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Student Satisfaction and Educational Experience with Collaborative Learning Teams

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2020

Abstract

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by

Jacquelyn Lee Jenkins

MAT, American University, 2004

BS, University of Washington, 1999

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The use of collaborative learning teams is successful at many traditional higher education institutions. However, the use of collaborative learning teams at 3 University X campuses was noted as a source of frustration for students and may affect student satisfaction. Lower satisfaction rates equate to lower rates of success, graduation, referrals, and retention. The purpose of this study was to explore student satisfaction with the use of collaborative learning teams and how learning teams affect students' educational experiences at University X. Vygotsky's social learning theory and Astin's theory of student involvement framed the study. The mixed-method design included a quantitative online descriptive survey ($n = 75$) and qualitative phone interviews with students ($n = 19$) to explore the students' satisfaction with the collaborative learning teams, including perceived aspects of their educational experiences. Quantitative data analysis resulted in descriptive statistics and disaggregated data table sets. Qualitative data analysis through axial coding resulted in the creation of response themes. Combined analysis provided evidence that although students were generally satisfied with the use of collaborative learning teams, there were areas of improvement that could increase satisfaction and improve the student experience. The results of this study provided the basis for a 3-day faculty training that focused on improving practice and facilitating successful collaborative learning teams. This project can bring about social change on these campuses providing guidance to ensure both student satisfaction and success at University X and other education environments with shorter academic terms.

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Dedication

This project is dedicated to my twins, Paisley AnneMarie and Weston Scott. You two are the most magical beings that ever were and my entire inspiration for the completion of this project. It is the light I see in your eyes as you learn and grow that reaffirms the importance of an educational system that fosters a love of learning and provides an opportunity to become whomever you want to be. One day you two will go out and change this world for the better. You have already changed mine. I love you!

Acknowledgments

This doctoral study turned out to be a long and bumpy ride that mirrored the twists and turns of my life over the decade from when I first started this adventure. There were several times that I thought completion was out of reach, and it certainly would have been if not for the support of some special, patient, dedicated, wonderful people. First, I would like to thank my family and friends for their continued support. My children have grown their entire lives hearing about how Mommy needs to work and now telling me to "Go get it done, Dr. Momma!" Without their encouragement and belief in me, this would not have been possible.

Most importantly, I need to thank my doctoral chair, Dr. Linda Swanson, for her continued support and dedication. Her knowledge, feedback, and guidance were essential in the planning, research, and creation of this project. Dr. Swanson not only acted as a great academic support but also proved to be a key personal support. She offered her advice, concern, and time as I went through several major personal losses and changes in life. She stood by me when I decided to take a leave of absence to care for my family and fought on my side to get me reinstated later. She provided emotional support and encouragement when I needed direction. I consider Dr. Swanson a great mentor and friend, and I appreciate her and everything she has done for me to no end.

Additionally, I would like to thank Dr. Englesberg and Dr. Berndt for serving as the rest of my committee and providing thoughtful and fair feedback to guide me to completion. I would also like to thank the support staff at Walden University who also provided proper guidance as I needed it. It is with the support of all the aforementioned people that I feel confident in my ability to go forth and effect positive social change.

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Section 1: The Problem

The Local Problem

In 1926, Eduard Lindeman, a leading adult learning theorist, began writing about

learning communities. After developing his theory for more than 30 years, he defined

learning communities as

> small groups of aspiring adults who desire to keep their minds fresh and vigorous;
>
> who begin to learn by confronting pertinent situations; who dig down into the
>
> reservoirs of their experiences before resorting to texts and secondary facts; [and]
>
> who are led in the discussion by teachers who are also searchers after wisdom and
>
> not oracles. (Lindeman, 1961, p. 7)

Since then, both in academia and business, collaboration has become an

increasingly common technique employed to increase learning and achieve a better

product. Barkley, Cross, and Major (2014) offered a simple definition of collaborative

learning, stating that "collaborative learning… is two or more students laboring together

and sharing the workload equitably as they progress toward intended learning outcomes"

(p. 4). Collaborative learning and cooperative learning are often confused and

interchanged. For the purposes of this study, the term *collaborative learning* collectively

encompassed both uses and all meanings. A good working definition of *collaborative

learning* for this study is Zambrano, Kirschner, and Kirschner's (2020) definition:

"Learning collaboratively involves two or more learners who actively contribute to

attaining a mutual learning goal and who share the effort needed to reach this goal" (p.

33). Researchers have indicated that the curriculum in many higher education settings

includes collaborative learning as a standard practice (Chen & Chang, 2016; Waugh & Su, 2017).

Since the inception of collaborative learning, it has been lauded a success. Previous researchers have cited benefits such as increased participation, critical thinking, communication, and knowledge base (Barkley, Cross, & Major, 2005; Chen & Chang, 2016; Fakomogbon & Bolaji, 2017; Hyun, Ediger, & Lee, 2017; Kozlov & Groβe, 2016). However, this research addressed long-term collaboration in traditional U.S. university settings, university settings outside the United States, or online university settings. Traditional universities typically have academic terms of about 16 weeks. For example, So and Brush's (2008) study took place at Indiana University Bloomington, and Waugh and Su's (2016) study took place at the University of Tennessee, Knoxville, both of which are traditional 4-year universities with academic terms of 16 weeks. Other studies took place at international universities with varying structures. For example, Chen and Chang (2016) conducted their study at the Graduate Institute of Network Learning Technology, National Central University in Taiwan, and Cho (2015) conducted his study at an unnamed university in Seoul, Korea. Moreover, online universities have become increasingly prevalent study sites, where asynchronous and synchronous collaborative learning modules, like that of Fakomogbon and Bolaji (2017) or Waugh and Su (2016), are difficult to compare to face-to-face collaborative learning models. The research cited here does not include universities with short, intensive academic terms.

The local setting for this study was a for-profit, nontraditional university, referred to in this study as University X. It is considered a nontraditional institution because of its

offerings of evening, weekend, and online classes for working adult students as well as its shortened, 5-week course terms. According to the university's website, University X has associate, bachelor's, master's, and doctorate programs, serving approximately 142,000 students worldwide (United States Securities and Exchange Commission, 2016). Because of the large scale of the University X community, in this study, I focused on three campuses, which had 1,292 total students enrolled as of August 2019.

University X uses collaborative learning teams as standard instructional practice. However, according to one campus director of academic affairs (DAA), even though he believed there was an overall benefit to learning teams, they were reported as a source of frustration among students at that campus, and there was visible conflict, decreased productivity, and anger toward the process. Moreover, the DAA stated that the faculty also reported frustration with the required use of collaborative learning teams in their classrooms and the discord sometimes brought on by individuals in the learning teams who are unable to adapt to the process. The DAA on one other campus stated that complaints revolving around learning teams were common. These reports did not reflect the success found in much other collaborative learning research.

Although collaborative learning has been primarily shown to be beneficial in traditional settings with terms of 15 to 16 weeks, no research had revealed if these benefits are also realized in nontraditional settings with 5-week terms, like these three University X campuses. If students at the study site continue to have negative outlooks toward collaborative learning teams, then conflict may increase (Cho, 2015; Kozlov & Groβe, 2016; Waugh & Su, 2016), learning may decrease (Cho, 2015; Waugh & Su,

2016), isolation and marginalization of students may increase (Waugh & Su, 2016), and students may be more likely to drop out of school (Waugh & Su, 2016). Because of these problems, the purpose of this study was to explore student satisfaction with the use of collaborative learning teams and how collaborative learning teams affected students' educational experiences during the 5-week courses at University X.

<div align="center">**Rationale**</div>

Researchers have found many benefits to collaborative learning practices. Larbi-Siaw and Owusu-Agyeman (2017) stated that students' knowledge is motivated by social interaction and critical reflection. Chen and Chang (2016) noted that collaborative learners are stimulated when engaging in discussion, sharing ideas, and coconstructing knowledge that leads to improved individual performance, including critical thinking and communication skills. Cho (2015), Fakomogbon and Bolaji (2017), and Hyun et al. (2017) all also found that collaborative learning improves the coconstruction of knowledge through discourse and hypothesis building. Supporting these findings, Kozlov and Groβe (2016) stated that collaborative learning fosters more developed communication skills and increases involvement as well as forms higher-level thinking abilities. This type of collaborative discourse not only aids in connecting information to prior knowledge but also offers situations for sharing and understanding different perspectives that lead to improved attitudes toward diversity. Moreover, both Chen and Chang and Hyun et al. observed increased attendance and participation due to increased engagement.

However, not all research was positive. Cho (2015) found that collaborative learning often causes conflict through power inequality. Both less-capable and more-capable learners assume negative consequences through collaboration. He indicated that there is a marginalization of less-capable learners as the environment deters the less-capable from participating in or offering their fair share of the work (Cho, 2015). Conversely, the more-capable learner takes on more cognitive load or the amount of working memory a person has (Abeysekera & Dawson, 2015). Attempting to take on cognitive load beyond a person's limitations may cause "psychological distress" that can inhibit the learning process (Cho, 2015, p. 3). Abeysekera and Dawson (2015) explained that cognitive load consists of a combination of intrinsic load (the core problem or concept), extraneous load (anything not related to the task that makes the task more difficult, such as stress or environment), and germane load (the brain's efforts to create new schemas or add to old schemas as a method of learning). Even Chen and Chang (2016), who were supportive of collaborative learning practices, found that there can be lower levels of participation because of distractions from the social aspects of collaboration, reducing individual success. These findings support Kozlov and Groβe's (2016) observation that true collaboration is becoming less prevalent.

According to one DAA, unless the students were prepared for collaborative learning, they had difficulty adapting to the process, created unrealistic expectations for themselves and their teammates, created disequilibrium in the group, and sometimes created cause to disband and restructure a team. He further noted that many students were "individual-centric and don't have the self-skills to work with other students… don't

know how to talk to real people." He noted that frequent complaints focused on the quality of other students' work, inability of students to keep up with the rest of the group, and unfair distribution of workload among group members. Another DAA echoed this sentiment, stating that fairness, division of labor, and teamwork skills were common student complaints. According to four faculty members, in 2015, University X recognized the challenges facing collaborative learning teams and tried to mitigate the problems by including a learning team charter to outline task division and grading policies, providing additional online communication methods for students to use, and implementing an optional, unpaid faculty training. However, the problem still existed. In fact, according to one campus director, several University X campuses where collaborative learning teams were identified as a potential detriment were closed or were slated to close because of low enrollment, lack of engagement, few referrals, low retention, and low satisfaction. Thus, the purpose of this study was to explore student satisfaction with the use of collaborative learning teams and how collaborative learning teams affected students' educational experiences during the 5-week courses at three University X campuses.

Definition of Terms

Before discussing at length the details of the study and its significance, it is necessary to define several important terms in this study, as many interpretations can be found in literature.

Cognitive load: Cognitive load is the amount of working memory used in a person's brain (Abeysekera & Dawson, 2015).

Cognitive style: Cognitive style refers to a learner's method to approaching and processing learning, organizing and assimilating information, and accessing and using knowledge (Chen & Chang, 2016).

Collaborative learning: Collaborative learning is often referred to as people working and learning together to obtain higher level knowledge as a group (Barkley et al., 2014). Collaborative learning also indicates the students and teacher working together in a less authoritarian structure (Davidson & Major, 2014).

Cooperative learning: Cooperative learning has numerous interpretations but is generally referred to as people completing a task through item delegation and compilation.

Critical thinking: Critical thinking is a higher-level thinking that requires a person to carefully consider and assess information based on cultural contexts, multiple perspectives, prior knowledge, and determined values (Foundation for Critical Thinking, 2015).

Nontraditional college or university: The nontraditional institution often serves adult communities, ages 25 and up, focuses on career advancement or skill acquisition, offers evening and/or weekend class opportunities with nontraditional learning formats, provides certificates in addition to degrees, and may use an alternative campus style, such as office building, online classroom, or technical building (National Center for Education Statistics, 2017a). A nontraditional institution will typically be accredited and licensed as any other higher education institution (National Center for Education Statistics, 2017a).

Scaffolding/Dialogic scaffolding: Scaffolding is the process of providing guided learning that falls within a student's zone of proximal development to enhance the assimilation of information. Dialogic scaffolding fosters learning through dialogue (Simpson, 2015).

Short, intensive academic term: *Short term* means happening over a short period of time (Merriam-Webster, 2017). An *intensive* environment is one where students are expected to complete readings, papers, activities, and other coursework equitable to a traditional semester length (University of Southern California, 2017). *Academic term* refers to the length of time spent per course, from the class opening to the last work submitted (The Free Dictionary, 2017). According to University X, a *short, intensive academic term* in this study was a 5-week term that met once a week for 4 hours, for a total of 20 hours of direct instruction.

Social loafing: According to the Business Dictionary (2017), social loafing is the act of a group member putting in less effort than their peers and passing on their peers' efforts instead of on their own. This occurs when one member of the team does not put in equal amounts of work but receives equal credit and sometimes only passes assignments or courses because the group work carries the person, creating a free-rider situation that creates further conflict.

Student satisfaction: Contentment of a student in their educational institution and its programs.

Transactive memory system: In a collaborative group, a transactive memory system is knowing who knows what information in a group that is developed in an

asymmetrical collaborative group who works together for a longer period and aids in the group's ability to create higher-level products.

Significance of the Study

At the time of this study, no research existed relating to collaborative learning in institutions that had shortened course terms, such as the 5-week courses at University X. However, because student satisfaction is key to retention and recruitment, this study was key to the success of these campuses. The resultant data served as the basis for the creation of a faculty training program that improves implementation and practice of collaborative learning teams, which may additionally aid other nontraditional universities with shorter terms.

Student satisfaction is a key element to the success of an institution. Daniel, Liben, and Adugna (2017), Hyun et al. (2017), and Sears et al. (2017) all noted the importance of faculty involvement, and Daniel et al. and Sears et al. noted student services and academic offerings as a main component to satisfaction. In the classroom, Hyun et al. and Larbi-Siaw and Owusu-Agyeman (2017) described levels of active learning, classroom atmosphere, and student interactions as the keys to satisfaction. However, the researchers agreed that above all, academic performance was the prominent factor of student satisfaction (Daniel et al., 2017; Hyun et al., 2017; Larbi-Siaw & Owusu-Agyeman, 2017; Sears et al., 2017). Students who claim high levels of satisfaction showed higher levels of attendance, participation, achievement, and interest in learning (Hyun et al., 2017). Furthermore, increased student satisfaction leads to increased student success and in turn increased retention, referrals, and recruitment

(Daniel et al., 2017; Hyun et al., 2017; Larbi-Siaw & Owusu-Agyeman, 2017; Sears et al., 2017).

Furthermore, the controversial yet realistic nature of many higher education institutions, including University X, is that the institution is essentially a business and the students its customers. Competition fueled by increasing availability of higher education institutions from which adult students may choose creates an increased need for institutions to attract and retain students (Daniel et al., 2017; Sears et al., 2017). Considering that tuition rates in the United States are rising faster than inflation at an average of 3.6% a year (Bancalari, 2017; Sears et al., 2017), these institutions must market themselves favorably through well-constructed campuses and programs based on student needs and satisfaction. As Larbi-Siaw and Owusu-Agyeman (2017) noted, students' perceptions of collaborative learning relate to their satisfaction levels. Therefore, an examination of student satisfaction with collaborative learning practices could benefit the students and the university. The students would benefit from the receipt of an education based in best practices that increases academic success, and the university would benefit from the increase in enrollment, retention, and referrals that tend to accompany student satisfaction.

Research Questions

The purpose of this study was to explore student satisfaction with the use of collaborative learning teams and how collaborative learning teams affected students' educational experiences during the 5-week courses at University X. Researchers have shown numerous positive effects in various learning environments, including student

benefits, such as increased critical thinking and understanding of diversity, and

institutional benefits, such as retention, referrals, and enrollment. However, there was no

research on short-term, intensive collaborative learning environments. Therefore, the

main guiding questions and hypotheses for this study addressed exploring student

satisfaction with collaborative learning practices.

Research Question 1: How satisfied are students with the collaborative learning

teams at three University X campuses?

Research Question 2: In what ways do students believe collaborative learning

teams affect their educational experience?

Subquestion 1: In what ways do students believe working in collaborative

learning teams will affect their academic success?

Subquestion 2: In what ways do students find collaborative learning teams

beneficial?

Subquestion 3: In what ways do students find collaborative learning teams

detrimental?

Subquestion 4: How does perception of collaborative learning teams change over

time?

Subquestion 5: In what ways do collaborative learning teams affect the decision to

continue education?

Review of the Literature

A review of foundational and current literature on this topic has revealed the

variance in interpretations and the inconsistencies in best practices for implementation of

collaborative learning practices in higher education institutions. This review encompasses the conceptual framework for the study, the broader problem, including benefits and limitations of the practice, and current views on best practices.

