Case Study Based Learning	Instructor chooses or discusses using case study-based learning	I would suggest that a case study is a formal document.	14
Cooperative Learning	Instructor chooses or discusses using cooperative or group-based learning strategy	[The students] present what they've got. They talk it through with each other.	39
Curriculum Integrity	Instructor discusses the importance of keeping the curriculum consistent	I love the way that [problem-based learning] is incorporated into HR 225	11
Inquiry Based	The instructor chooses or	When students start bringing	8

A-Priori Code	Operational Definitions	Representative Quote	Frequency
Learning	discusses using an inquiry-based learning strategy	in their own ... situations into the classroom.	
Problem Based Learning	Instructor chooses or discusses using problem-based learning	[We] should have every single class designed around PBL.	31
Questions about strategies	Instructor expresses questions about a teaching strategy or strategies and how to implement them	I was trying to figure out how [problem-based learning] is different than using case [studies]	16
Reciprocal Learning	Instructor chooses or discusses using a reciprocal teaching strategy	And then what I've tried to do is have the students more involved in kind of teaching one another, right?	16
Simulation Based Learning	Instructor chooses or discusses using a simulation-based learning strategy	There's so many elements of that simulation that apply to what did or should have taken place during COVID.	7
Total frequency for all a priori codes			142

The top ten in-vivo codes, their operational definitions, representative quotations from meeting proceedings and total instances across all meetings are shown in Table 5

Table 5*Top Ten In-Vivo Codes with Definitions and Representative Quotes*

Code Name	Operational Definitions	Representative Quote	Instances across all meetings
Make decisions and ... defend decisions	Students make and defend decisions	...having them make decisions. And defend those decisions. Why? Why did you choose that as the solution?	28
Real world applications	This code was used when an instructor references the connection of educational work to real world situations	If you come up with something that's so out of the ordinary that it makes more sense to go that direction, by all means, do that!	25
Balancing group with individual	This code was used when instructors articulated the necessity of ensuring individual competence while also making room for group contributions in either learning or professional performance	The format of teams is a little bit different because you'll have specialists that will bring things together.	14
Predefined solution parameters	Indicates that predefined solutions, typical of case studies and simulations, were different from undefined solutions, typical of most constructivist strategies.	Well, this is what they did and this is the right answer and a case study has that answer key bit about it. And [so does] a simulation kind of, depending on how the simulation is set up.	13
Resources for Finding Solutions	This code was used when an instructor indicated specific effort was made to direct students to resources for drafting solutions.	Good thing you brought that up, 'case I say our library is one of the best resources we have on campus.	13

Code Name	Operational Definitions	Representative Quote	Instances across all meetings
Asking students additional questions	Code indicated that the instructor was speaking about the practice and/or impact of asking additional questions during a learning activity	I do ask a lot of questions because I want to learn from my students, and I want to see where my students are coming from.	12
Resistance to implementation	This code was used when an instructor displayed resistance or reluctance to using new strategies.	As I'm sitting here right now, I can't think of anything I would change in the next few weeks anyway	11
Different solutions	This code was used when an instructor indicated that different solutions could be generated for the same activity, typically case studies	They are trying to solve a real problem that we just faced. And you know, there is no right or wrong, there's just different ways to solve it.	10
Digging Deeper	Code described the process of coaching and encouraging students to dig deeper in their learning. Different from just asking additional questions.	She was wanting me to spell out the whole thing and I . . . was like, "No, you know what you're doing. Just trust yourself and see how it happens."	10
Finding answers vs solving problems	Code was used when instructors brought up the idea that solving problems is different than simply finding right answers	They just want to tell the answer that others want . . . and helping them realize they're not just finding answers, but they're solving a problem.	10

Both the quotes from the a priori case examples and the top 10 in-vivo examples illustrate that instructors not only became conversant with some terminology and

verbiage surrounding constructivist teaching but also were willing to share when they were both willing and hesitant to utilize constructivist strategies. The participants' conversation included ways in which students constructed meaning for themselves, argued for decisions and had to defend conclusions in conversation and discussion. Instructors articulated, particularly in later meetings, ways that students were invited to teach one another and engage in the hard work of solving problems as opposed to simply finding "right answers."

Also of interest from the CoP meetings were two concerns expressed regarding implementation of constructivist strategies. The first was more specifically related to Problem Based Learning, the subject of the first article and first CoP meeting. The concern was that of changing the curriculum in order to implement PBL. One of the participants expressed, "We're constantly revising ... making [it] better, but as I'm sitting here right now, I can't think of anything I would change in the next few weeks anyway." Another participant expressed something similar when they said, "I just need to dive a bit deeper into that. I'm certain there are things that I can apply a little bit, share better . . . but if we have a project or a group assignment or whatever, how do we allow them to do certain things?" This example suggests that participants felt a level of expertise or practice was necessary before implementing the PBL strategy, and these were coded with the RESISTANCE TO IMPLEMENTATION code.

The second concern around implementing constructivist strategies appeared during both the PBL phase and the Group Learning (GL) meetings. This concern was illustrated by quotes like, "I paid to have a teacher come and help me learn, and I'm just doing it with the members of my class," and "I feel there are students who sit back and

go, if you're making me go do the work, then I don't feel like you're educating me."

Taken together, these two concerns suggest that teachers felt unprepared or unequipped to explain the value of constructivist teaching and learning strategies to students in a way that could help students see the value they brought to the learning process. These comments were coded using the WHO'S DOING THE TEACHING? code.

Throughout the innovation, there appeared to be a shift away from a defensive stance regarding constructivist strategies to an acceptance of strategies. One participant who had some administrative responsibilities for one of the programs stated, "I would hope that none of my adjuncts would change the curriculum," during the first meeting when discussing implementing PBL. The same participant said in the second meeting, when the group was asked if they had found a way to use PBL in the classroom, "Today! In just ½ hour we have a class, and it's an extra class that we normally don't have ... so we'll see how it goes." This change in position was echoed by others as the innovation continued. Where conversation was somewhat slow during first meetings and participants spent time looking around the room and waiting for someone else to participate, the second set of CoP meetings were livelier, and discussion was much more free flowing.

An additional insight that arose from session observations was the nature of conversation around the constructivist strategies. During early meetings, the discussion revolved around understanding new constructivist strategies in comparison to the strategies with which they were already familiar. For example, participants seemed to have a foundation in case study learning and attempted to understand problem-based learning by how it related to case study learning. This was illustrated by the participant who offered "I was simply trying to figure out how it's different than using cases." To

which another participant responded, “I’m not sure that it is different, or it has to be different, ‘cause that’s what a case study is.”

Later discussions seemed to shift to not just understanding the strategies themselves, but also how and when those strategies could be integrated into their teaching (immediately, or in the later process of course redesign). This motivation to include the strategies in teaching was clearly illustrated by one participant who said, “I did relate that I wondered if this could be applied to that in some way, to turn it into a bigger assignment or activity.” Participants in later sessions appeared to be more focused on looking for ways to implement the strategies being presented and were more collaborative in suggesting ways of using the strategies. One of the participants gave voice to that when they offered this:

But let me say, what I like about the group project, or the group learning is, you know, we’re trying to give them ... prepare them for the ... to go out and get jobs, right, and in ... at work you’re typically working on things with other people. And so you need to be able to [say] we gotta fix this. How are we going to do that? How can we do this together? And so, it’s a better simulation of what the workforce is like than solo assignments or tests.

Conclusion

For question 1b, the data suggest that the T-SEDI program resulted in some challenging or resistance to the use of constructivist strategies initially, but overall improvements in self-reported use of constructivist strategies toward the conclusion of the study. These improvements were evidenced by the change in both content and context of dialog during the CoP meetings as documented above.

Question 2: Most Effective Aspects of the T-SEDI Program

Data for question 2 came primarily from two questions on the post-innovation survey and was supplemented by information from the researcher's journal. Survey data provided descriptive reports of what participants felt were the most useful components of the innovation and was contextualized with qualitative observations from the sessions.

Two questions on the post-innovation survey that were directly related to this question asked instructors what they found most useful and what they would suggest adding for the future. Table 6 summarizes those responses by participant and includes information regarding years of teaching experience for reference.

Table 6

Summary of Most Useful Aspect of the Innovation and Suggested Additions

Participant	Years Experience (Teaching/Higher Ed)	Most valuable aspect of innovation (Articles, Discussions, Both Equal, No Answer)	Suggested Additions
P1	0/0	Articles	Did Not Answer
P2	5+/5+	Both Equal	Did Not Answer
P3	5+/5+	Both Equal	Did Not Answer
P4	3-5/1-2	Discussions	Did Not Answer
P5	1-2/1-2	Both Equal	Did Not Answer
P6	0/0	Discussions	Start earlier, Additional Meetings
P7	3-5/3-5	Both Equal	Assigned Mentors
P8	5+/5+	Both Equal	Did Not Answer

Participant	Years Experience (Teaching/Higher Ed)	Most valuable aspect of innovation (Articles, Discussions, Both Equal, No Answer)	Suggested Additions
P9	5+/5+	Both Equal	Research on best practices

As shown in the table, two respondents indicated that they found the group discussions most useful while the remaining seven participants indicated that they found both the articles and the group discussions equally useful. One of the respondents augmented this answer by indicating more group discussions would be valuable, along with starting them earlier in the semester. Only one participant indicated that the articles themselves were of greatest value.