Conceptual Framework

This research study was framed by Vygotsky's (1978) social learning theory and Astin's (1984) theory of student involvement. Vygotsky believed that learning is a product of social interaction recognizable in three major themes. First, people learn through interaction with others through observation, interpretation, mimicking, and mutual active experiences (Vygotsky, 1978). Second, people learn from those who obtain more or higher knowledge (Vygotsky, 1978). This interaction is mutual as members learn from each other, using various backgrounds, perspectives, and experiences. Third, is Vygotsky's (1978) concept of the zone of proximal development (ZPD), which indicates the link between the knowledge, learning, and problem-solving capabilities of a group versus that of the individual. For example, an individual will increase their abilities to problem-solve through social learning in the group and then assimilate the skill to their individual skill set. Through shared experiences, individuals increase their knowledge and abilities to an extent impossible on their own (Cho, 2015; Gucciardi, Mach, & Mo, 2016; Stigmar, 2016; Waugh & Su, 2016). Further, the individual gains perspective and understanding through shared experiences to construct meaning (Al-Rahmi, Othman, & Yusuf, 2015; Cheng, Wang, Huang, & Zarifis, 2016; Ennen, Stark, & Lassiter, 2015; So & Brush, 2008). Through this shared experience, students interact, increase abilities, and magnify meaning making.

Even though Vygotsky's theory is described as the principal collaborative theory (Gucciardi et al., 2016), there is no dominant methodology for implementation. Scholars have agreed with Vygotsky's belief that learning is a biological function driven by social interaction through a cultural context, and that this process precedes internalization where the learner assumes the knowledge and skills as their own core set (Gucciardi et al., 2016; Retnowati, Ayres, & Sweller, 2017). What is not as agreed upon is the way in which this takes place. Intersubjectivity lies at the center of the debate. In 1985, Wertsch defined intersubjectivity as the establishment of shared understanding between teacher and student. As the debate of *how* to establish shared understanding and meanings efficiently and effectively grew, more detailed interpretations and concerns of intersubjectivity made their appearance. Waugh and Su (2016) acknowledged the growing significance of the *social* aspect of social interaction in recent years that should be considered in task design. Still, Vygotsky (1978) left the methods for implementation of practice ambiguous.

The ZPD is central to successful use of collaborative learning activities. Vygotsky (1978) defined the ZPD as the difference between a person's current developmental level and their potential developmental level through expert guidance and collaboration with people in different zones. This process aids in the internalization of new concepts and skills, helping a learner to later complete tasks using those concepts and skills on their own, going beyond previous individual limitations (Clapper, 2015). To initiate the process, a facilitator of collaborative learning provides meaningful problem-solving tasks that are too difficult to accomplish alone but that can be accomplished as a group (Markee, 2015). As the learner encounters "disequilibrium" during the challenge, he or

she will then consult peers and/or the facilitator (Clapper, 2015). Then, through dialogic interaction, such as scaffolding, individuals share personal understandings and develop new understandings together to create a communal meaning with which to complete the task (Clapper, 2015; El Kadri, Roth, Gil, & Mateus, 2017). Dialogic scaffolding uses the familiarity of prior knowledge while stretching a learner's core knowledge and abilities with the introduction of new information without overextending cognitive load (Muhonen, Rasku-Puttonen, Pakarinen, Poikkeus, & Lerkkanen, 2016). As the learner assimilates the new information, the scaffolding changes to reflect the new knowledge and again stretches the learner with new information, much like taking steps on a ladder (Muhonen et al., 2016; Simpson, 2015). However, difficulty lies in the determination of what tasks are at the right level and will encourage dialogue for a particular group of students.

Vygotsky (1978) pointed out that the stages of learner development will not be the same for all people in a group, making it difficult to place a task at the appropriate level for all members. For instance, Vygotsky noted that individuals have various sizes of ZPD; some people have a larger zone, allowing them to function at a higher level, and some people have smaller zones that require more specific instruction and may lead to more limitations (as cited in El Kadri et al., 2017). Because students with differing ZPDs may likely be grouped together, it is entirely plausible that some learners will be given tasks outside of their current ZPD, making it difficult to grow with the group, while other learners will be given tasks that do not extend their ZPD (El Kadri et al., 2017). Further, So and Brush (2008) and Clapper (2015) pointed out that when mismatched groups

recognize their status, there is a tendency to divide work based on current ZPD skills,

providing less opportunity for communication, interaction, and ultimately learning. These

possible complications provide reason to research collaborative learning in today's

institutions and best practices for facilitating collaborative work.

In addition to Vygotsky, I added Astin's theory of student involvement to serve as

a conceptual framework for the study. Astin (1984) developed the theory of student

involvement after he noted that the university would implement a program and expect a

certain measurable outcome, such as grade point average (GPA) or test scores, but

without really looking at what was occurring between implementation and measurement.

In fact, he lamented on the mindless nature of the process, stating that the university

faculty and administrators "seem to accept [educational program theories] as gospel

rather than as testable propositions" (Astin, 1984, p. 520). Astin observed that the

students' active roles in their education were often ignored in evaluation. In subject-

matter theory, the focus is on the dissemination of information directly from the

instructor with passive intersubjectivity and not on the student's role. In resource theory,

universities focus on providing enough resources to students to achieve their goals, and

like Vygotsky (1978), included high-level students as a resource, especially in

collaborative learning scenarios (Astin, 1984). However, little focus is given to how or if

the students use such resources. In individualized theory, education is entirely

individualized for each student, providing opportunity to adapt content, timelines,

electives, and activities to meet needs; however, it is difficult to maintain because of high

costs and staffing needs, and it is difficult to determine if those efforts are effective

(Astin, 1984). Even though each theory has the intention of increased success for the student, the student's role in their education is overlooked.

Astin (1984) observed that time is the biggest resource a student has, and time and energy spent on various activities is a direct indicator of the student's involvement and success in those areas. For example, if a student spends most of their time with their family, work, or in other activities, less time is spent on school, involvement is reduced, and success is less likely (Astin, 1984). However, a student who invests a significant amount of time and energy to their education is more likely to perceive their outcomes as successful. Astin stated that there are five postulates at the base of his theory. First, students will invest energy in various objects and activities. Second, the investment of energy occurs on a continuum where each student extends energies differently, and an individual extends their energy uniquely to each object or activity. Third, the investment of energy has quantitative aspects, such as the number of hours spent studying, and qualitative aspects, such as the student's understanding of a task. Fourth, the amount of learning and individual development that comes from an academic program is proportional to the involvement level. Fifth, the effectiveness of a policy or program is related to its ability to increase student involvement. The last two postulates have indications for program and policy design.

Astin's (1984) theory lends to a few practical applications in academia as well. For one, faculty and administrators should focus less on the content and teaching techniques and more on student involvement, motivation, time, and energy given to the educational experience (Astin, 1984). Additionally, student success personnel should

monitor students individually, focusing on awareness of involvement levels (Astin, 1984). Further, research into the role of peer groups and collaborative learning opportunities and their influence on time, energy, commitment, and experience could provide important indications for future program implementation (Astin, 1984). Astin's theory frames the necessity to study student satisfaction with collaborative learning practices. Students who perceive higher satisfaction with the practice will invest more energy into the work, thus increasing the possibility of success. The converse is also true in that students who are more involved will likely perceive higher satisfaction with the program. A university interested in increasing success would likely be interested in the satisfaction rates and further investigation into student involvement.

Review of the Broader Problem

The literature review is a synthesis of over 70 different sources. The majority research was completed using the Walden Library search engines Academic Search Complete, The Chronicle of Higher Education, EBSCO e-books, Education Source, ERIC, NCES Publications, ProQuest Central, SAGE Journals, Science Direct, Thoreau Multi-Database Search, and Walden Library Books. The rest was completed using Google and Google Scholar. The keywords that directed this research included *collaborative learning (groups, communities, in higher education, andragogy, practices, best practices, implementation, satisfaction, benefits, limitations, conflict, intersubjectivity, social, academic, student performance, instructor, trust, formation, composition, grouping, heterogeneous, time…), student satisfaction, retention, zone of proximal development, stages of collaborative learning, stages of group development,*

building a sense of community (in collaboration, higher education, trust…), cooperative learning, and more. New relevant research present in readings was also located in the library and read. Other keywords or concepts identified in the readings led research in the next direction.

Benefits of Collaborative Learning

Collaborative learning is the process by which a group of individuals work together to accomplish a singular goal. According to Barkley et al. (2014), pioneers of developing and implementing collaborative learning procedures in andragogic environments, the many benefits of collaborative learning are far worth the trouble of determining proper implementation of practice. When successful, student benefits of collaborative learning practices are academic and social skills development that lead to increased academic performance.

One major benefit of collaborative learning is increased academic skills development. At the forefront are strengthened critical thinking skills. "Critical thinking is not an isolated goal unrelated to other important goals in education. Rather, it is a seminal goal which… is best conceived as the hub around which all other educational ends cluster" (Foundation for Critical Thinking, 2015, Introduction section, para.1). Critical thinking derives from deep-level assessment of incoming information and perspectives (Beckmann & Weber, 2015). Participants in the Hyun et al. (2017) study showed improved thinking skills over individual learners. According to Cho (2015), it is the dialogic nature of collaborative activities that incites deeper level thinking.

Clearly Vygotskian in nature, the use of collaborative teams is especially effective when task completion will benefit from the experience, knowledge, and thought processes of a group of peers, thus accessing individual ZPDs and assimilating to a level of development (Fernandez, Wegerif, Mercer, & Rojas-Drummond, 2015). Chen and Chang (2016), Cheng, Wang, Huang, and Zarifis (2016), and Cho (2015) all noted that students had improved consensus building skills. For example, the students in Chen and Chang's study had better written collaborative texts and with less cognitive load than individual students. Collaboration with others stimulates complex information processing which requires less mental effort (Chen & Chang, 2016; Retnowati et al., 2017). Two or more people contributing to a task typically create a higher-level product than one could produce on one's own (Fernandez, et al.; Vygotsky, 1978). According to Fernandez et al. (2015), collaboration led to improved understanding and retention. The findings of Chen and Chang and Ennen, Stark, and Lassiter (2015) supported Fernandez et al.'s conclusion, maintaining a well-formed collaborative group fosters increased knowing and retention, and at levels unattainable on one's own (Retnowati et al., 2017). Both higher and lower performing students benefit from this development, gaining equal amounts of knowledge (Kozlov & Groβe, 2016). Hyun et al. (2017) wrote that the individual academic improvements stem from heightened engagement.

Another major benefit of collaborative learning is increased social skills development. Barkley et al. (2014) noted that collaboration increases communication and leadership skills. Developing social skills through collaboration is important for developing group dynamics and fulfilling expectations in the future workplace (Barkley,

Cross, & Major, 2014). Collaborative learning fosters a sense of community (Al-Rahmi et al., 2015; Ennen et al., 2015), which encourages engagement (Gucciardi et al., 2016) and even attendance (Hyun et al., 2017). Al-Rahmi et al. (2015) noted positive results in creating an atmosphere of community among students as they formed higher levels of trust, loyalty, interest, and general engagement. With these social aspects strengthened, academic performance improved (Al-Rahmi et al., 2015). Ennen et al. (2015) emphasized the importance of trust in collaborative groups, stating that trust is the cornerstone to effective collaboration. The development of trust releases students from fear and allows them to fully participate (Ennen at al., 2015). The more active the collaboration, the more participatory the student (Hyun et al., 2017), and as Cho (2015) noted, active participation means increased discourse and communication.

Active discourse in collaboration encourages the development of sophisticated communication skills (Cho, 2015, Kozlov & Groβe, 2016). In such an environment, students provide moral support for one another (Waugh & Su, 2016) and are free to share their personal perspectives and prior knowledge (Fakomogbon & Bolaji, 2017). Fernandez et al. (2015) positioned skilled argumentation as the catalyst for increased communication skills as students learn to listen, think carefully, and form effective responses. This method removes automatic emotional responses and replaces them with cautious, educated responses, therefore increasing understanding of diverse perspectives (Nokes-Malach, Richey, & Gadgil, 2015). As stated by Cheng et al. (2016), "collaborative learning positively impacts the learning process since group diversity evokes a re-thinking of the intention of every participant" (p. 61). Moreover, through

collaborative communication, students increased motivation and engagement (Nokes-Malach et al., 2015). Students learn to work and succeed as a group, hold themselves accountable for their own portion of the collaboration, and reflect upon their group experiences to grow both individually and as a group (So & Brush, 2008).

Specifically of interest at these University X campuses was the fact that researchers had identified non-traditional settings as appropriate settings for effective collaborative learning practices. Barkley et al. (2014) determined that collaborative learning befits non-traditional students in non-traditional environments. Chen and Chang (2016) and Kozlov and Groβe (2016) determined that collaborative learning proves especially beneficial to lower-achieving students, who are commonly found in foundational courses of open-enrollment schools. These campus population mirrored those from the studies of Barkley et al. (2014), Chen and Chang, and Kozlov and Groβe, confirming there could be a positive nature to collaborative work at these University X campuses. However, the campuses were at risk for potential limitations in using a collaborative learning strategy.

Limitations of Collaborative Learning

Although collaborative learning proves beneficial in numerous aspects, scholars agree that there are limitations, especially regarding establishing and conducting collaborative practices in educational environments. First, to establish and monitor the collaborative learning groups and facilitate their progress properly requires the instructor to put in enough time (Ennen, 2015; Prieto, Sharma, Wen, & Dillenbourg, 2015), which can increase the faculty's cognitive load (Prieto et al., 2015). Further, the facilitator's job

does not end once he or she creates collaborative learning groups or assigns tasks. The facilitator must continually monitor the groups, providing further expert scaffolding to ensure that people in incongruous ZPD zones are able to work together and reap the benefits of the team, which may include introducing additional interaction and dialogue opportunities or adjustments to tasks (Prieto et al., 2015). Ennen et al. (2015) listed the great many responsibilities of faculty in creating and facilitating successful collaborative environments that can "lead some professors to avoid this technique (Ennen et al., 2015, p. 616).

Second, there is some evidence that students have difficulty in high-level participation in collaborative learning groups. For example, Cho (2015) noted the critical learning opportunities for individuals were often lost in the group as there was no time or motivation to conduct personal investigation. Cho also noted that there may not be enough time in a collaborative group for effective reflection, requiring a quicker and premature response that could lead to conflict and misunderstanding. Importantly, the individual differences of students in collaborative groups can be detrimental to the overall success of the group (Chen & Chang, 2016). The cognitive differences among students are frequently dismissed during group formation (Chen & Chang, 2016), and the formation of asymmetrical learning groups can create disparity in learning ratios (Kozlov & Groβe, 2016). Many researchers noted the difficulties in keeping groups on-task and efficient (Chen & Chang, 2016; Cho, 2015; Cheng et al., 2016). Cheng et al. (2016) noted that many students were distracted, took too much time to complete tasks, and easily got off-topic. Ennen et al. (2015) also noted the distractibility of students in groups, which

seemed to encourage the social loafing of some members. The frequent divergent discussions not only decreased efficiency but also demotivated students from higher-level achievement (Cho, 2015).

Third, time is a factor. There does not seem to be enough time for sufficient group development (Waugh & Su, 2016). Waugh and Su (2016) recognized that it takes time to develop ease of interaction among students, sharing and support skills, feedback routines, and diversity acceptance. Ennen et al. (2015) blamed a lack of time to develop trust among members to fully immerse themselves in collaboration, and as Nokes-Malach, Richey, & Gadgil (2015) commented, one must know how to collaborate and that takes time to learn.

Of most importance is the fact that collaborative learning is found to be the cause of significant emotional distress among students (Cheng et al., 2016). This distress may come from past negative experiences with collaborative learning or from being forced to work with strangers (Cheng et al., 2016). There is inherent risk when grades are involved, and those risks amplify when those grades are affected by others (Ennen et al., 2015). Students must rely on one another and that requires a minimal level of trust (Ennen et al., 2015). However, they also noted that this can be developed in time. Further, a group that lacks trust tends to have amplified awareness of cognitive or knowledge-based differences among the members, which causes power inequalities (Cho, 2015). Cho (2015) found that less capable students were marginalized over time and more capable students suffered from increased "psychological burden" (p. 6). Waugh and Su (2016) found that marginalized students became isolated and academic performance suffered.

Moreover, the more capable students in these scenarios attained less benefit in collaborative groups, with reduced rates of knowledge acquisition (Kozlov & Groβe, 2016). Anxiety levels over group tasks, especially when personal feelings are involved, can create havoc within the team and reduce the group's ability to move through the stages of group development to achieve a productive state (Cho, 2015; Tuckman & Jensen, 1977). Such limitations may be avoided with proper implementation of collaborative practices to ensure student and institutional success.

Implementation of Collaborative Learning

Indications of benefits and limitations of collaborative learning require specific development of implementation and practice to increase the likelihood of student success. Although highly used and lauded, collaborative learning does not always result in desired outcomes. Retnowati et al. (2017) warned educators to be aware of the many limitations of collaboration and to take them into consideration while planning collaborative activities. Therefore, research indicating ways to develop, implement, and support collaborative learning groups is imperative (Cheng et al., 2016; Kozlov & Groβe, 2016). As stated by Davidson and Major (2014), the new perspectives "focus on creating an environment that best helps an individual to develop mentally, emotionally, and socially through being an active participant, personally committed to learning within the context of a supportive learning community" (p. 20). A synthesis of current research indicated that best practices could be summed up in seven key aspects: role of the instructor, sense of community, collaborative training, group composition, task design, time in collaboration, and supplemental tools.

Role of the instructor. The way the instructor facilitates collaborative learning teams greatly affects the outcomes of those teams. Original collaborative learning models shifted responsibility from the teacher to the students; however, to successfully implement collaborative learning in higher education, much responsibility has returned to the teacher in implementation, facilitation, and encouragement (Davidson & Major, 2014) as well as the minimizing of potential negative effects of collaboration (Cho, 2015). Davidson and Major (2014) noted that although a teacher is still responsible for standard class management, instructor participation is that of active facilitation. Hyun et al. (2017) wrote that the instructor's job is to encourage engagement through meaningful activities, supporting Gucciardi et al.'s (2016) statement that the instructor is there to guide students to meaning making. With effective communication and purposeful perspective-taking activities, the instructor builds trust among students and ensures cooperation and contribution (Davidson & Major, 2014; Ennen et al., 2015). Further, instructors should be aware of the load placed on both more- and less-capable students and provide support for both, such as pointing out high performance from less-capable students to increase their perceived value to the team and aiding in even distribution of work (Cho, 2015; Davidson & Major, 2014).

Equally important, feedback and grading are keys to continued success in collaborative learning teams. Providing formative feedback throughout the collaborative process can keep students on track, help them to reach the next level ZDP, and increase self-confidence (Dann, 2018). According to Goldin, Narciss, Foltz, and Bauer (2017), formative feedback given to students in a timely manner intended to help students

immediately improve practice promotes cognition. Also, grading is easily a main issue of potential frustration for students in collaborative learning teams. Davidson and Major (2014) noted that in collaborative learning groups, there are frequently under-performers who do not contribute equally and sometimes only receive passing grades because of their high-performing teammates. In this case, fairness of grading becomes an issue. According to Waugh and Su (2016), the solution to such unfairness in grading is to grade students individually against a provided rubric. In turn, social loafers may increase participation or develop personal accountability (Cho, 2015). Instructors play a major role in the success of a collaborative learning group.

Sense of community. Building a sense of community serves as one of the most important bases for social and academic skills development. In fact, the emotional support gained through a sense of community was found to be a critical factor to student satisfaction by So and Brush (2008). So and Brush were clear to state that simply placing students into groups does not mean that they will work collaboratively as this is a skill that must be taught, fostered, and honed. Chatterjee and Correia (2019) supported this claim, indicating that effective collaborative learning comes from a sense of community developed over time, much higher in graduate students than undergraduate students, where learners cultivate trust, communication, and conflict-coping skills. Once developed, a sense of connectedness becomes a major factor in student learning and satisfaction. In fact, Chatterjee and Correia emphasized that a sense of community increased positive feelings toward the collaborative process. "Students' sense of community is positively related to learning outcomes, including learning experiences,

achievement, and student effort" (Kuo, Belland, & Kuo, 2017, p. 39). Moreover, Kuo,

Belland, and Kuo (2017) stated that it is this social interaction and development of

community that facilitate the appropriation of information and increase in shared

knowledge that leads to higher level individual knowledge and builds an improved sense

of self-efficacy.

To help build a sense of community, facilitators of collaborative learning can

discuss this relationship, model communication, provide ample opportunities for

socialization and discourse, include the group work as a required portion of everyone's

overall success and/or grade, and help facilitate transitions that often bring conflict

(Garmston & Wellman, 2016). Faculty should provide social context to the group work,

encourage, and facilitate communication among members, and provide time for

meaningful interaction (Garmston & Wellman, 2016; So & Brush, 2008). Davidson and

Major (2014) considered the employment of activities intended to acquaint students in a

positive manner the first step in successful collaboration. Prior to grouping and starting

group work, instructors should provide ample opportunities to develop a sense of

community, which allows for the development of rapport, comfort, a sense of belonging,

and trust (Cho, 2015). One example is the use of peer tutors in the classroom, which can

reduce anxiety and increase community trust (Gucciardi, 2016).

According to researchers, the most important element of building a sense of

community is trust development. According to Ennen et al. (2015), trust is the

cornerstone to effective collaboration. Trust development in "temporary workgroups"

(Ennen et al., 2015, p. 617) requires students to make certain judgments that creates a

level of trust that allows students to progress. This initial trust is the requisite trust

developed in a group with little experience with or expectations for group members

(Ennen et al., 2015). Specifically-designed tasks can facilitate the group through the

stages of collaboration and help avoid the conflict and baseless judgments that can occur

during the initial trust stage on the way to mutual trust (Davidson & Major, 2014, Ennen

et al., 2015). Nurturing a sense of connectedness among learners in a collaborative

learning group is an essential aspect to successful implementation but requires

simultaneous implementation of appropriate collaborative task design.

        Collaborative training. Students are not automatically ready to participate in

collaborative learning and often need to be prepared for the process. Ennen et al. (2015)

proposed direct instruction on teamwork and high team performance. Also, Davidson and

Major (2014) suggested teaching students group basics, such as "listening without

interruption, paraphrasing, summarizing, disagreeing agreeably, and… reflecting" (p. 31).

Findings suggested including the expectations for group learning in the syllabus,

reviewing those expectations during the first class, and being firm about penalizing

loafing (Ennen et al., 2015). Setting expectations provides a framework for groupwork

and interaction (Davidson & Major, 2014); however, Garmston and Wellman (2016)

warned that too much emphasis placed on rules can detract from the groups' ability to

form trust and a sense of community. Garmston and Wellman also stated that it is

important to work students up to big collaborative projects by instituting smaller projects

initially to model proper team behavior, provide an opportunity for success, provide

instructions for teambuilding with clarity, and allow students to gain necessary

experiences and group skills. Preparing students to collaborate ties directly into the time needed to develop group skills, interdependence, and accountability.

Additionally, students need to be prepared for potential conflict among the group members. Cho (2015) stated that conflict is standard in collaborative learning groups and that students should be taught to navigate this difficulty. Fall and Wejnert (2005), whose work provided the most recent methodology for practical use of Tuckman and Jensen's (1977) stages of group development, explained that the process of group development can encourage group development and reduce negative outcomes from conflict. Educating students on the stages of group development creates self- and group-awareness and leads to directed activities intended to develop strategies for successful progress through the stages (Tuckman & Jensen, 1977).

The stages of group development are comprised of five stages through which all groups proceed. Tuckman and Jensen's (1977) original concept was that of sequential order; however, some modern academics contest that rather than an immobile sequence, students may flow between the stages back and forth in a fluid process and that the instructor may facilitate this process for success as well (Fall & Wejnert, 2005). In order, the stages are forming, where students first meet and develop a team; storming, where conflict is a detriment to the team; norming, where the members begin to find and use solutions to conflict to become a better team; performing, where the team has implemented changes and is now functioning well; and adjourning, where the team dissolves and moves on to other endeavors (Tuckman & Jensen, 1977). As students

prepare for collaborative learning activities, an understanding of the stages may help facilitate, improve, or even accelerate development.

Group composition. Research has shown the importance of the way in which collaborative learning groups are set up (Chen et al., 2016; Davidson & Major, 2014; Kozlov & Groβe, 2016; Waugh & Su, 2016). However, there remains much debate in this area in terms of what is considered best practice. The most agreed upon factor is the size of the groups. Traditionally, collaborative learning groups consist of 3-5 students (Davidson & Major, 2014); however, recently it has become more acceptable to have a group of just two (Davidson & Major, 2014; Waugh & Su, 2016). Small groups are simply more effective (Waugh & Su, 2016). Garmston and Wellman (2016) explained this phenomenon, stating that smaller groups provide emotional safety, allow for communication and learning through social talk, and still include enough diversity to increase ZPD and provide perspective. The students in Waugh and Su's (2016) study supported these findings, stating that when their groups were larger, students were left out and did not participate; however, when the groups reduced to three or four, they were much more successful. In short, when there are fewer students to hide behind, individuals are more apt to contribute and be heard.

In early implementation of collaborative learning groups, instructors used random assignment to create learning groups (Davidson & Major, 2014). As it became clear that some groups were more successful than others, research on group composition turned to intentional grouping practices (Davidson & Major, 2014). Initially, faculty were implementing homogenous grouping since the random assignment groups were

inherently heterogeneous. Some based grouping on gender, which was found to be

isolating and especially ineffective for males (Zhan, Fong, Mei, & Liang, 2015). Others

separated groups based on cognitive abilities. However, ability grouping is highly

ineffective and inappropriate because a main part of collaborative learning and peer

scaffolding is the benefit from having higher-level students working with other level

students (Vygotsky, 1976). Garmston and Wellman (2016) noted the importance of

having a higher-level student in each group to encourage higher-level work. This idea

stems from accessing current ZDP and striving for a higher level with tasks that are set

just outside of the range of any given individual. However, grouping more- and less-

capable students together did raise concern that the less-capable peers will take advantage

of the more-capable peers (Cho, 2015). In the end, this possibility did not reduce learning

or hinder the more-capable students and, in fact, typically enhanced their learning

through discussion and explanation (Kozlov & Groβe, 2015). The debate between

homogenous and heterogeneous grouping was intense; however, as more studies

concentrated in this area, heterogeneous grouping decisively emerged as the more

successful of the two (Cho, 2015; Kozlov & Groβe, 2016). The debate now focuses on

which methods for achieving heterogeneous groups are best.

     Heterogeneous grouping. The creation of heterogeneous groups is not always as

easy as allowing students to form their own groups even though this is a popular tactic.

Davidson and Major (2014) urged faculty to use intentional heterogeneous grouping

strategies to foster success. Although assigned groups are often unpopular among

students (Waugh & Su, 2016), a well-formed team can alleviate student complaints and

increase group success. Research has indicated the most effective is grouping by cognitive style although there are several other methods with their own benefits.

Grouping students by cognitive style allows each member to employ their natural skills, gain from the group members with other styles, and still extend their ZPD. There are numerous methods to determining an individual's cognitive style including Pask's (1988) Holism/Serialism dimensions and the Allinson-Hayes (1996) Cognitive Styles Index. Results can be used by an individual to develop a better sense of self and how to insert into a collaborative setting, and they can be shared with group members to increase trust and make task distribution more efficient. Cognitive styles influence learning and certain styles are more apt to perform in collaborative situations than others (Chen & Chang, 2016). Chen and Chang (2016) studied how holists and serialists (global learners and analytical piecemeal learners, respectively) react in collaborative versus individual learning situations. They determined that serialists are more naturally suited to collaborative learning but that an all-serialist group is low-performing (Chen & Chang, 2016). Holists scored much higher in individual learning activities and need serialists to increase performance in collaborative work (Chen & Chang, 2016). When you mix holists and serialists together in a group, both groups perform their best, each offering their viewpoints and aiding the others in developing more efficient ways of learning (Chen & Chang, 2016). Supporting these findings, Kozlov and Groβe (2016) found that although symmetrical cognitive styles could exchange information smoothly, an asymmetrical cognitive style pairing or grouping was most effective in navigating, assimilating, and using new knowledge. They noted that when these asymmetrical groups

work together over longer periods of time, they develop a Transactive Memory system. Kozlov and Groβe (2016) further observed that asymmetrical groups were much more beneficial to lower-ability students but did not hinder the higher-ability students. Instead the higher-ability students strengthened their knowledge and skills through a teaching aspect in the group (Kozlov & Groβe, 2016).

Determining students' cognitive style can be a time-consuming task. According to Kozlov and Groβe, using the Content-based Knowledge Awareness (CoKA) approach increases awareness of cognitive styles and leaning preferences. Students provide group members with a visual of content knowledge prior to collaborating, which allows the group to develop a pool of information from which to work and distribute work appropriately (Kozlov & Groβe, 2016). Ennen et al. (2015) believed this knowledge will increase trust and community building in the group as well, furthering the group's potential for success. Participants in Kozlov and Groβe's study not only increased performance using the CoKA method but also reduced their individual perceptions of task difficulty. The intention of these methods is to increase knowledge transparency and facilitate a quicker group development to reach a high-performance state.

Another method of heterogeneous grouping is grouping students so there is a blend of personality types. Personality grouping allows each member of the team to use their strengths and gain support for weaknesses. Jarl (2016) claimed that collaborative groups could easily solve complex problems when the personality traits of group members are known, and strengths are used in problem-solving. A common way to implement this strategy is to use a pre-established personality inventory to help students

determine their overarching academic personality. Several inventories are available, including the Personality Spectrum Inventory developed by Bishop (1999) and the Meyers-Briggs Type Indicator (Meyers-Briggs, 1962/2013). Students take the inventory to determine their personality type and then form groups that incorporate different personality types. The Meyers & Briggs Foundation (2017) stated, "when students understand the differences in their learning styles, communication, and therefore learning, is enhanced. A student's interests and ways of learning directly affect how he or she takes in information" (Type and Learning section, para. 2). Initial dialogue focuses on sharing the personality type, understanding the strengths and weaknesses of each type, and developing a plan to best support and use each student's skill set appropriately in the group (Thomas & Hilton, 2016).

Time in collaboration. Collaborative learning proves to be more successful than individual learning in many ways but only when the collaborative group is high-functioning, experienced, and skilled in both task knowledge and collaboration (Chen & Chang, 2016; Cho, 2015; Garmston & Wellman, 2016). Foundational evidence begins with Vygotsky (1978) who clearly explained that although learning is social, it still takes time for that social interaction to fully aid in internalization and maturation of the psychological functions. This poses the question of *why does it take time to develop a functioning collaborative team?* Chatterjee and Correia (2019) posited time as an essential group factor. Collaborative learning teams need time to develop and should be progressively accelerated to full-steam collaborative mode (Chatterjee & Correia, 2019). The amount of time that students spend with each other and get to know each other

personally and academically prior to collaboration makes a difference in their abilities to form and function successfully (Alvarez-Bell, Wirtz, & Bian, 2017). Although initial trust develops quickly, it is not nearly as important as the mutual trust that develops over time to ensure the group is effective and individuals are gaining as much or more than the group (Alvarez-Bell, Wirtz, & Bian, 2017; Ennen et al., 2015).

Similarly, swift trust, the trust formed in collaborative groups, is often impeded by a lack of time to fully develop into mutual trust (Ennen et al., 2015). This means that undeveloped groups with "minimal experience working with one another" are forced to perform "complex, time specific, and unfamiliar" tasks (Ennen et al., 2015). In fact, Chatterjee and Correia found that graduate students who have had significant time to work in collaborative teams worked better as a team due to increased time working together and establishing relationships. Moreover, So and Brush (2008) discovered that the number of courses using collaborative learning groups learners had taken was positively correlated with their satisfaction with the system and ability to be successful in these groups. The more time the students had worked in collaborative learning teams, the easier and better the process became and the more the students benefitted from the process. Bachrach et al. (2019) also noted that it takes time to develop transactive memory systems to make a group more efficient. The longer the time spent together in collaboration, the less likely there are misconceptions and overestimations of abilities (Bachrach et al., 2019). Waugh and Su (2016) supported this conclusion, noting that students could overcome initial conflict in their collaborative teams over time. So and Brush indicated that the beneficial effects of collaborative learning were realized given

enough time. Time allows groups to develop, which leads to increased interaction, sharing, support, feedback, diversity, and success in the group (Waugh & Su, 2016).

Furthermore, a major complaint of students is a lack of time to complete a task, and this becomes especially true when working on a collaborative group task. Providing enough time for the task includes building in time for dialogue, planning, and even socializing (Barkley et al., 2014). Especially in adult learning communities, considerations for work schedules, family life, and other commitments must be made in task time development (Garmston & Wellman, 2016). Groups should be given sufficient time to plan, coordinate, organize, schedule, research, discuss, share, and develop the task (Kuo et al., 2017). Building enough time for students to complete a task increases their ability to be successful and student satisfaction with the process.