Observations throughout the innovation sessions suggest that what participants found valuable corresponded with the degree of perceived effort with which the participants engaged each aspect of the innovation. Participant 1, an instructor with no prior experience in teaching, who found the articles most useful was less forthcoming during discussion and had to leave one of the group discussions early without having made any contribution at all to the discussion. Likewise participant 6, who also had no prior experience in formal teaching, engaged in the reading but was also very vocal in discussions, even when engaged in discussions with more experienced instructors. The active participation in the CoP meetings may have led to their identification of the discussions as most valuable. This participant was also one of three who provided specific suggestions for improvement, with the suggestion to increase the number of discussions.

Outside of the innovation sessions, on four separate occasions, different participants approached me between classes at the college where the innovation took place. Each one indicated that they enjoyed the discussions that had taken place and hoped that they would prove useful. Two of the individuals indicated that they wished we could have more discussions like the ones that had been connected with the innovation. None of these individuals were the participant who had responded in the post-innovation survey about the discussions being the best aspect or more discussion time being a good addition to the contribution, which suggests that the majority of the group felt that the discussions were the most useful aspect of the innovation.

Conclusion

Based on ratings in the post-innovation survey instrument, observations during the innovation, and unsolicited feedback outside of the framework of the innovation, there appears a pattern to indicate somewhat greater appreciation of the discussion portion of the T-SEDI program.

CHAPTER 5

DISCUSSION

This AR study explored whether the T-SEDI innovation could produce changes in adjunct instructors teaching self-efficacy (TSE), and use of constructivist strategies within their classes. It appears that TSE did improve for new instructors (but not those who were experienced), and that problem-based learning strategies were more often used in classes as a result of the innovation. Participants reported feeling that the CoP meetings were the most useful aspect of the innovation and identified suggestions for future iterations of the program.

This chapter will explore the ramifications of each of the findings of the study in greater detail. The changes, both positive and negative, in TSE with regard to teaching strategies will be addressed first, followed by further discussion of the self-reported use of constructivist teaching strategies. Next will be a more in depth discussion of the aspects of the program that instructors found to be most useful and some of the limitations of the study. The implications of this study for both future research and practice will also be discussed, including rationale for implementing a program of this type.

Changed TSE in Teaching Strategies

There was a statistically significant increase in participants' feelings of TSE among new instructors, but not more experienced instructors. This is not surprising, given that new instructors likely had less confidence than experienced instructors when starting the program, and were more open to the opportunity to learn new teaching strategies. The statistically significant gains for new instructors in using Instructional Strategies

demonstrate this difference. The fact that this area was the only one that significantly changed is consistent with the fact that the articles used in the innovation focused on ways that instructors could use specific instructional strategies in the teaching for greater engagement and learning by students.

The change in TSE is consistent with the literature, as it has been shown that adjunct instructors are often asked to teach classes with little to no formal training regarding pedagogy, andragogy or any other formal instruction regarding teaching strategies (Baik et. al., 2013; Maksymchuk, 2018). When little to nothing by way of foundational knowledge is provided at the beginning of an adjunct instructor's experience with teaching, anything provided during supplemental training will likely have the effect of increasing TSE.

When examined against the model of self-efficacy (Bandura, 1997) increased self-efficacy for new instructors was likely because opportunities were afforded for effective activity in several aspects of the self-efficacy domains. The articles provided critical information around the *mastery tasks* that would be necessary for effective implementation of the constructivist strategies discussed, even if the instructors had never experienced them prior to the innovation. CoP meetings provided *verbal persuasion* as to the importance of learning to effectively implement the strategies. Finally, the CoP meetings also provided an opportunity for *vicarious experience* as experienced instructors talked through ways that the strategies were applied, difficulties they experienced, and outcomes achieved.

Experienced instructors did not report the same increase in self-efficacy, and in fact there was one statistically significant drop in experienced instructors' feelings of

their abilities to calm disruptive students. This negative direction of change was an unexpected outcome. It is possible that, because experienced instructors rated themselves high in TSE the outset of the process, their engagement in the CoP helped them discover weaknesses that they previously were unaware of. Increasing the TSE of experienced instructors would likely take much more time and training to significantly impact their higher TSE scores. Further, the focus of the CoP meetings might need to be augmented to include more specific TSE development activities focused on experienced instructors, such as pairing them in a mentor/mentee relationship during the entire process (Paul, 2015; Baik et al, 2018; Morton 2012).