Task design. To ensure collaborative activities are effective, the activity must be specifically designed. Effective tasks lead toward group and individual transformative growth in knowledge, skill, ability, and social development (Barkley et al., 2014; Garston & Wellman, 2016). Barkley et al. (2014) determined the two key aspects of task design are making the tasks appropriate and engaging. The task given must be relevant to the students to encourage meaning-making. Tasks should not only require knowledge and skills gained through the course but also have a connection to real-life situations or experiences (Davidson et al., 2014). Davidson, Major, and Michaelsen (2014) pointed out the importance of ensuring the tasks are better done by a group rather than an individual. The task should require the skills of the group to create a more highly developed product (Järvelä et al., 2015). Based on Vygotsky's (1978) ZPD, the task provided should be

prospective, just outside the ability of any individual in the group, thus requiring the shared knowledge of the group for completion (Simpson, 2015). Prieto, Sharma, Wen, and Dillenbourg (2015) concluded that tasks carefully planned to facilitate high cognitive load moments will optimize learning.

Saturation

The Walden library search engines provided easy access to peer-reviewed education research published in 2015 or later as well as seminal studies on the topic. Further the ability to use Google Scholar added to the ease of access of information. My searches yielded numerous sources, of which I used nearly 90 to inform this review. At this time in my research, I am no longer finding new original studies on this topic and am often being rerouted back to the works already cited in this text. I believe I have hit saturation.

Implications

Because the purpose of this study was to explore student satisfaction with the collaborative learning practices on campus and how collaborative learning teams affect students' educational experiences, the intention was to use those results to provide the administration and faculty with data on best practices. I determined if students in the short-term, intensive educational environment believe that they benefit from such practice. I have created a faculty training program that provides direct whole-group instruction on the conceptual framework, relevant research supporting best practices, specific data pertaining to these campuses, the results of this study, and best practices for successful implementation of collaborative learning teams in the classroom. Group

discourse provides opportunity to share, support, reflect, and provide various perspectives on the topics. Forming collaborative groups within the workshop both exemplifies the practice and provides opportunity for working examples, discourse, role play, and task development. Further, the workshop also allows the administration and faculty to actively participate in determining methods of implementation on campus. This means changing current curriculum and classroom practices to meet the best practices found in the literature. The workshop is inclusive of a PowerPoint presentation and handouts to take home. The goal is to further train and/or support the campus in continuing or implementing practices that increase student satisfaction and, therefore, success, retention, and referrals.

Summary

University X is a non-traditional university that educates primarily adult learners through intensive 5-week courses; however, little research indicated the effectiveness of collaborative learning in such an environment. The three University X campuses used collaborative learning as standard practice in its courses. Although there was much research to prove the benefits of collaborative learning, student complaints indicated that they may not be reaping those benefits. In fact, researchers showed that successful collaboration requires significant time spent in the learning groups to develop collaborative skills, work through the stages of group development, develop mutual trust, and build a sense of community. Because student satisfaction affected the university greatly through student success, retention, and referrals, it was important to explore student satisfaction with collaborative learning practices at University X.

Collaborative learning can be incredibly beneficial for students. However, it has also been noted that not all studies show positive effects (Cho, 2015), and that it is only beneficial when implemented properly (Ennen et al., 2015; So & Brush, 2008). A review of literature determined that collaborative learning yields increased social and academic skills, although it does have its limitations. Literature also revealed the six key aspects to proper implementation of collaborative learning: instructor interaction, sense of community, collaborative training, group composition, time in collaboration, and task design. Time appears to be the essential piece of each of these aspects, but there was little research that supports the effectiveness or use of collaborative learning teams in a short-term, intensive environment, such as that at University X. However, prior to instituting or changing practice, data was collected and analyzed to determine students' satisfaction with collaborative learning.

Section two of this study outlines the methodology used for this study, including the mixed-methods design, setting and sample, data collection strategies, data analysis, and possible limitations.

Section 2: The Methodology

This section provides details of the research addressing the following research questions: How satisfied are students with the collaborative learning teams at three University X campuses? In what ways do students believe collaborative learning teams affect their educational experience? Included is the complete research design for this mixed-methods study, covering population and sampling procedures. Further, the data collection section provides information on the quantitative and qualitative phases of collection as well as instrumentation. Similarly, the data analysis section provides details on the analysis procedures for each phase, including scoring and descriptive statistics for the quantitative section and preparation, coding, and interpretation for the qualitative section.

Mixed Method Design and Approach

This study was a convergent parallel mixed-methods design. A mixed-method design provided a complete view of the topic (see Creswell, 2012; Creswell & Creswell, 2018). The convergent parallel nature allowed me to gather data concurrently, analyze them individually, and compare them together to strengthen the interpretation of the data (see Creswell, 2012). In the quantitative portion, I used a descriptive survey to explore the topic of collaborative learning among students in a nontraditional, intensive program, providing the facts and statistics for comparison and discussion. Then the qualitative portion provided depth to the topic with personal accounts from students' phone interviews to enrich and explain the results of the quantitative study. Data collection

commenced immediately after approval from both universities. Both methods were conducted virtually from my home in South Lake Tahoe, California.

Setting and Sample

Population

The population of this study was the group of enrolled students at three of University X's campuses who had completed at least two courses with collaborative learning teams. After communicating with the DAA on each campus, I determined that from the total population of 3,294, 1,884 students qualified for the study. Seventy-five students, approximately 4% of the population, served as the sample.

Sampling

Because the students in this population were identifiable through enrollment data, I used a single-stage sampling design. This meant that the students who qualified for the study were separated from those who did not (see Creswell, 2012). Research participants had to be ground-campus students enrolled in the full-time evening or weekend degree program on campus. I used a census population sample, meaning I invited the entire population of qualifying students to participate (see Creswell, 2012). I invited qualifying students to participate in the survey and the interview in the same invitation, which was distributed either by student email or by student physical mailbox on campus. Each campus DAA determined which method was appropriate for that campus. After receiving Walden University's Institutional Review Board (IRB) approval for the study, I applied to University X's Committee on Outside Research and University X's IRB to gain

permission to complete the study. Upon their approvals, I returned to Walden's IRB for final approval.

Conducting a census sampling of students ensured that each qualifying student had as much chance as any other to participate in the quantitative survey (see Creswell, 2012). The invitation to participate explained the study, the voluntary nature of student participation, and a statement of participant confidentiality as well as a consent form (see Creswell, 2012). Participants gave their consent to participate in the survey by clicking on the *I consent* button that took them directly to the survey. A total of 89 students took the survey; however, 14 surveys were removed from analysis because they were incomplete or missing responses, leaving 75 completed surveys.

To obtain the sample for the qualitative interviews, maximal variation sampling was used to obtain a group representative of the student body at this institution (see Creswell, 2012). Those who emailed their consent to participate and provided contact information and times of availability within the 2-week data collection period were considered for the qualitative portion. A total of 32 students responded with their consent. Interviews were scheduled with 21 students. Two of those interviews were removed from analysis as that they did not meet the minimum qualifications. This left a total of 19 interviews.

Ethical Considerations/Protection of Human Subjects

Protection of student participants is a key aspect of research (Creswell, 2012). Wellington (2014) emphasized the importance of maintaining ethically sound studies in educational research, especially in planning, treatment of subjects, opportunities given,

safety, and confidentiality. In this study, all participants were treated equally, received the same opportunities, and were free from potential harm. Moreover, student confidentiality was protected in each phase of research. Students were initially contacted with an invitation to participate that explained the voluntary and confidential nature of the study and were asked to give their formal consent prior to participating. The survey invitation included a link to the online survey administered by SurveyMonkey (2018), the makers of a top-rated online survey tool. The survey did not collect any names; however, participants were given the voluntary option to include an email address at which to receive their thank you gift card. Students who agreed to participate in the interviews were provided a notice of confidentiality prior to scheduling the interview (see Wellington, 2014). Further, students were provided my information and informed of my prior relationship with the university. Student participants were informed of whom they could contact should they have questions or concerns about the study. Following these stipulations ensured the study was ethical and participants were fully protected.

Data Collection Strategies

Qualitative and quantitative data collection occurred concurrently. All invitations were given at one time. Survey collection occurred over a 2-week period from the date the invitation went out. Interview participants had 2 weeks to email their consent and dates and times of availability. As consent was received, students were contacted to set the appointment for the interviews. The first interview was conducted on the fourth day of the first week, and the last interview was completed 3 days after the 2-week period ended. All data were collected prior to any analysis was conducted.

Qualitative Sequence

Interviews. The personal interviews commenced concurrently with the quantitative data collection. According to Creswell (2012), in a convergent parallel design, the qualitative interviews are designed to provide support to the quantitative portion by providing the missing detail and context. In the initial email inviting qualifying students to participate in the survey, I also included an invitation to participate in the interviews. This purposeful sampling provided insight into the typical student experience with collaborative learning and preserve confidentiality (see Creswell & Creswell, 2018). The interviews took an average of 35 minutes.

All students currently enrolled at one of the three University X campuses who had completed a minimum of two courses that used collaborative learning teams were invited to participate in the study. I sent invitations to 1,884 students across the three campuses. Students willing to participate in the phone interview were asked to send me an email with the words, *I consent*, a contact number I could call, and days and times of availability.

At the scheduled time, I called each student, introduced myself, and asked for verbal permission to conduct the recorded interview, to which each participant responded with *I consent.* I explained to the participants that I would be asking them 13 prewritten questions and follow-up questions to explore their answers in-depth. I informed them that there was no correct answer; they could speak as freely as they wished, and they could ask me any questions as needed during the interview. Following the interview, I asked the participants once again if they had any questions and told them that they would be

receiving another email from me with a summary of my initial findings for member

checking. I informed them that participation in member checking was fully voluntary but

provided an opportunity to ensure that their voices were heard. I also informed them that

they would receive a digital gift card from their choice of Amazon or Starbucks within

24-hours. Approximately two weeks after the first interview, I emailed a summary of

findings to all 19 participants for member checking, asking them to respond to three

questions to ensure accuracy and provide validity to the data. They were given 1 week to

respond. Only one participant responded and did so with complete agreement and

approval of the summary.

Interview protocol. Using Creswell and Creswell's (2018) guide to qualitative

data collection, I created an interview protocol to guide the interview process. The

protocol included my instructions for the interview, the questions I asked, and space for

notes. I took notes as well as made an audio recording of the interview through mobile

phone application, Automatic Call Recorder, by Appliqato, for later transcription. Upon

commencement, I asked each participant to give her/his verbal consent to the recorded

interview to satisfy consent requirements (see Creswell & Creswell, 2018; Wellington,

2014). I asked the participants the 13 questions on protocol (see Appendix B) as well as

follow-up questions to seek clarification or a more in-depth responses (see Creswell,

2012). The interview protocol eased the coding process in data analysis later, ensuring

the responses of each participant were clearly comparable (see Creswell & Creswell,

2018). Additionally, because the qualitative interview questions mimicked those of the

quantitative survey, data triangulation was built into the process (see Creswell &
Creswell, 2018).

   Establishing sufficiency. As noted in Table 1, the survey questions and the
interview questions related to both Research Question 1 and Research Question 2 and
their subquestions. Therefore, the survey and interviews provided sufficient data to
interpret findings on how satisfied the students were with the use of collaborative
learning teams and how the collaborative learning teams affected students' educational
experiences.

   Role of researcher. I had no known relationship with any possible participant on
campus, and my role in data collection had no negative effect on any student. Because I
did not work on these campuses or live near any of them, I did not have the ability to
personally visit the campus and encourage participation or to conduct more personal face-
to-face interviews.

Quantitative Sequence

   Descriptive survey. The quantitative sequence used a descriptive survey design.
Using a survey is the most time- and cost-effective means of obtaining this information
and has a small impact on student time, potentially increasing participation (Creswell,
2012). The self-administered questionnaire collected both demographic data and data on
student satisfaction with collaborative learning teams. The survey was designed to align
with the research questions. For this study, the unit of analysis was the set of responses
from the combined student populations at the three University X campuses; therefore, I
sent the survey invitation, link, and consent information to the campus DAAs who

distributed them to the qualifying students, easing access to the survey and providing

students with ample time to complete the survey. To maintain standardization, a universal

invitation was delivered to all qualifying students that detailed the instructions for

completing the questionnaire and the timeline in which to do so.

   Instrumentation. I used the Collaborative Learning, Social Presence, and

Satisfaction (CLSS) survey developed by So and Brush (2008; see Appendix C). The

developers gave their permission to use and modify the inventory for use in this study.

This instrument was created to collect data on student satisfaction with collaborative

learning and social presence in the online collaborative classroom (So & Brush, 2008).

The sections of this instrument related to my current study except for the section on

social presence, which was deleted from the inventory for this study. The inventory

consisted of items intended to collect demographic data from each student as well as data

on each student's perception of collaborative learning. The original inventory had four

sections: general information, satisfaction, collaborative learning, and social presence (So

& Brush, 2008). I modified the demographic data collected in Section 1 to include age,

gender, program of study, number of courses taken using collaborative learning, and

GPA as these are all characteristics that determined differences in other related studies.

Further, I modified the questions in Section 2 and Section 3 as necessary to reflect the

collaborative learning/ learning teams focus for this study. Also, with permission from

the authors, I removed Section 4 on Social Presence from the survey as it does not pertain

to this study. Last, I modified some formatting, including the Likert-type scale to make it

easier to respond online and the section instructions to meet the focus.

The modified survey consisted of three sections: general information, satisfaction, and collaborative learning. Section 1 had five questions (#1-5) collecting demographic data, asking students to choose a specific response (i.e. What is your gender? Female. Male. Other.). Section 2 had 10 questions (#1-10) on student satisfaction with collaborative learning. The questions were presented with a 5-point Likert-type scale ranging from 1--*strongly disagree* to 5--*strongly agree*. Section 3 had seven questions (#1-7) on the students' collaborative learning experiences. The questions were presented with a 5-point Likert-type scale ranging from 1--*strongly disagree* to 5--*strongly agree*. Overall, students responded to 22 questions.

Using a questionnaire, a researcher can easily gather data on attitudes and simply conduct data analysis, making questionnaires a suitable choice for data collection (see Creswell, 2012; see Wellington, 2014). Confirmation of reliability, validity, and bias of the instrument came through careful selection. Because the intent was to gather the range of pre-conceived attitudes of students, rather than individual thoughts and concerns, a questionnaire that displayed no bias was most appropriate (see Wellington, 2014). Further, Wellington (2014) noted the importance of choosing or creating a questionnaire that is properly formed with clear, direct questions at the beginning and more open-ended questions at the end. It was imperative to choose an instrument that was both reliable and valid (see Creswell, 2012; see Wellington, 2014). Reliable scores are consistent over time, making it important that the questionnaire is free of vague items and includes standardized procedures (see Creswell, 2012; see Wellington, 2014). According to one creator of the instrument, the instrument reached acceptable reliability levels through

factor analysis and the removal of extraneous items. A valid instrument is one that

provides data that matches the intended use (see Creswell, 2014). So and Brush (2008)

stated the purpose of their study was to examine the relationship among social presence,

collaborative learning, and satisfaction, a purpose very closely related to that of this

study, proving initial validity of instrumentation. Further, other published studies have

since cited use of the CLSS for similar purposes and derived conclusions from data

obtained using this instrument (e.g. Pritchett, Naile, Murphrey, & Reeves, 2014; Sorden

& Munene, 2013). A wise instrumentation choice was key to ease of and accuracy in data

collection and data analysis.

The modified survey was recreated as an online survey through SurveyMonkey

(2018). The survey was completed online and was mobile friendly (SurveyMonkey,

2018). To complete the survey, students used the link on the invitation routing them to

the online survey. Students then filled in the demographic data in Section 1 and clicked

on the appropriate number response on the Likert scale for each question in sections two

and three. Once complete, the students reviewed their answers and clicked on a

completion button that sent the completed survey back to me. The entire survey was to

take no more than 10 minutes to complete, but according to the completion data on

Survey Monkey (2018), no participant took more than 4 minutes to complete the survey.

Raw data are available by request. The collated data is available in the appendices of the

study.

Data Analysis and Results

After data collection, the data were prepared for analysis, examined, tested for errors, and analyzed using the guidelines set forth in Creswell (2012), Creswell and Creswell (2018), and Wellington (2014). I analyzed the data from each method individually, beginning with the qualitative analysis. Then, I compared the data sets to make interpretations.