Self-Reported Use of Constructivist Strategies

The qualitative data showed two clear indications that instructors self-reported use of constructivist strategies were changing. At the beginning of the study instructors were primarily discussing using case studies that were already integrated into the curriculum they received. In later meetings, the instructors began to discuss new ways to open the classroom time by asking questions differently and bringing in real world problems for students to discuss. This change in attitude toward using questioning strategies was expected, given that the first meeting centered on the constructivist strategy of Problem Based Learning (PBL) and included encouragement to try using PBL as a strategy in the time between the first and second meetings.

As the CoP meetings offered both *vicarious experience* and *verbal persuasion* from peers, this improvement in stated use of constructivist strategies in general, and of PBL specifically, is consistent with the findings in the literature that said new instructors desire engagement with experienced instructors to help them know not only what is

working well but how to integrate new approaches to their teaching. (Thirolf, 2012; Thirolf, 2013; Paul, 2015). As instructors were provided with a setting where new approaches could be discussed and others' experiences of using them were shared, they seemed more willing to try the new strategies.

What Worked Best

For research question two, regarding which aspect of the innovation was most effective, the quantitative data suggest that both factors, articles and meetings, were seen to be valuable. However, because the option in the survey simply gave a forced choice option of "article 1, article 2, group discussion, all equal" it is likely that the default choice of "all equal" was selected as a way of saving time during the survey. This format indicated that perhaps instructors felt that something was of value in each aspect of the innovation and did not want to indicate that one aspect was weak because another was preferred. The qualitative data from the meetings seems to suggest that participants referenced the articles, but the true value was in their discussions with others, where they could elaborate, check their own understanding, and learn from the experiences of one another. Comments from instructors outside of the meetings supported this idea of how valuable the peer-to-peer interaction in the meetings was and no mention of the articles. This is consistent with the literature (Baik et. al., 2013; Morton, 2012), which suggested that new faculty members' satisfaction and self-efficacy could be positively impacted by engaging them with experienced faculty in group and mentoring settings.

Limitations

Limitations for this AR study grew out of the study methods and protocol itself, including small sample size, a mixed population of experienced and novice instructors,

imprecise measures, the lack of a second rater for qualitative data and the limited time for the entire intervention.

It was originally anticipated that this study would target all new adjunct instructors. However, there was a lack of institutional support that meant that the participants could only be recruited from the business department and without enough new faculty in the business department, the program was opened up to both novice and experienced faculty. The program was also intended to be built into required orientation and training for new faculty, but because it was not part of any required training, it was much harder to recruit this sample, and the participants may have represented a more motivated group of faculty to engage in this type of innovation. The small sample of nine instructors who participated in the study and the fact that the sample included both new and experienced instructors meant that it was harder to identify changes across the larger group. As shown in the results, separating out the experienced instructors from new instructors significantly changed the quantitative results of the study. Given that all participants came from the business department in one institution, it is possible that differences could be seen with participants from other departments and other institutions.

The survey questions on perceived value of the program components may also need to be revised to be able to more clearly identify those components that participants found most useful about the innovation. As opposed to requiring participants to describe the value of the different portions of the innovation against each other, more clear results are likely to be obtained if each item were evaluated on its own with an independent rating scale, such as a star rating or a Likert scale.

Using a single coder for the qualitative data was a limitation for this study. While the in-vivo codes built from the instructors' actual words and conversation as it developed during the CoP meetings appears clear, the addition of a second rater would strengthen the claims that instructors self-reported use of constructivist strategies did indeed change from the beginning of the study through its conclusion. A second rater could potentially also identify more codes or nuances that were not discovered with a single coder.

Another limitation of the study was its relatively short time frame. The entire time for the innovation, from recruitment through post survey, was 3 months, and within the innovation, only one hour of structured time for CoP discussion was available. In spite of this limitation, significant improvements were seen in several aspects of teacher self-efficacy and the participants stated use of constructivist teaching strategies. In light of this, it is reasonable to presume that greater improvements could be achieved if more time were allowed in the CoP meetings, for faculty to practice the topics discussed within their own classrooms, and if the structured time in the meetings could address other constructs of teaching self-efficacy, such as classroom management or student engagement.

Implications for Future Research and Practice

The T-SEDI program, in its limited scope of this study, still showed measurable improvement in teaching self-efficacy the use of constructivist strategies. It is not unreasonable to consider how this program could result in stronger gains if three factors were addressed, namely an expansion of time, scope, and meaningful connection with existing faculty.

New adjunct faculty saw an improvement in TSE as a result of two, thirty-minute CoP meetings held a month apart. Conversation changed noticeably from the first meetings to the second meetings, as participants shared more on what they found useful as well as experiences from the classroom that had strengthened both their understanding of the ideas presented in the first CoP meeting, and their willingness to discuss the implementation of new teaching strategies to the prescribed curriculum. It is reasonable to presume that the improvements found would be magnified by allowing for even more time in CoP meetings, both in the form of more instances for sharing and more time between sessions. There may also be additional engagement by faculty if an institution compensates and requires participation in this type of program as part of the onboarding process during the entire first year of teaching. Further, if the CoP meetings were to be expanded to occur once every four weeks throughout the first year of employment, and each session were to last sixty minutes, it is reasonable to assume that the gains experienced in TSE would allow for observable improvements in other factors the college is interested in, namely student engagement, retention and performance.

Expanding the scope of the T-SEDI program could also help develop greater self-efficacy among experienced adjunct instructors. New adjunct instructors typically have little or no understanding of pedagogy and andragogy. By expanding the scope of the T-SEDI program to include some pedagogical and andragogical foundational knowledge along with opportunities to explore sound best practices in classroom management, student engagement and instructional strategies through articles and CoP meetings that last an entire year, the new adjunct's tool kit of available behaviors for the instructional

environment can grow far beyond what they bring with them at the time of interview and hire.

Including experienced instructors could also become a powerful piece of a program of this nature. As experienced instructors engage with new instructors, they get the opportunity to revisit ideas, concepts and strategies that they may not have used before or may have neglected because previous patterns of performance were comfortable and predictable. This exposure can allow for the expansion of existing teaching skills as attention is given to new strategies and approaches. With additional time in each session, experienced instructors could be allowed time to share insights that they have gleaned from years of work in education generally, and the institution specifically. In this way, both experienced and new adjunct instructor's benefit. New adjunct instructors receive the benefit of *verbal persuasion* and *vicarious experience*, and existing instructors receive the benefit of practicing with new *mastery tasks* while also having a platform to share insights from reflection, a critical component of *physiological states* as related to the development of self-efficacy.

Including experienced instructors in the T-SEDI program can also be done as a way of pairing an experienced instructor with a new instructor in a mentoring relationship. The literature suggests that these mentorship opportunities can be powerful in assisting new adjuncts in identifying and implementing effective teaching strategies as well as feeling a sense of belonging and connectedness to the institution (Baik et. al, 2012; Morton, 2012) as was heard from the novice instructors in this study.

Perhaps one the most powerful aspects of expanding the time and scope of the T-SEDI program is in the way that constructivist learning could be reinforced in the lives of

the instructors themselves. By engaging in CoP meetings after certain pieces of foundational knowledge are provided (in this case, the articles that were sent prior to the meetings), instructors could be introduced to an environment where they watch a facilitator demonstrating an instructional strategy (*vicarious experience*) while they participate in discussions about how to use the strategies (*verbal persuasion*) and are perhaps allowed to share both plans for utilization in the coming class periods and report back on how they went (*mastery tasks, physiological states*).

Finally, by expanding the time, scope and participant selection of the T-SEDI program, new adjuncts are allowed to integrate more quickly and completely into the organization. As suggested by others (Baik et, al, 2012; Flaherty, 2018; Maksymchuk, 2012; Morton, 2012; Paul, 2012; Thirolf, 2013) the life of an adjunct is complicated and full of challenges and not all of them are in the classroom. However, as instructors meet regularly with selected fellow faculty (adjunct and full time), in CoP meetings, their network of contacts that possess institutional knowledge increases the potential for finding solutions quickly. This network creation could help retain more adjunct instructors within an organization (Thirolf, 2012), which is important to institutions because of the heightened demand for the real-world expertise of specifically experienced adjunct instructors. Having these experienced adjunct faculty could also be a factor that schools leverage as a competitive advantage for attracting students (Levin, 2005).

In future research, it would be very helpful to link all of these teaching benefits to student learning and engagement. The intent underlying the improvement in teaching self-efficacy and the utilization of constructivist strategies is to help new instructors shrink the time that it takes to reach confidence and competence in utilizing those

strategies that typically result in better student outcomes. This study shows promise in accomplishing that intent. Its expansion and application in more settings can turn that promise into the outcomes that students deserve.

Summary

This AR study was focused on the strengthening of TSE among adjunct instructors through an innovation that included providing instructors with information regarding constructivist teaching strategies along with CoP meetings where the strategies and their implementation could be discussed. The study also sought to increase the use of constructivist strategies among new adjunct instructors. While there were limitations in the study regarding time, participation and some methodology, the quantitative data indicate that the study was successful, as statistically significant increases in TSE were seen for new adjunct instructors as a result of the innovation. Additionally, qualitative data from the CoP meetings and observations by the researcher indicate an increase in positive discussion regarding the use of the constructivist strategies that were presented as part of the study. Qualitative data also suggest that the CoP meetings were critical to the success of the study.