Analysis of Interview Data

Upon completion of the interviews, I conducted careful preparation for data analysis. The preparation of interview data involved several steps, the first of which called for the careful transcription of the recorded interviews. For this, I used digital transcription available through the audio recording application. Then, the transcriptions were read carefully to detect emerging patterns or categories in the responses. A meticulous coding process was essential, so I used the software NVivo 12 (2020) to ensure clear and accurate analysis. I began by uploading the 19 transcribed interviews to the program. Then, while reading the transcriptions, I coded each item with inductive open coding. I then conducted axial coding, grouping similar codes together and eliminating any overlap in themes. From there, I grouped the codes into larger categories and named them, so the categories responded to the research questions, were exhaustive, mutually exclusive, and sensitive to the type of data. As the purpose of coding and creating categories is to see the emergent themes through frequency of codes, it was important to be as clear as possible in their creation. Data charts along with descriptive narratives from the participants show the relevancy of the emergent themes.

Determining validity in qualitative research is somewhat subjective as it is typically referred to as how well the information depicted the participants' thoughts, feelings, and ideas and can be somewhat skewed by the interpretations of the researcher (see Cypress, 2017). This can be completed by checking researcher interpretations with the participants, using an external auditor, using research over a prolonged time, clarifying bias, and through triangulation with the quantitative data (see Creswell & Creswell, 2018). In this study, I used triangulation and member checking to provide internal validity. To triangulate findings, I compared the emergent themes in the qualitative data with those in the quantitative data. The presence of convergent data in both data sets provided accuracy and credibility of the findings (see Creswell, 2012). I further validated accuracy of the data with member checking. After the initial analysis of the interviews and determination of the emergent themes, I wrote a summary of my initial findings that included basic demographic data, including ranges and medians where appropriate, the emergent themes, and my assertations from analysis. I emailed the 19 participants the summary along with a short set of questions to guide their review, asking participants to check if the information appeared complete, realistic, accurate, fair, and representative of the situations they had experienced, and to reply with any feedback they had. Participants had 7 days to review and respond to the summary. Only responses received within the allotted 7 days were accepted, which in this case was just one response that indicated approval of the summary.

Analysis of Survey Data

I recreated the modified CLSS as an online survey using SurveyMonkey (2018) and invited qualifying students to participate. According to SurveyMonkey (2018), 80% of responses are collected within 14 days, so students were given 14 days to complete the survey. Upon completion, I collected all survey results from SurveyMonkey (2018) and commenced data analysis.

Preparing data for analysis began with scoring the data or assigning a numeric value to the responses (see Creswell, 2012). Demographic data collected required code creation. Each participant was assigned an identification letter from A to S. Gender was given the values of male = 1, female = 2, other = 3. Age was given the following codes: 18 to 25 = 1, 26 to 35 = 2, 36 to 45 = 3, 46 to 55 = 4, and Above 55 = 5. Program of study was given the following codes: Business & Management = 1, Education = 2, Nursing = 3, Health Administration = 4, Criminal Justice & Security = 5, Psychology & Social Sciences = 6, Arts & Sciences = 7, and Technology = 8. Self-reported grade point average was based on an eight-point scale: Under 1.0 = 1, 1.0 to 1.4 = 2, 1.5 to 1.9 = 3, 2.0 to 2.4 = 4, 2.5 to 2.9 = 5, 3.0 to 3.4 = 6, 3.5 to 3.9 = 7, 4.0 = 8. Number of courses taken using learning teams aligned with true values except "More than 10," which was given a code of 11. All scales were finalized prior to data analysis. The questions on the survey were given a score that matched the scale of the survey. For example, because there is a 5-level Likert-type scale, the scores ranged from 1 to 5.

I used Statistical Package for the Social Sciences (SPSS) to analyze the data. After the data was entered, it was tested for errors, including accounting for missing data

(see Wellington, 2014). Participant surveys that had skipped questions were discarded but reported in the final report. Eighty-nine surveys were submitted, but only 75 remained after testing for missing data. No other errors in the surveys required correction or deletion.

Descriptive statistics were used to determine the trends in the data. The data were grouped into categories based on demographics (age, gender, program of study, number of courses completed, and GPA) and satisfaction levels. The various groups were compared to one another and the frequency of each group occurrence was calculated as well. Even though the use of a Likert scale may not provide statistically significant results, mean, median, and standard deviation were calculated and used for comparison. Descriptive statistics also provided responses to the overall satisfaction levels of the students. Further, the self-reported demographic data are displayed in disaggregated tables (see Appendix D) to express satisfaction levels by demographic category for further support and interpretation.

Combined Analysis

Once data from each method were collected and analyzed individually, the combined data were analyzed and interpreted to determine the overall findings. The resultant interview data were used to personalize the survey data, provide depth to the subject, and aid in meaning making. Because the predetermined interview questions mirrored the subquestions of the main research question, the responses guided the interpretation of the student perceptions collected in the survey data. Each survey item and predetermined interview question addressed one or more of the research subquestions

guiding the research (Table 1). Analysis of these responses in relation to the question

determined the results.

Table 1

Relationship of Survey and Interview Items to Research Questions

Research question	Subquestion	Related survey item(s)	Related interview item(s)
RQ1: Student Satisfaction			Q 1-4, 12
		Section 2: Q 1-10	
		Section 3: Q 7	
RQ2: Educational Experience	SQ1: Affect Success	Section 3: Q 5	Q 5-8
	SQ2: Benefits	Section 3: Q 1-4	Q 9
	SQ3: Detriments	Section 3: Q 6	Q 10
	SQ4: Change Over Time		Q 11
	SQ5: Decision to Continue Education		Q 13

Results: Interview Data

I interviewed 13 females and six males whose ages ranged from 21 to 56. The

number of courses taken that used collaborative learning teams ranged from 3 to 20. Each

campus and program of study was represented as well. As I interviewed students, it

became clear that military affiliation was also a factor in responses from participants, so I

added the question, Are you an active duty or veteran student? to the interview protocol

and asked all remaining interviews. Additionally, I emailed the three participants whom I

had already interviewed and asked them the same question. Once all responses were

collected, there were a total of seven military and 12 civilian participants (Table 2).

Table 2

Participant Demographic Data

Participant	Sex	Age	Campus	Military affiliation	No. of learning teams
A	M	52	S	N	3
B	F	28	SC	N	15
C	F	25	SC	N	10
D	F	44	SD	Y	10
E	M	42	SD	Y	3
F	M	30	SC	Y	15
G	F	29	SD	N	6
H	F	46	SD	Y	15
I	M	30	SD	Y	10
J	F	45	SC	N	8
K	M	35	SD	Y	10
L	F	27	SD	N	7
M	F	33	SC	N	4
N	F	21	SC	N	3
O	M	43	SD	Y	20
P	F	23	SD	N	3
Q	F	25	SC	N	5
R	F	56	SD	N	20
S	F	27	SD	N	8

Satisfaction levels. Research Question 1 asked how satisfied students were with the collaborative learning teams at three University X campuses. Data showed that of the 19 participants, 16 students (84%) were at least somewhat satisfied with collaborative learning teams. Question #12 specifically asked participants, how satisfied are you with the use of collaborative learning teams? Ten students identified themselves as satisfied by giving responses such as "satisfied," "very satisfied," and "oh, yes, I am [satisfied]." Six participants identified themselves as somewhat satisfied by giving responses such as "I do, but I don't [like the teams]," "kind of satisfied," "somewhat satisfied," and "just kind of [satisfied]." Three participants identified themselves as not satisfied by giving the following responses: "If somebody wasn't funding my education… I would have dropped out already," "not so satisfied," and "I'm not [satisfied]."

Satisfied students tended to be female, civilian, below the average age of students, and have below average number of learning team experiences. Of the ten students that identified as satisfied, eight were female and two were male. Four students were above the age of 35 and six below. Five satisfied students had participated in more than 10 learning teams, and five had participated in less than 10 learning teams. Four of the satisfied students were military and six were civilian. Satisfied students included two nursing majors, one criminal justice, three business administration, three marriage and family therapy, and one non-identified. Eight of the ten satisfied students identified their experiences as mostly positive. Participant B, a 28-year old nursing student, said that she was satisfied with the use of collaborative learning teams even though she recognized that there were some downfalls as well:

Okay. I would say probably like scale of one to 10, probably a seven, just because I've had a positive experience with the group that I'm with. But like you said, if it were where like the teacher was the one assign it, that I mean it's so stressful. And then not only that, there's those downfalls where I just kind of skim the surface on topics because we all share the assignment and it was just so big for us to do on our own and to go back and look at and do more research on our own.

Similarly, Participant S, a 27-year old female marriage and family therapy student stated that she was "surprisingly very satisfied" now that she was toward the end of her coursework and had learned how to navigate the teams to her benefit, but that if you had asked her early on in her program, her rating "would have been in the lower end." Participant L, a 27-year old marriage and family therapy student noted that her satisfaction reflected her appreciation for the practical application that the collaborative learning team had toward her field. She explained that "it's all about communication… we have to learn how to communicate with different people." However, Participant L also stated that she was unsatisfied with the collaborative teams in her undergraduate program when it did not appear to have that practical application.

Participant O, a 43-year old male MBA student, also indicated his satisfaction with the collaborative learning teams, but that it was because in time, he learned that he could use them to his advantage to make the workload "easier for us." Comradery and team support were Participant E's reasoning for his satisfaction with the collaborative learning teams. Participant E was a 42-year old veteran in the MBA program. He appreciated the similarity of the learning team to his previous military team where each

member did their part to ensure team success. He claimed that this way each student could "carry a little bit of that [extra] weight" or that if you do not understand something, your teammates can "give you a better understanding on how to do what you're trying to do." Like Participant E, the other two military affiliated students who identified as satisfied were older, retired military, and all related their ability to recognize and use the benefits of the collaborative learning team to their previous military experience they had to rely on teammates for their own success.

Somewhat satisfied students tended to be female, civilian, below average age of students (34 years), and have below average number of learning team experiences. Of the seven somewhat-satisfied students, five were female and two were male. Four of the students were below age 35 and three above; however, those below were within just a few years. Four of the students had participated in at least 10 learning teams and three had participated in fewer than 10 learning teams. Three students were current or former military and four were civilians. Although the satisfied group had identified with mostly positive experiences, the somewhat-satisfied group related positive, neutral, and negative experiences in the learning teams, and many participants related all of them at once. For example, when asked if he liked the learning teams, Participant F, a 30-year old active duty student responded "I do, but I don't" and went on to discuss the high instances of chaos that accompany the learning teams. He explained that there is a lot of chaos and conflict that can be overwhelming until leadership and roles are established. At that point, there is efficiency in the learning teams that allows them to do more work faster.

This sentiment was contradicted by Participant H, a 46-year old female student, who claimed that the group did not make the work faster, but in fact made the work more difficult and time consuming. However, she did note that through these experiences she was able to gain better perspectives from other people, which was applicable to her life and career. Participant Q, a 25-year old female student, identified her experiences as neutral because although she recognized the benefits of the learning team, she also experienced some downfalls: "…the benefits and the cons kind of weigh each other out, so I don't feel that it's made that much of a difference." The general perception of this group was that the learning teams had their place, but there were recognizable issues.

Unsatisfied students tended to be male, civilian, above average age of students, and had below average number of learning team experiences. One unsatisfied student was a 35-year old male veteran who had participated in about 10 learning teams in the business management program. He began by stating, "there's nothing I like about learning teams… I hate when I find out that I'm going to be on teams." He went on to state that the learning teams have "negatively impacted the degree of my success." Although other students found splitting up the workload in the learning team to be a benefit, this student stated that this practice kept him from learning the other parts of the assignment, reducing the quality of his education. He also stated there was further time consumption editing work submitted by other students in the team who produced lower quality work, saying, "I have to do work that I wasn't anticipating doing prior, now we're affecting my time." Participant K found unfair grading to be the most problematic:

There was an assignment… we all wrote an essay together. I went through it…

there were marks, "This is good, good, good." My paragraph was the only one

that said, 'Great.' I'm like, ha! But I still got a 126 out of 150, so it's like, well,

mine was the only part that was marked 'Great,' which is better than 'Good.' How

did I falter? How did I get less than a perfect grade? Well, yes, [the learning

teams] will impact my degree of success, but I will not drop out.

Another unsatisfied student was a 29-year old civilian female who had

participated in six collaborative learning teams. She stated that she was not a fan of the

learning teams and find them "very stressful." Her dislike of the teams primarily came

from dealing with teammates who did not participate, submitted work late, produced low-

quality work, or created chaos. Participant G provided an example of one student with

whom she worked:

We had a learning team of three people and he right away didn't want to do

anything. He didn't want to put up the PowerPoint together. He wanted us to

pretty much do the whole work and him sending us his stuff. And then, I ended up

getting a bad grade because when he presented all he did was mumble and he

copied and pasted. A lot of his slides were mostly copy and paste.

According to this participant, "at one point, I felt like dropping out" because of negative

experiences in the learning team.

Participant A, an older civilian male who had participated in three collaborative

learning teams, was the most dissatisfied. Participant A summarized his dissatisfaction,

stating,

It has been a detriment to my education. The level of professionalism and academic ethics are absolutely deplorable. If I knew it was going to be like this with learning teams, I would never have enrolled in the [name of university redacted]. There is no collaboration. There are favorites… There is isolation, and there is no collaboration. There's just extremely poor leadership defining how we're going to do things. That's why I requested to pull out of my learning team because I was getting dead buy-ins about that, and plagiarism submitted under the pretense they'll never check. My plagiarism has been up to 46% on Turnitin. So, there's no academic ethics. Learning teams are essentially another way to throw a project into the curriculum, and there is no true learning experience except for regurgitation of what we pull out of a book.

Participant A stated, "If somebody else wasn't funding my education, I would've dropped out already." Although there were only three participants who self-identified as not satisfied, they clearly identified some of the problems that exist with the collaborative learning teams.

There was little difference in satisfaction levels among students based on the number of learning team experiences or military affiliation, but age did seem to make a difference. Ten participants had experienced below the average of nine learning team experiences, and nine participants had experienced above the average. When combining satisfied and somewhat satisfied student data into the category of *generally satisfied,* eight students were below the average, and eight students were above the average; whereas, when looking at the *unsatisfied* students, two students were below the average

number of learning teams and one was above the average. The age 18-34 group had more

satisfied students than the older group, with 10 satisfied students and one not satisfied

students versus six satisfied and two not satisfied students in the age 35+ group. Of the

seven military students, six identified as generally satisfied and one as not satisfied. Of

the civilian students, 10 identified as generally satisfied and two identified as not

satisfied. Further interpretation of the interview data related to Research Question 2

provides an in-depth look at the positive and negative aspects of the collaborative

learning teams that led to these satisfaction levels. O

Educational experience. Research Question 2 asked about ways students believe

collaborative learning teams affect their educational experience. After coding and

categorizing the responses of the participants, I divided the data into positive aspects and

negative aspects. Three major themes of positive aspects emerged from the data. In order

of frequency, they were development of a successful team over time (87 references),

improved learning experiences (73 references), and skill development (11 references).

The emergent themes of negative aspects almost entirely centered on collaboration with

less-desirable teammates (98 references), then detriment to learning (52 references), and

in small part the development of negative feelings toward the university (19 references;

Table 3).

Positive aspect: Development of a successful team over time. The development

of a successful team over time was the most referenced positive aspect of collaborative

learning teams, with 18 or the 19 students referencing this theme. All students who

identified themselves as satisfied or somewhat satisfied referenced this theme, many

more than once. The 96 references in this theme can be broken down into five sub-themes: equal responsibility (23 references), definitive roles and leadership (19 references), learning team formation (20 references), trust (19 references), and sense of community (15 references). Participant O, a 43-year old male veteran, summarized the effectiveness of these sub-themes coming together for a successful team:

> So, I've had the same group in all my classes, and the working relationship we have is great. So everything's done timely, everyone knows their role, everyone does everything, so everything's cool. So being with the same people, continuity is there, teamwork's there, everyone knows what everyone's got to do.

Participants noted that a successful team can be created over time with the fostering of a few key team aspects. The most mentioned aspect was equal responsibility for teamwork, with 23 references. "No one wants to let down their team. Even if they're only doing the minimum, they're at least doing what's required" (Participant D). Dividing the work equally among team members and team members taking responsibility for their portions was key to success. This ensured fairness and complete assignments while not increasing workload due to non-participatory members. Participant D, a 44-year old veteran female, said, "The group I'm with now, we're really good…We all do our portions and submit it." Participant I, a 30-year old veteran male, mirrored this sentiment, stating, "So far, everyone has pulled their own weight… and we don't leave things to the last minute." Participant E, a 42-year old veteran male, hinted that figuring out how to divide work equally can take some time, stating, "It took a little bit of time to figure out how everybody's going to deliver, but after knowing everybody and saying,

okay, you can do this and let's break it down into these parts." Notably, all but one active duty or veteran military participant identified this theme and provided clear examples of how each team member taking responsibility for their portions led to success. In fact, all of them also mentioned that their military training that focused on teamwork and not letting your team down directly affected their ability to perform in their learning team.

Equivalent to equal responsibility was the creation of definitive roles and leadership. All 19 participants pointed out the importance of setting expectations from the beginning. Picking a leader for each assignment, or perhaps for the group for the entire course, gave a sense of stability to the group. Participant F, a 30-year old male veteran, claimed, "Once we established somebody that was going to take charge, it was a lot easier." The leader oversaw the division, collection, and submission of work. Participant B, a 28-year old female civilian, stated that as leader, she would "be the one to kind of direct…to kind of delegate." Participant C, a 25-year old female civilian, noted, "So I always like to initiate being the team lead, and then set the assignment up for the rest of the team, so we know what's expected."

Definitive roles inside the group also provided structure and maintained expectations. Roles, such as proofreader, would be assigned by skill level, willingness, time available, or in rotation. Participant F said that roles were divided by expertise, and Participant D noted that they rotated roles based on each person's availability that week. This ensured higher quality of work, the meeting of deadlines, and fairness.

Learning team formation continued to be a subject of focus in learning team success. According to the students in this study, group formation was only important in

terms of team member willingness to participate and the length of time a team could

spend together to develop the necessary skills, trust, and sense of community needed to

be successful. Participant D relayed a time where two non-participatory students kept the

learning team from being successful: "These two people did not respond. They did not

contribute. And I was like, 'You know what? Fuck them!' I just can't rely on *these* [kind

of] people." In reference to reforming learning teams in each course, Participant B said

that it would "probably be a mess... It's so stressful!" Participant R, the oldest participant

in the study, stated a preference for keeping the teams together through the program

> …because we can get to know each other. So, I know the strong ones… I know
>
> who's the better… who has better grammar skills and stuff like that. So
>
> eventually, it's like, oh, maybe this person would probably be better here and
>
> there. So, like, even the ones that are like procrastinators, too…. That's how you
>
> build a team.

Closely related are the sub-themes of trust and a sense of community. With 19

and 15 references respectively, these two themes seemed to elicit the more emotionally

positive responses. Thirteen participants imparted at least one anecdote that revealed the

importance of building trust in the group and developing a sense of community. The

comments of the participants supported those findings. Participant E, a 42-year old male

veteran, stated the following:

> You get to know everybody a little bit more, not only to what they do, but even as
>
> a friend. You start telling people more things about your family…more
>
> personal…it's a lot easier then to tell them when you can and can't deliver.

Participant E went on to say, "Once you have developed trust, it's a lot easier to function successfully. The more time you have together, the more you're going to build that trust and that confidence and that experience together." Participant J also noted that increased time together as a group allowed students to "build more of a rapport… and that got better because we were together." Participant L, a young female in the marriage and family therapy program who identified as satisfied and provided many specific examples of benefits she had received through her learning teams, emphasized that trust is important in adhering to the deadlines for assignments as well, stating, "You have to trust each other with the work… we have to trust them that they are going to do it and turn it in when they're supposed to." Participant P, another young female in the marriage and family therapy program, stated with emotion that the learning team had "grown into a community" and they were all proud to have worked together, helped each other, and that they would graduate together soon. Those participants who noted that their teams had become close or like a family also claimed higher levels of satisfaction and recognized the other benefits of the team.

Positive aspect: Improved learning experience. The second most referenced positive aspect was an improved learning experience, with 73 total references. Students believed their academic experiences were enhanced with multiple perspectives, reduced workload, and increased knowledge. Fourteen participants named multiple perspectives as a benefit to the collaborative learning process; however, it should be noted that one of the *not-satisfied* students informed me that although he understood it was intended to be a benefit, in his experience, it has "failed miserably" (Participant A). Participant B, a

young, female, nursing student, stated that through the learning team, "you get to work with different people" and "kind of see how other people think and learn their ideas and really kind of find out about you." Participant C, another young, female, nursing student, noted that "getting a different view of someone else's opinions on the assignment" was helpful in meaning-making. Several participants noted that when everyone shared their ideas on the subject matter, everyone gained a better view of it than they had on their own, and that it also cleared up any ambiguity on the understanding of the assignment itself. Participant I, who is the only active duty male in the study, said a benefit was to

> gain different perspectives… because the way I do things is completely different from how another person does things. They're more analytical and really by the book, and I sometimes go a little off on weird tangents and bring weird thoughts to things that other people go, 'Oh, okay. I didn't see it that way,' or 'Oh, okay. The book says this…'

Other students noted the same benefit, stating, "it's helpful being in a team because I get to see other peoples' perspectives besides my point of view. I get to kind of think outside of the box" (Participant M). "If I saw it this way and they saw it differently and it's like, okay well I see what you mean and we're able to discuss more and get as to why they saw it differently" (Participant P). It was easy to perceive an appreciation for gaining multiple perspectives from the students who discussed it.

A reduced workload was another benefit that 14 of the 19 students noted. Because the team assignment is typically broken down into parts that each team member is responsible for, there is overall less work to complete individually. Participant Q, a

young, female, nursing student, stated, "I think it's been a good experience in the way where we tackle a lot of the assignments together and it kind of lets us disperse the workload." Participant L, a young, female, marriage and family therapy student, said, "sometimes the papers that we have to write as a team are extremely long, so it's good to have different people doing it as well." A few students did admit to feeling guilty for enjoying this benefit. One said, "I know it doesn't sound right, but I have less to do and less to worry about" (Participant R).

Increased knowledge was one of the more noted benefits of the improved learning experience (13 references). Participant C, one of the young nursing students, shared that "if I am not sure what's going on, besides reaching out to the teacher, I can reach out to my teammates and say, 'Hey, do you understand what this means?' Or stuff like that." Participant O, an older, male, military student, stated that in group meetings, members ask each other, "'Hey, I got this, what did you get?' and we can say, 'I think you're wrong." And we discuss. We are correcting each other [and] backing each other up." Participant P realized, "I guess sharing ideas in the learning team actually expands more on my learning. So, I think it's been more of a benefit to me." Participant R, the eldest participant, pointed out, "There's a lot of things that I have learned *because* of meeting them." Students acknowledged that their knowledge-base and learning increased while working in a learning team. Notably, it was the same students who acknowledged multiple perspectives as a benefit who also noted increased knowledge.

Positive aspect: Skill development. The last positive aspect of collaborative learning teams noted by participants was that of skill development. Participants who

recognized this benefit were mostly young females who also identified as satisfied. Some students accredited the learning team with teaching them how to better work in a team, collaborate, listen, take criticism, work through conflict and chaos, and communicate effectively. "Because of how we are studying, we have to learn how to communicate with different people. I've had a good experience so far" (Participant L). Participant M, a mid-aged female, said that "being with different personalities can be challenging but that's collaboration… being with a group perspective…learning how to listen, learning how to take criticism, also." One young nursing student reflected on the growth of team skills through the courses, saying that "you learn, like, team skills and are obviously working with coworkers and being a team player or being a leader" (Participant B). Participant C, who had participated in 10 learning teams at the time of the interview, noticed that these skills took some time to develop, stated the following:

> The communication has gotten better, I guess. At first, it was just new, but now I'm used to [it]. Yeah, so I'm kind of learning how to be successful in a collaborative learn team. The collaborative learning skills have set in and then it gets a lot more fluid.

Participant L noted that the skills learned on the team relate to the work world, and Participant M said that reflecting on the new skills makes them more applicable:

> I think it also teaches me how to read people also, because I want to be a leader. It teaches me how to observe, read people, make decisions, kind of be like, 'Why didn't it work out? This is what I can learn from it,' type of thing.

Although there were fewer references to developed skills, the comments made were strongly in favor of their benefit.

  Negative aspect: Less-desirable teammates. Converse to the noted positive aspects of the learning teams are the negative aspects. These negative aspects almost entirely revolved around having to collaborate with less-desirable teammates, with 98 references. There was enough commentary on bad teammates that I was able to break this category down into three smaller sub-themes: poor work quality (75 references), lack of skills (15 references), and lack of proper motivation (8 references).

  The second most referenced idea in the qualitative portion of this study was the poor work quality of bad teammates and how that negatively affected the team and the individuals in the team. Students noted that social loafers who do not participate in the group, conversations, or assignments were a large problem (36 references). Participant K related the frustration involved in a teammate not participating until the work is done and then still taking the group's grade:

> We've had three team assignments so far already. One of the team members has not contributed one sentence…not to the team charter, even, so I don't have his information… and not any of the other assignments. So, I finally submit the assignments. I submit the assignment at 1 o'clock on the Thursday… the assignment is due by 6pm. At 3 o'clock he chimes in and goes, 'Hey guys…. did you need anything from me for this assignment? It looks like you've already got it in.' And I was, like, *three hours before it's due, now you're chiming in after a whole week to do [it]?* So, this week, I've already done the full assignment. It's

just sitting on my desktop. I haven't done anything [with the learning team]. I haven't reached out to anybody, and you know what's on the [team assignment] board? Nothing.

The effects of social loafers go beyond that student not completing their responsibilities or even the other students having to cover the extra workload; team morale and motivation are reduced and team productivity plummets. Also detrimental to the team are the students who produce low-quality work and/or work contains blatant plagiarism (32 references). Participant M admitted, "I'm a little worried about my grade" being affected by teammates' poor work quality. One dissatisfied student claimed that the "level of academic professionalism and academic ethics are absolutely deplorable" (Participant A). Plagiarism was named as the cause of much stress on the group because it increased the workload of other teammates, the team grade may be affected, and the teammates then have to have an uncomfortable conversation with the offending team member. Participant B recalled,

> There was a student that actually plagiarized like 85% of the portion that she sent me. It was hard because it created tension between the group because we had to talk to her about it, and then she had the opportunity to redo her portion. But nothing happened. Nothing came of it.

Lastly, the team members who are untimely with work completion or communication with the team hinders the progress and overall success of the group (7 references). Participant G related the difficulty with untimely work, stating, "sometimes you get

someone [turning in work] last minute, they're not giving me their part, and it's just very stressful."

The second notable complaint about less-desirable teammates was their lack of communication, collaboration, and leadership skills (15 references). Participant J lamented on the stress involved when teammates lack communication skills, "When there's one person you don't always hear from… honestly, it gives me a little anxiety. You know how it is. Have to deal because again, it's not in my control, but yet it affects my grades." Participant M said that there is a learning curve with all teammates and that the only real difficulty comes with those that have difficulty communicating with the group. The lack of collaboration skills on some teams led to disequilibrium and a lack of structure and planning in the group. Participant M claimed "there is really no rule or direction on how we [work] in our team. It's just the team charter." Participant B described when the team lacks the ability to collaborate or a leader to organize the team that it is "now putting a little bit more pressure on you and it also puts you in a place where you may not be able to develop that same relationship with the people you're working with." Participant A noted "extremely poor leadership in defining how we're going to do things." The lack of such skills reduced productivity and stunted the successfulness of the team.

Lastly, there were some complaints that some team members did not have the proper motivation to make them as productive and helpful as others. All eight references on this topic were directed at active-military-duty and veteran students. The campuses would not provide the current percentage of students on the campuses using the GI Bill;

however, according to the students interviewed, "a very large population" (Participant D) of the students are active military using their GI benefits. According to some of the students in this study, that creates a motivational imbalance in the classroom. The civilian students claimed that the active duty students did not care as much because "some of them, they're getting paid to be there" (Participant G). Participant G went on to say, "I have to pay to be there, so for me, it's very important. And for them, I'm not saying all of them, but a lot of them, they have said it, 'I'm here because I'm here for the money.'" Even one of the GI Bill students admitted that this is the practice among many military students. Participant K shared,

> The degree is kind of my secondary reason for going to school. Yeah, it looks good… that's why fees paid by the military is more my higher drive than the degree…you have a lot of people who are doing that. I don't necessarily attend all of my classes. I don't care about being marked down for not having participation. But if it brings down my grades…I'm getting C's, D's, because I'd rather spend my time [on] something else.

This attitude was noticed by Participant M who specifically sought to not work with military students because, "when I'm in a team, I'm like, *Okay,* I'm not working with you because obviously you don't take this as seriously as I do'" when the response from those students was often, "I'm just here to get money." Teams that were mixed with unmotivated military students and civilian students struggled to collaborate and complete high-level work on time.

Negative aspect: Detriment to learning. Students made 52 total references indicating that the collaborative learning teams were a detriment to their learning. Even students who self-identified as *somewhat satisfied* or *satisfied* also identified certain detriments to the collaborative learning process. Namely the complaints were that individual grades could be negatively affected by team work (19 references), the team work was more time-consuming work (14 references), and that the conflict and chaos that can accompany learning teams was a distraction or detriment to learning (12 references).

Many participants expressed concern for how their individual grades could be affected by learning teamwork. Because learning teams were typically graded as a whole and not individuals, another teammate's poor-quality work, lack of work, or unethical work could take down the others' grades. Although there were more females than males who identified this drawback, more males pointed out grades as a problem than in most other categories. Students who referenced this problem also tended to be older and have military affiliation. Participant B stated that when "working with someone that didn't really do that much work…there were quite a few times where I had to end up making up for that person because I wasn't going to get a bad grade." Participant D, one of the female active duty participants, was skeptical of group work from the beginning, questioning, "Why should your sloppy work affect my grade?" Participant H also stated, "I will do the work if somebody else doesn't do it…it affects my grade if somebody else doesn't do their work."

Along with this negative aspect was the added time and work that could come from making up for the social loafers of the group or redoing low-quality work in

addition to the added time to do work as a group rather than just individually. Those that referenced this problem were primarily female, younger, and somewhat satisfied. Participant E explained, "You have those slackers who will just do the minimum and try to get away with it." According to Participant B, those slackers were "like the weaker link in the team and so you have to carry them." This process increased time and effort made by other team members to complete the assigned tasks. Participant B also stated, "So I have to do whatever I have to. And if that means I have to work twice as hard just because I have to carry your butt, well, I guess I'm going to have to do it." Participant J also lamented frustrations over having to do more work, stating "I didn't necessarily have time to babysit everyone else." Participant H considered all group to be extraneous and unnecessary work. Participant M also believed group work to be too time-consuming:

> The time… like having time to work together, like [to] meet up, and I believe we all work 40 hours, if not more. I mean, some of them have kids and family, it has to be difficult, so it's really hard to meet up, or FaceTime it if we have to.

According to Participants P and S, finding time to work together and complete the assignments was one of the more difficult parts to collaboration.

Conflict and chaos are a natural part of becoming a successful team. Participants who identified conflict and chaos as a problem were female, young, civilian, and somewhat satisfied. According to Participant B and Participant N, conflict was noted by participants when plagiarism and low-quality work was submitted by a member. Participants C and F both claimed the learning teams are chaotic without leadership, set expectations, and equal participation, and that this can lead to conflict. Participant S

stated that her first few learning teams were very chaotic and that "it was more draining [in] my undergrad." Conflict resolution skills were needed to adequately perform. Without the proper skills to reduce conflict, the frustration over unfair grading and increased time needed to complete learning team tasks created enough discord in the learning team to disrupt the learning, thus setting the team up for failure from the start.

Negative aspect: Development of negative feelings toward the university. The last notable negative aspect of the use of collaborative learning teams was the development of negative feelings toward the university. Although less than half of the participants mentioned negative feelings toward the university, the comments and examples show the seriousness of the problem. The most unsatisfied students declared their great dislike of collaborative learning and their waning trust in the faculty and the university. Participant A stated that collaboration is impossible when faculty is ineffective. "I have not met a single instructor in there yet who knows how to manage a classroom, meaning allowing students to equally share" (Participant A). Participant B also stated that faculty was not helpful when there was conflict in the learning team. "I notified the teacher, and nothing happened. Nothing came of it. The teacher just said, like, 'Oh, just tell her to rewrite it.'" (Participant B). In Participant G's case, the faculty member blamed this individual when a teammate did not perform, and when Participant G notified the academic advisors, nothing was done. One participant even stated that he considered dropping out of school so he could switch to a different university that did not use collaborative learning teams (Participant A). Participant A's summation of the problem concluded, "The elimination of learning teams, and the promotion of classroom

management, and fair dialogue, would be advantageous to the program." The issues

causing students to discuss their growing dislike for the school with such emotion clearly

need to be addressed.