While this action research study was not intended to be generalizable, there are some potentially transferable ideas that can be applied by institutions both large and small. First, the instructors involved in this study, particularly the new instructors, expressed appreciation for the extra information received, attention given, and involvement with more experienced instructors. What makes this even more compelling is the fact that all of the instructors who participated in this study did so voluntarily, with no compensation of any kind. Their participation was likely influenced by factors such as

their relationship with the researcher and recognition of the role of research in educational development, but ultimately their participation in the program through its conclusion was dependent on something beyond compensation. While not all instructors, adjunct or otherwise, may be able to participate in a voluntary program such as this, it is apparent that some instructors are driven by the simple desire to become better at the art and craft of teaching.

Second, simply providing for a time and space for instructors to gather and discuss what was working and what could be working better had value. The instructors in this study engaged in conversation with each other about how to integrate new ideas into classes that varied widely from each other. No two instructors taught the same content or curriculum, even though they were all within the same department. But the CoP meetings did not have a department agenda or specific initiative to drive forward other than exposing instructors to new ideas of how to teach and a space to share ideas about how to integrate them. They participated openly, and when the program was concluded, they wanted more.

These two factors, recognizing that adjunct instructors are willing to invest time in improving their craft and that simply providing a time and place for sharing of ideas may be sufficient, illustrate the possibility that any higher education institution, large or small, can implement the program suggested by this study with very little operational overhead and could potentially see similar results in the TSE of the participants. Instructors could help each other develop stronger TSE, and with that stronger TSE could come any number of improvements in outcomes for the institution.

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APPENDIX A
SURVEY INSTRUMENTS

Pre-Innovation Survey

Teaching Self Efficacy among Adjuncts at Ensign College - Pre-Survey

Introduction

This survey is seeking your opinions regarding your current level of Teaching Self Efficacy, or your ability to realize teaching objectives due to your current skill level in teaching. There are two short sections. The first asks questions related to your current Teaching Self-Efficacy. The second asks several demographic questions. Your name will not be used for this survey. Instead, follow the instructions below to create your ID code

Your ID code for participation in the study, including this survey, is the first letter of your first name, the first letter of your last name and the four digits of your birthday. If my name were John Smith and I was born on January 1st, my code would be JS0101

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum. Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.

1. How much can you do to control disruptive behavior in the classroom?
2. How much can you do to motivate students who show low interest in schoolwork?
3. How much can you do to calm a student who is disruptive or noisy?
4. How much can you do to help your students value learning?
5. To what extent can you craft good questions for your students?
6. How much can you do to get students to follow classroom rules?
7. How much can you do to get students to believe they can do well in schoolwork?
8. How well can you establish a classroom management system with each group of students?
9. To what extent can you use a variety of assessment strategies?
10. To what extent can you provide an alternative explanation or example when students are confused?
11. How well can you implement alternative teaching strategies in your classroom?

For the next set of questions, please answer based on your teaching experience prior to accepting an adjunct instructor position in the fall of 2022.

12. How many years of formal teaching experience did you have prior to fall of 2022?
 - a. No Previous Teaching Experience
 - b. 1-2 Years Previous Teaching Experience
 - c. 3-5 Years Previous Teaching Experience
 - d. More Than 5 Years Previous Teaching Experience
13. If you taught prior to the fall of 2022, how much of that teaching was in higher education?
 - a. No Previous Higher Education Teaching Experience
 - b. 1-2 Years Previous Higher Education Teaching Experience
 - c. 3-5 Years Previous Higher Education Teaching Experience
 - d. More than 5 Years Previous Higher Education Teaching Experience

Post Innovation Survey

Teaching Self Efficacy among Instructors at Ensign College - Post Survey

Introduction

This survey is seeking your opinions regarding your current level of Teaching Self Efficacy, or your ability to realize teaching objectives due to your current skill level in teaching. There are two short sections. The first asks questions regarding your participation in the Teacher Self Efficacy Development (TSED) program. The second asks questions related to your current Teaching Self-Efficacy. Your name will not be used for this survey. Instead, follow the instructions below to create your ID code

Your ID code for participation in the study, including this survey, is the first letter of your first name, the first letter of your last name and the four digits of your birthday. For example, if my name were John Smith and I was born on January 1st, my code would be JS0101

1. Enter your Participant Code

Participation Information

For the next set of questions please select the answer that best represents your participation in the Teacher Self Efficacy Development (TSED) program

2. How would you describe your participation in the program

- a. I received the articles but did not participate in any of the Community of Practice meetings
- b. I received the articles and participated in one of the Community Practice meetings.
- c. I received the articles and participated in both of the Community of Practice meetings.
- d. I received the articles and participated in one-on-one meetings with the TSED program director.