Table 3

Demographic Data of Survey Respondents

Demographic	Category	Number	Percent
Gender	Male	30	40%
	Female	45	60%
Age	18-25	17	22.67%
	26-35	30	40%
	36-45	19	25.33%
	46-55	8	10.67%
	Above 55	1	1.33%
Program of study	Business & Mgmt.	35	46.67%
	Education	0	0%
	Nursing	16	21.33%
	Health Admin.	1	1.33%
	Criminal Justice	5	6.67%
	Other	18	24%
GPA	Under 1.0	0	0%
	1.0-1.4	0	0%
	1.5-1.9	0	0%
	2.0-2.4	3	4%
	2.5-2.9	6	8%
	3.0-3.4	15	20%
	3.5-3.9	39	52%
	4.0+	12	16%
No. of courses	0-1	0	0%
	2-3	4	5.33%
	4-5	15	20%
	6-7	9	12%
	8-9	6	8%
	10	3	4%
	More than 10	38	50.67%

Results: Survey Data

The invitation to participate in the survey was given to 1,884 students across the

three University X campuses. Per the request of each campus, paper invitations were

given to students in their on-campus mailboxes at two campuses, and electronic

invitations were given to students through student email at one campus. Those willing to

participate either clicked on the link to the survey if they received an electronic invitation

or used the provided URL to access the survey if they received a paper invitation. Student

consent was given in their action to access the survey. There were 89 surveys submitted

within the collection period; however, only 75 remained after testing for missing data.

The demographic data collected (Table 3) showed that that the respondents were

comprised of 60% female and 40% male. The most common age range of respondents

was 26-35 years. The most frequently chosen program of study was Business

Management. The most reported GPA range reported was 3.5-3.9. Over half of the

respondents (50.7%) had completed more than 10 University X courses.

  Satisfaction levels. Research Question 1 asked *How satisfied are students with*

the collaborative learning teams at three University X campuses? Fifteen of the 16

statements regarding the participants' learning team experiences resulted in higher

positive responses (agree/ strongly agree) than the negative response (disagree/strongly

disagree) or neutral (Figure 1). Furthermore, 14 statements resulted in a majority positive

outcome. Section 3, Item 7 stated, "Overall, I am satisfied with my collaborative learning

experiences." 62.6% of participants agreed, 16% disagreed, and

21.3% were neutral (Figure 2). However, when students responded to whether they

would like to work in learning teams in the future, 42.7% responded that they would, and

33.4% responded that they would not, a much closer margin. Moreover, although 57.4%

of participants found the learning teams to be useful, 21.3% did not and 21.3% were

neutral, the next highest negative responses. Although the "Agree" response was most

frequent in all questions, one statement received the highest "Strongly Agree" response

and one statement received the highest "Strongly Disagree" response. 40%, responded

with "Strongly Agree" to the statement that they were able to actively exchange ideas in the collaborative learning team, whereas the largest percentage of "Strongly Disagree" was 14.67%, in response to the statement, "I would like to work in a learning team in the future." Although somewhat conflicting, the overall response resulted in students being satisfied with their collaborative learning experiences.
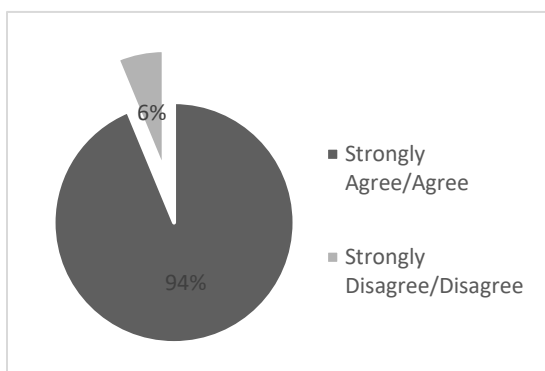
Figure 1. Positive educational experience with CLT (Items 6-22).
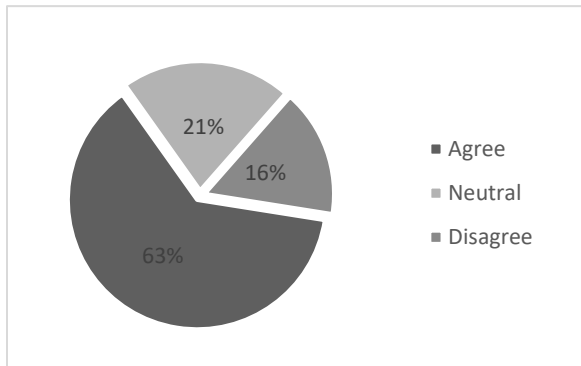
Figure 2. Satisfaction with CLT (Item 22)

Dissection of the data into disaggregated tables (see Appendix D), comparing each demographic to the other demographics and the survey items, largely pointed to a general satisfaction. Per the data tables, participants in the Marriage and Family Therapy were the most satisfied and identified the most social benefits to collaborative learning teams. Younger students tended to be more satisfied overall, to have a higher GPA, and

to provide more positive responses. Males were willing to work in a learning team in the future, found the learning teams useful, and were overall satisfied with learning teams. Females found the learning teams aided in understanding others' point of view, found the instructors to have met expectations, felt a part of a learning community, were able to actively exchange ideas with their teams, developed new skills, and found the learning teams effective. Participants with a GPA above 3.5 agreed with all benefits of the collaborative learning teams and were far more satisfied with the learning teams. Participants who had worked in more than 10 learning teams at the time of the survey proved to provide the most extreme responses with both the most and least satisfied participants.

Table 4

Quantitative Results on Educational Experience

Aspect	Percent agree	Percent disagree	Percent neutral
Able to work effectively in CLT	58.7%	22.63%	18.67%
LT stimulated further research	48%	25.4%	26.67%
Gain new perspectives	73.4%	17.27%	9.33%
Would like future CLT	42.7%	33.3%	24%
CLT was useful	57.4%	21.33%	21.33%
Diversity of topics increased participation	61.4%	25.27%	13.33%
Learning was of highest quality	44%	33.4%	22.67%
Assignments met expectations	60%	16%	24%
Instructors met expectations	75%	9%	16%
Courses met expectations	77.3%	5.37%	17.33%
Felt part of learning community	69.33%	12%	18.67%
Actively exchanged ideas	84%	6.67%	9.33%
Developed new skills	68%	16%	16%
Developed problem-solving skills	65.3%	13.33%	21.33%
CLT was effective	60%	20%	20%
LT were (not) time consuming	24%	50.67%	25.33%

Educational experience. A closer examination of the data provided responses to Research Question 2 and its subquestions. Research Question 2 asked, *in what ways do students believe collaborative learning teams affect their educational experience?* The responses identified participants' belief that expectations were met, and the collaborative learning process was effective (Table 4). Participants agreed that the courses that utilized collaborative learning teams and the instructors that taught them met their expectations. Nearly 75% of participants believed that instructors met their expectations and just over 77% of participants believed that courses met their expectations. Sixty percent of

participants found that the collaborative in-class activities and group assignments met their objectives as well. Most participants over age 35 found that the collaborative learning process was effective and useful.

Further, the responses identified benefits including skills attained, increased knowledge-base, and new perspectives and understandings. In fact, all agreement-level statements yielded positive responses that identified perceived benefits to collaborative learning. Most participants agreed that they were able to work effectively in a collaborative learning team and that they developed new skills and knowledge from working in the team. Moreover, 65.3% were able to develop problem-solving and collaborative learning skills. The benefits that the highest percent of participants agreed upon were the abilities to exchange ideas and gain new perspectives through the collaborative learning team. Eighty-four percent of participants, the highest of any response, agreed that they were able to actively exchange ideas with their collaborative learning teams, and 73.4% of participants agreed that they were able to gain and understanding of new points of view through their exchanges in the learning team. Notably, participants believed the diversity of topics discussed encouraged participation in the discussion, but less than half of the students agreed that the learning team stimulated them to do any further research beyond that. The participants largely agreed to the attainment of several skills and abilities though the collaborative learning teams.

However, there were four perceived areas of improvement. The only question that received a larger negative response than positive was in response to time. About half of the participants noted that the learning teams were time consuming, while 25.3% were

neutral and 24% were negative. Three other questions had lower positive responses as well. As previously noted, 48% of students reported they were stimulated to do additional research; however, the remaining 52% was split evenly between those who were neutral and those who disagreed, showing that although it was not the strongest positive aspect of collaborative learning, it also was not a negative one. Similarly, 46% of participants believed the level of learning to be of the highest quality, but again, those who believed the learning to not be of the highest quality were 33%. However, 42.7% of students agreed and 33.4% disagreed that they would like to work in a learning team in the future, providing the largest number of dissatisfied responses.

Combined Analysis

This study was based in Vygotsky's (1978) social learning theory and Astin's (1984) theory of student involvement. These theories postulate that students learn through social interaction given the opportunities to activate prior knowledge in an environment with others that offer their knowledge and perspectives that stretch the individual's mind beyond individual capabilities to a new higher level of thinking and knowing. Moreover, the amount of active involvement on a student's part, in terms of amount of time and energy a student puts forth, will directly affect the student's learning and the effectiveness of the program. In the case of this study, and according to these theories, collaborative learning teams should provide students the environment in which to learn through each other and provide opportunity for active involvement in learning. However, as the research questions ask, are students satisfied with this practice and do they assume the benefits?

From the results of the quantitative survey and the qualitative interviews, I determined that students were satisfied with the practice of collaborative learning teams. Although a significant number of students indicated that they would rather not work in teams if given the choice, they recognized the benefits that came with this practice. One major benefit noted by students was skill development. Students identified newfound collaboration, problem-solving, and conflict resolution skills. Nearly every participant in both portions of the study noted that a major benefit of collaborative learning teams was gaining multiple perspectives and through that having the opportunity to actively exchange ideas that aided in meaning-making and knowledge acquisition. The students' recognition of this aspect is in support of this study's Vygotskian framework, showing that students in heterogeneous groups would stretch their individual ZPDs to reach a knowledge level otherwise unobtainable on their own (Vygotsky, 1978). Students also acknowledged these benefits as part of becoming a learning community. Al-Rahmi et al. (2015), Ennen et al. (2015), Gucciardi et al. (2016), and Hyun et al. (2017) all noted in their studies that combined trust and sense of community, increased interest, engagement, and academic performance as team members were able to actively collaborate in a safe and fearless environment.

However, students did agree that developing the learning community and reaping these benefits took time. The courses at University X are only 5 weeks in length. Apart from a couple of participants, the students who said they were satisfied tended to be students who had taken more courses with collaborative learning teams. Tuckman and Jensen's (1977) seminal study on the stages of group development posited that time is a

crucial factor to developing the skills necessary to achieve the performing, or group success, stage. *Storming* is an essential step; however, in Tuckman and Jensen's work, groups were given several weeks to months to flow through the stages from *forming* to *storming* to *norming* to *performing* to *adjourning,* not just 5 weeks. Given the short nature of the intensive course, students did not have adequate time to reach performing stage unless the same teams were continued through their courses of their program. Even in that event, there would be conflict in the beginning courses that could derail the team without a proper foundation. Further, as Astin noted, the amount of time invested by a student reflects the amount of benefit received by the student. The more time students spend in collaborative learning groups, not only the more opportunity to develop the skills necessary but also the more time to derive the benefits from this process. Cho's (2015) study supported these findings as well, determining that students needed the time to build the sense of community that led to successful partnership, which mirrors the findings this study.

From these findings, I determined that collaborative learning teams were beneficial to students at University X; however, careful planning, implementation, support, and collaboration training for both students and faculty over time would provide for the most beneficial environment.

Section 3: The Project

Introduction

This research project asked the following questions: How satisfied are students with the collaborative learning teams at three University X campuses, and in what ways do students believe collaborative learning teams affect their educational experience? The results indicated that students are satisfied with the practice and recognize the benefits of the practice; however, student responses also indicated difficulty developing a successful collaborative learning group given the time constraints of a short program. Thus, proper implementation of collaborative learning is imperative. The areas of need identified included fostering the skills necessary to succeed and negotiating intersubjectivity among facilitator, students, and peers.

To ensure the proper implementation of collaborative learning practices at these University X campuses, I chose a results-based professional development training program. Such a program supports continued satisfaction among students as well as potentially improves practice to correct areas where students noted possible deficiencies. The results of this study are incorporated into a 3-day professional development program for faculty and administrators.

Those attending this training program will be University X faculty and administrators. Faculty and administrators at this university do not necessarily have a background in higher education or pedagogical/andragogical methodology. Further, because the university hires faculty who are leaders in their field, rather than faculty who hold a master or doctorate in the field, the faculty may also lack a background in higher

education or pedagogical/andragogical methodology. Therefore, the training program is comprehensive, including some background information in the foundational theories and andragogical practice. Additionally, attendees will gain a knowledge base on seminal and modern perspectives of collaborative learning, its benefits, potential detriments and limitations, current student satisfaction levels, specific ways in which students perceive their learning, and best practices for implementation of collaborative learning activities and fostering collaborative learning skills. Through dialogue and small-group collaboration during training, attendees will also have the opportunity to see practice in action as well as further develop the faculty/administrator community. The goals of the training are for faculty and administrators to gain the confidence and abilities to implement practice, foster skills, and improve the learning community on the university campuses.

Rationale

As students are constantly affected by a changing socio-politico-behavioral atmosphere, higher education institutions must keep abreast of contemporary studies and practices (Ferreira & Bertotti, 2016), and because best practices change, continuing education in higher education is essential (Maloney et al., 2017). In order to affect change in a higher education institution through effective implementation of practice, there must be support, training, and development opportunities provided for faculty (Bigatel & Williams, 2015; Elliott, Rhoades, Jackson, & Mandernach, 2015; Gregory & Martindale, 2016).

Professional development can be defined as "structured professional learning that results in changes in teacher practices and improvements in student learning outcomes" (Darling-Hammond, Hyler, & Gardner, 2017, p. v). Although there is no empirical evidence of one correct method for implementing professional development for teachers (Korthagen, 2016), Darling-Hammond et al. (2017) delineated seven aspects of professional development that, when used, have proven more successful. Effective professional development "is content focused, incorporates active learning, supports collaboration, uses models of effective practice, provides coaching and expert support, offers feedback and reflection, [and] is of sustained duration" (Darling-Hammond et al., 2016, p. v-vi). Darling-Hammond et al. concluded that collaborative professional development also fosters personal professional growth and self-efficacy.

How the Project Addresses the Problem

The quantitative survey data and the qualitative interviews revealed the same results, indicating that modifications to practices were necessary. Proper implementation and facilitation of the collaborative learning process is imperative to students' success in these teams (Gregory & Martindale, 2016), especially because they are working in a short-term, nontraditional environment that provides less time to develop and use effective strategies. A pragmatic application of new best practices in the classroom can be implemented in the form of a faculty development training program that emulates the desired practice (Gregory & Martindale, 2016). Therefore, the university faculty and administrator training program provides information on the background of collaborative learning, the results of this study on their campuses, and best practices for implementing

the collaborative activities and fostering collaborative skills using hands-on, practical, exemplary methods.

Review of the Literature

The literature review was comprised of relevant scholarly journals and books. Research was conducted through Google Scholar and the Walden University library. The databases used in the library were EBSCO, Thoreau, and Sage. The following search terms were used to locate the literature reviewed: *professional development, professional development in higher education, professional development benefits, professional development implementation, collaboration training, faculty development, collaborative faculty development, faculty development methods, faculty development practices, continuing professional development, interprofessional development,* and *faculty development program models.* Saturation was reached as no new perspectives were uncovered and information was repeating.

Professional Development

In higher education, it is widely accepted that professional development is necessitated by the ever-changing fields (Elliott et al., 2015; Ferreira & Bertotti, 2016; Gregory & Martindale, 2016; Korthagen, 2016; MacPhail et al., 2018). According to Wabule (2016), professional development is essential to maintain currency as social structures and diversity evolve. Further, changes in current research, best practices, modalities, technology, and socioeconomic climate also require adaptation to educational practice (Ferreira & Bertotti, 2016; Rodriguez, Condom-Bosch, Ruiz, & Oliver, 2020). Teachers must continually relearn to teach in the current climate (Bigatel & Williams,

2015; Drummond, 2018; Ferreira & Bertotti, 2016). Additionally, as education has

become consumerized, teacher qualifications and the quality of teaching have come under

examination (Leigh, 2016). Instead of hiring scholars with terminal degrees, many

nontraditional universities, including University X, hire faculty with expertise in their

field and midlevel degrees, many without any teacher training (Ferreira & Bertotti, 2016),

thus requiring faculty development to train faculty in andragogical methodology (Elliott

et al., 2015). The quality of faculty education influences the quality of student

achievement, so it is to the university's benefit to maintain current faculty development

programs (MacPhail et al., 2018; Rodriguez et al., 2020). Professional development is not

without its obstacles, however. A lack of time, work overload, and poorly developed

professional development programs can reduce the efficacy of the practice (Hall &

Zierler, 2015; MacPhail et al., 2018).