3. What aspect of the TSED program did you find most valuable in your work to develop greater self-efficacy in your teaching practice?

- a. The article on Problem Based Learning
- b. The article on Group Learning
 - c. The discussions with other teachers and/or individual discussions with the program director
 - d. I think all the aspects were equally valuable for me

4. If you could add anything to the TSED Program, what would it be?

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum. Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.

- 5. How much can you do to control disruptive behavior in the classroom?
- 6. How much can you do to motivate students who show low interest in schoolwork?
- 7. How much can you do to calm a student who is disruptive or noisy?

8. How much can you do to help your students value learning?
9. To what extent can you craft good questions for your students?
10. How much can you do to get students to follow classroom rules?
11. How much can you do to get students to believe they can do well in schoolwork?
12. How well can you establish a classroom management system with each group of students?
13. To what extent can you use a variety of assessment strategies?
14. To what extent can you provide an alternative explanation or example when students are confused?
15. How well can you implement alternative teaching strategies in your classroom?

APPENDIX B

AGENDA OUTLINES FOR MEETINGS

Agenda for Community of Practice Meetings

- Welcome (2 min)
 - Reminder of purpose of meeting - to help instructors develop self-efficacy in the role of providing instruction in conjunction with the Ensign College Immersive Instruction model
- Good news to report from previous work? Success using strategies? Insights around opportunities taken or missed? Engagement wins? (10 min)
- Review of Article assigned
 - Summaries shared in small groups (3 min)
 - Big takeaways from small groups shared with larger group (4 min)
 - Open discussion for application (10 min)
- Meeting closing (1 min)
 - Review of date and time for next meeting

APPENDIX C
CODE BOOK

A PRIORI - CASE STUDY BASED LEARNING instructor chose or discussed using Case Study Based Learning

A PRIORI - COOPERATIVE LEARNING Instructor chose or discussed using Cooperative or group-based learning strategy

A PRIORI - CURRICULUM INTEGRITY Instructor discussed the importance of keeping curriculum consistent

A PRIORI - INQUIRY BASED LEARNING The instructor chose or discussed using an Inquiry Based Learning strategy

A PRIORI - PROBLEM BASED LEARNING Instructor chooses or discusses using Problem Based Learning

A PRIORI - QUESTIONS ABOUT STRATEGIES Instructor expressed questions about a teaching strategy or strategies and how to implement them

A PRIORI - RECIPROCAL LEARNING Instructor choose or discussed using a Reciprocal Teaching/Learning strategy

A PRIORI - SIMULATION BASED LEARNING Instructor choose or discussed using a simulation-based learning strategy

Administrative challenges This code was used to articulate the presence of administrative challenges that interfere with using constructivist strategies.

Asking Students Additional Questions Code indicated that the instructor was speaking about the practice and or impact of asking additional questions during a learning activity.

Balancing Group with Individual This code was used when instructors articulated the necessity of ensuring individual competence while also making room for group contributions in either learning or professional performance.

Coaching Students This code was used to describe when instructors provided additional coaching to help students successfully work with a given strategy or develop competence.

democratic learning or self-directed learning This code was used when an instructor referenced a teaching and learning model that allowed or even encouraged the student to determine what he or she should study.

Difference between strategies Code indicated the existence of differences between two or more of the constructivist strategies.

Different Solutions This code was used when an instructor indicated that different solutions could be generated for the same activity, typically case studies.

Digging Deeper Code described the process of coaching and encouraging students to dig deeper in their learning. Different from just asking additional questions.

external client Code indicated that an external client was referenced in the learning

Finding answers vs solving problems Code was used when instructors brought up the idea that solving problems is different than simply finding right answers.

Government projects Code was used when teachers indicated learning activities included government entities at any level

Improvisational Teaching This code was used to articulate the idea that teaching could be organically pursued, based on discussion between teacher and student.

Learning is different This code was used when an instructor made an observation about the difference between learning, particularly in an academic setting, and performing job functions in a professional setting.

let students struggle This code was used to indicate that instructors made a conscious choice to let students struggle to find a solution rather than simply give them one

make decisions and ... defend decisions students made a defended decisions

Motivation of student Code described the fact that student motivation had an impact on how easily a strategy may be implemented.

Not there to lecture Code used when the instructor indicated that he or she knew that active learning was preferred to lecture.

Old Ways This code was used when instructors pointed out that the constructivist strategies are different from the "old way" of teaching.

Predefined solution parameters indicated that predefined solutions (typical of case studies and simulations) are different from undefined solutions, typical of most constructivist strategies.

Principles and concepts This code was used when instructors described direct teaching around principles and concepts

Programmatic Intent This code was used to articulate when an instructor asked a question or made an observation around the programmatic intent

QUESTIONS REGARDING IMPLEMENTATION Used when more than one of the following codes were used: Difference between strategies, similarity with a case study, predefined solution parameters, different solutions

Real world applications This code was used when an instructor referenced, either directly or implicitly, the connection of educational work to real world situations.

Relationship Building This code was used to represent the instructor identified the use of any of a group of Relationship Building activities in conjunction with Cooperative Learning.

Resistance to Implementation This code was used when an instructor displayed resistance or reluctance to using new strategies, particularly PBL

Resources for finding solutions This code was used when an instructor indicated specific effort was made to direct students to resources for drafting solutions.

Send them to the library This code was used to reference occasions where instructors pointed out the usefulness of the library as a specific resource for finding solutions

Similarity with a case study code indicated the existence of similarities between case studies and PBL

STUDENT GROWTH Used when more than one of the following codes were present: Real world applications, make decisions and defend decisions, different solutions, think ... differently, Scary to let students struggle

Teaching Through Stories This code was used when instructors chose to teach directly utilizing stories from their careers.

Theory vs. application This code was used when an instructor identified a preference for theoretical teaching vs. application teaching.

Think . . . differently This code was used to identify when a teacher indicated that some strategies are used to get students to change their way of thinking.

USING CONSTRUCTIVIST STRATEGIES Used when more than one of the A PRIORI Codes was assigned to a reference

Who's doing the teaching? This code was used when instructors mentioned that students didn't readily recognize constructivist strategies as scaffolded instruction but rather as independent development.

APPENDIX D
IRB EXEMPTION LETTER

EXEMPTION GRANTED

Erin Rotheram-Fuller
 Division of Educational Leadership and Innovation - Tempe
 -
 erf@asu.edu

Dear [Erin Rotheram-Fuller](#):

On 8/25/2022 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Teaching Self-Efficacy Development Initiative
Investigator:	Erin Rotheram-Fuller
IRB ID:	STUDY00016381
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Consent Form, Category: Consent Form; • CoP Meeting Agenda 08082022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Ensign College Permission Letter.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • IRB T-SEDI - 08222022 - Social Behavioral 2019 .docx, Category: IRB Protocol; • Post-Intervention survey 08082022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Pre-innovation Survey 08082022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Recruitment Email, Category: Recruitment Materials; • Training Email 1-PBL 08082022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

	<ul style="list-style-type: none">• Training email 2-GL 08082022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);
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The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 8/25/2022.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

Sincerely,

IRB Administrator

cc: Todd Wentz
Todd Wentz

BIOGRAPHICAL SKETCH

Todd Wentz was born in Salt Lake City, Utah on February 27, 1969. In 1972 he moved with his family to Minnesota, where they eventually settled in Blaine. Todd began his elementary schooling at Jefferson Elementary School in Blaine through the third grade. At that time, his family returned to Utah and moved to Fruit Heights. Todd finished his elementary schooling at Burton Elementary School, and then proceeded to attend Kaysville Jr. High School and Davis High School. Todd distinguished himself in these years by both academically and in extracurricular activities. In his sophomore year he was a finalist for the International Science and Engineering Fair and a quarter finalist in the National Merit Scholarship competition. In his junior year he was an officer for FBLA and in his Senior year he was a national finalist in the National Forensic League where he competed in National Extemporaneous Speaking. Todd Entered BYU in the fall of 1987 and, including a two-year hiatus for humanitarian service through his church, majoring in Psychology. After graduation Todd worked in Human Resources, specializing in training and development, and eventually began teaching at a local college. In 2001 he entered Weber State University where he pursued a master's degree in education. During his time at Weber, Todd was inducted into the Pinnacle Honor Society and served as a chapter officer during his final year at Weber State. Todd worked for the next two decades in higher education as an adjunct instructor, full time faculty, faculty trainer and associate provost. He was accepted to Arizona State University's Online EdD program in 2020 and graduated in 2023. Todd has been an advisor to student business organizations since 2002, working with FBLA/PBL, DECA and SHRM, and has also been a frequent presenter for the Utah Association for Talent Development. Todd has been recognized for excellence in his work by Ensign College, National FBLA/PBL, Covington Who's Who, and Who's Who among American Teachers. Todd is a member of MENSA.