Successful professional development results in skill and knowledge acquisition,

self-efficacy, competency, and personal growth (Darling-Hammond et al., 2017; Ferreira

& Bertotti, 2016; Hall & Zierler, 2015; Leigh, 2016; MacPhail et al., 2018; Rodriguez et

al., 2020; Silver & Leslie, 2017; Voogt, Pieters, & Handelzalts, 2016; Weißenrieder,

Roesken-Winter, Schueler, Binner, & Blömeke, 2015). MacPhail et al. (2018) posited

that faculty development is more effective when based in research, including research

conducted by the facilitator, university, and/or faculty peers. Use of such research

increases validity and relevancy of the information as well as encourages the

development of an interprofessional learning community among the faculty (Hall &

Zierler, 2015; MacPhail et al., 2018). An effective program is content-focused with

relevant activities and subject matter, provides active learning opportunities that mirror desired practice, provides coherence between goals and content, and uses collaboration among peers (Darling-Hammond et al., 2017; Hall & Zierler, 2015; Rodriguez et al., 2020). An effective program also provides opportunity for reflection on current practices in both written and verbal methods (Hall & Zierler, 2015; Leigh, 2016) as well as opportunities for dialogue and interaction (Rodriguez et al., 2020; Silver & Leslie, 2017). Through relevant dialogic activities, deficient practices may be remedied (Ferreira & Bertotti, 2016) and new, effective practices may be developed (Rodriguez et al., 2020). Further, efficacious teachers are organized, seek better ways to teach, and implement research-supported practices (Rodriguez et al., 2020). In turn, successful professional development fosters improved attitudes toward teaching and practice among faculty that positively influence student performance (Rodriguez et al., 2020).

From Theory to Practice

One major common theme among research was that of bringing theory to practice-- the idea that efficacy and success come from the ability to take research and create relevant classroom practice (Ferreira & Bertotti, 2016; Hall & Zierler, 2015; Leigh, 2016; MacPhail et al., 2018). Just as professional development should "challenge preconceptions of teaching" (p. 3), ongoing professional development should continually adapt as new research develops to improve and update practical applications (MacPhail et al., 2018). In the case of this faculty development training program, bringing theory to practice means providing content that fits the context and implementation that mirrors desired application.

According to MacPhail et al. (2018), a major theme of successful professional development is experiencing the program through collaboration with colleagues. Macià and Garcia (2016) stated, "Teacher professional development through collaboration among equals has been shown to be a key factor for student achievement" (p. 291). Shagrir (2017) agreed that collaboration is the most important factor to successful professional development, and focus should be the nature of collaboration, providing exemplary practice for classroom use. Participants have acknowledged their appreciation for learning from their colleagues and passing on their own knowledge and experiences (MacPhail et al., 2018). Collaboration creates a more meaningful experience and develops support for future learning community opportunities among colleagues (Donelan, 2016; Hall & Zierler, 2015; Leigh, 2016; MacPhail et al., 2018). The wider the network for resources among colleagues, the larger the learning community (Donelan, 2016). Leigh (2016) also acknowledged the importance of including opportunities for collaborative dialogue to share perspectives and create meaning-making.

Because this faculty development training program is specifically on teaching faculty how to teach their students how to effectively collaborate, it is imperative to conduct in an exemplary manner (see Voogt et al., 2016). This teaches self-efficacy and competence and reinforces the transference of knowledge and skills (Voogt et al., 2016). This includes collaborative activities, such as role-play, small group activities, peer learning, dialogic activities, reflection, and development of new collaborative problem-solving practices (Hall & Zierler, 2015; Maloney et al., 2017; Rodriguez et al., 2020; Voogt et al., 2016;& Weißenrieder et al., 2015). Moreover, such practice encourages

further collaborative engagement among colleagues for ongoing development beyond the initial faculty development training.

Project Description

I chose to conduct a professional development training program that not only educates and supports the faculty and administrators at the university but also reflects the best practices and implementation the participants will be asked to conduct on their own upon completion of the training. The program consists of three, 7-hour days, each with two 15-minute breaks and one, 1-hour lunch included. The stakeholders are all university faculty and administrators. The goal of the training is to inform stakeholders on past and current research, the findings of this study, and best practices to increase student satisfaction and success with collaborative learning teams.

Timetable

On Day 1, stakeholders will be introduced to the training goals, the problem identified on the campuses, the theoretical framework guiding the research, and the study. Stakeholders will be informed of the research questions that guided the study, methodology, and the results. The results focus on what was learned from students, including direct quotes to support the findings, including the positive outcomes and the areas of improvement. They will have the opportunity to participate in several discussions, partner work, and one small group activity that asks participants to reflect on their experiences with collaborative learning and their involvement in the process. The day ends with a summary and an opportunity to reflect on the day and complete an evaluation survey.

On Day 2, the focus is on the history of collaborative learning, perceived benefits and detriments, effects on students, and areas of improvement identified in the study. The PowerPoint slides are inclusive of pertinent information, videos, and diagrams to provide visual guidance. Participants will also partner to complete worksheets intended to provide the opportunity to collaborate with others, share ideas and perspectives, and clarify viewpoints. A small group activity provides for further CLT-sized collaboration and exemplifies an activity that can be used with students to further their collaborative skills. The day ends again with conclusion, reflection, and evaluation opportunities.

On Day 3, the focus is on best practices and successful implementation of collaborative learning practices in the classroom. This day has the most collaborative interaction among participants directly to exemplify activities and implementation. Participants will be placed into collaborative learning teams at the beginning of the day, asked to complete a learning team charter, given activities to aid in understanding and moving through the stages of group development, and foster collaborative skills development along with the supportive information provided via PowerPoint. At the end of the day, there will be a whole-training conclusion, reflection, and evaluation opportunity.

Necessary Resources

The resources needed to complete this professional development training program include a large room with access to tables, chairs, projector, and screen. Given that the program will occur on a university campus, these resources should be readily available.

Additional resources include the PowerPoint presentation that guides the whole program, and printed copies of the presentation, activity, and worksheet for each participant.

Potential Barriers

Potential barriers threaten the success of this program. The two major barriers are time and the mindset of the participants. Because this is a 3-day program for all faculty and administrators, it may be difficult to find a time when all stakeholders can be available for the entire time while still running regular operations. One solution to this barrier is to close the campus for three days during the training. Because this is a for-profit university that runs year-round, this is not likely. A second solution is to conduct the training at non-class hours, over a weekend, or during a break. However, University X runs normal classes during the night so students and faculty can work during the day, but there may still be limited numbers that could attend during these times. The most plausible solution is to conduct two or more training programs and ask faculty and administrators to make the time to attend one of them. This leaves the remaining faculty and administrators to conduct regular operations.

The other potential barrier is the mindset of the participants. This professional development program asks faculty and administrators to adjust what they know and how they conduct their classrooms. Changing practice means changing minds and willingness to change, which can be difficult. As Cook-Sather (2016) stated, because improving practice requires a willingness to change thought patterns and behaviors, those who are willing can make a huge difference in student learning. Further, participants will need to update and adjust lesson plans, materials, implementation, and current practices.

Solutions to this barrier revolve around access to support. Participants will be provided

numerous ready-to-go activities and strategies to implement during the faculty training.

They will also have access to university support systems, such as peers and

administrators who have also attended the faculty training, to help aid in implementation

and answer questions along with access to the program presenter for the same support.

<div align="center">**Project Evaluation Plan**</div>

   I chose to conduct a goals-based faculty training evaluation. In goal-based

evaluation, the facilitator or evaluator judges the workshop based on its ability to meet

the predetermined objectives of the workshop (Youker, Zielinski, Hunter, & Bayer,

2016). The goals of the workshop are converted to measurable objectives for evaluation

(Youker et al., 2016). Although scholars such as Cronbach and Scriven (as cited in

Youker et al., 2016, p. 28) have asserted for many years that goal attainment is only a

portion of the evaluative process, goal-based evaluation remains the primary method for

short-term, objective-based workshops because it provides clear indication of areas of

improvement (Youker et al., 2016). Additionally, Youker et al.'s (2016) study found that

facilitators believed goal-based evaluations to be the easiest to read and interpret and

make modifications from as well as being the most participant-friendly option to

workshop assessment.

Formative and Summative Evaluations

   As they are complementary, evaluations given during this faculty training are both

formative and summative (Dixon & Worrell, 2016; Dolin, Black, Harlen, Tiberghien,

2018). Because this workshop runs over 3 days, participants are given an opportunity to

complete a formative evaluation at the end of Day 1 and Day 2 so that I can make immediate, necessary adjustments based on the individual group, environment, and current climate (Dixon & Worrell, 2016; Drummond, 2018). A formative assessment identifies actual influence of the workshop during learning with the intention of improving or increasing learning potential (Dixon & Worrell, 2016; Drummond, 2018; Moss & Brookhart, 2019). Reviewing these evaluations after each day provides the facilitator an opportunity to make modifications to content, style, or environment as necessary and able. This allows the facilitator to meet the needs of the current group as well as make potential permanent changes for future workshop presentations.

At the conclusion of the workshop on Day 3, students are provided an opportunity to complete a summative evaluation. A summative evaluation provides information on final student achievement as well as final thoughts and opinions on the workshop (Dolin et al., 2018). Such results can be used to make further modifications to the workshop for future success. According to Lucas, Promentilla, Ubando, Tan, Aviso, & Yu (2017), an analytic hierarchy process-based (AHP) evaluation for faculty training workshops provides concise summative data from which to evaluate the workshop. An AHP evaluation focuses on workshop design, quality of content, quality of delivery of content, and relevance of the workshop (Lucas et al., 2017). Lucas et al. found that the relevance of the workshop was the most important factor among faculty; therefore, relevance is the primary focus of the evaluation.

Goals of the Project

The purpose of this collaborative learning training is to inform University X faculty and administrators of the current state of students' satisfaction with collaborative learning practices and gain the confidence and abilities to implement practice, foster skills, and improve the learning community on the university campus. Daily goals of the training include providing clear information to the participants, maintaining engagement throughout the training, and providing opportunities for dialogue and collaboration. The three summative goals of this training are (a) gain knowledge on seminal and modern perspectives of collaborative learning, its benefits, potential detriments and limitations, current student satisfaction levels, and specific ways in which students perceive their learning; (b) learn research-based best practices for implementation of collaborative learning activities and fostering collaborative learning skills; and (c) provide an opportunity for dialogue and small-group collaboration to see practice in action as well as further develop the faculty/administrator community.

Evaluation Goals

The main goal of the evaluations is to collect the opinions of the participants to improve the training as necessary, specifically in design, quality, and efficacy (Lucas et al., 2017). The formative evaluations will provide participant opinions on environment, depth and clarity of information, relevance of information, facilitator tone and presentation style, handouts and activities, engagement level, and use of time. The summative evaluation will focus on the three main goals of the training, obtaining opinions on the training's ability to inform; quality, relevance, and applicability of the

content; level of engagement; level of collaboration, and overall satisfaction with the training. The responses provide the ability to measure performance, follow improvement, and determine methods for further improvement to workshop design and delivery (Lucas et al., 2017).

Stakeholders

The University X system is large with many stakeholders involved. Stakeholders are those that have an interest in the success of this workshop (Johns Hopkins University School of Education, 2020). The major stakeholders involved in this workshop are the full-time faculty, adjunct faculty, administrators, and students on these three specific campuses. However, because of the enormity of this university system, there are several indirect stakeholders, including the faculty, administrators, and students at the other campuses in the system, as well as the corporation that oversees the university system. On the individual campuses, the stakeholders' concerns are for the success and satisfaction of the students and improvement of the original perceived problem on the campuses. The consequent effects of increased student satisfaction can be increased engagement, student success, retention, referrals, and further recruitment (Daniel et al., 2017; Hyun et al., 2017; Larbi-Siaw & Owusu-Agyeman, 2017; Sears et al., 2017). Increased retention and recruitment positively affect the overall success and longevity of the university as a business; thus, providing reason for corporate interest in the workshop.

Project Implications

This study can bring about social change on these campuses, providing guidance to ensure both student satisfaction and success at University X and other similar

education environments. Improving education in these environments is improving education for the students that benefit from these environments. An increasing sector of America's education system is moving toward nontraditional, andragogical models to meet the changing needs of society (Gelbgiser, 2018; Hodgman, 2018; Holland & DeLuca, 2016). This increase in nontraditional educational institutions provides increased opportunity for adults to attend a higher education institution and obtain a collegiate-level degree.

Advantage for Disadvantaged Students

Non-traditional universities, such as University X, saw a 400 percent increase in enrollment from 2000-2010 (Gelbgiser, 2018). One reason for this increase in popularity is the opportunity provided for previously disadvantaged students (Gelbgiser, 2018; Silva-Laya, D'Angelo, García, Zúñiga, & Fernández, 2020). Open-enrollment, evening and weekend classes, career-focused degree tracks, and shortened course schedules provides students who would not have otherwise been able to attend college an opportunity to attain a college degree, decreasing inequality in degree attainment, (Gelbgiser, 2018; Hodgman, 2018; Holland & DeLuca, 2016).

Non-traditional education provides access to education for marginalized and historically underrepresented students, including people of color, women, undocumented people, and people who were products of substandard or unequal educational or learning environments (Hodgman, 2018; Public Policy Institute of California, 2017). According to the National Center for Education Statistics (2017b), women accounted for 76% of for-profit enrollment versus 57% at traditional universities, and people of color accounted for

27% of for-profit enrollment versus 16% at traditional universities. A 2017 study showed that people of color now represent the majority of enrollments at non-traditional for-profit universities in California, where these campuses are located (Public Policy Institute of California, 2017). Thus, the social impact of improving practice in the largest for-profit university system in the United States could improve educational opportunities for previously disadvantaged students, providing opportunity to reduce educational inequality.

Section 4: Reflections and Conclusions

Project Strength and Limitations

There are several strengths and limitations in the implementation of this project. One major strength of this project is that the training itself is a direct example of the desired results of the training. Hall and Zierler (2015), Silver and Leslie (2017), and Voogt et al. (2016) stressed the value of bringing theory into practice and emulating desired practice during training. This training is facilitated in the manner the participants are asked to facilitate in their classrooms. Also, the activities, discussions, and handouts are those that can be used in the classroom as well. There is direct implementation of the seminal theories and study findings presented toward practical application in the classrooms. A second strength of the project lies in its simplicity. It requires only one facilitator per presentation and very few materials. Also, it can be easily conducted on any campus. Third, the project can be updated as new research emerges or new problems and solutions present themselves on campus. Wabule (2016) emphasized the importance of updating professional development trainings to include new ideologies and technological modalities to maintain currency. Finally, and importantly, this project opens the dialogue and action for a collaborative learning community among the faculty and between the faculty and administrators that can extend beyond the training. Both MacPhail et al. (2018) and Rodriguez et al. (2020) highlighted the long-term benefits of fostering self-efficacy, confidence, and the desire for continued personal growth in a learning community. Each of these strengths builds the potential effectiveness of the project.

Nevertheless, this project is not without concerning limitations. University X is a large university system with numerous larger campuses and a number of satellite campuses. In this study, I focused on three of those satellite campuses, encompassing five total minor campuses. Keeping implementation at this smaller scale, limitations are few. One limitation is scheduling time across these campuses to conduct the training without unnecessarily interrupting academics for students. Because the campuses offer day, evening, and weekend classes, the training would need to occur during an academic break or possibly in multiple rounds to keep some faculty and administrators free to run business while others attend the professional development training. A second limitation is working with faculty and administrators with varying backgrounds and degree levels. Not all participants will come with similar degrees or pedagogical/andragogical training (Ferreira & Bertotti, 2016; & MacPhail et al., 2018). This could possibly create dissonance among participants as they collaborate; however, this provides an opportunity to exemplify real-life collaborative learning team situations, conflict potential, and conflict resolution possibilities (Chatterjee & Correia, 2019; Cho, 2015). A third limitation to the effectiveness of the project is participant willingness to change practice. Cook-Sather (2016) noted the potential difficulty to inspire seasoned teachers to change practice, but those who continually adapt and evolve their teaching are those who will make significant change in the lives of their students.

Implementing practical changes at just three campuses poses another potential problem: inequality of the education offered inside the university system. One of the benefits of a business-model education system is the consistency in the product delivered

at each campus (Bernik, Sondari, & Indika, 2017). This study addressed a concern for student satisfaction with the collaborative learning process and how it affected student experiences on the campuses for the purpose of improving practice and increasing satisfaction. A large variance in content or practice can negatively affect student success outcomes, thus negating the purpose of implementing the faculty development training program on the three campuses only.

However, the large size of the entire university system poses a sizeable limitation on successful implementation of this project. First, the chain of command to gain permission to conduct the professional development training is extensive, and it would be a long, arduous process to gain permissions at each level from campus directors to regional directors to vice presidents to presidents, and so on. Second, once permissions are gained, a decision would need to be made on conducting synchronous or asynchronous trainings. If synchronous trainings were chosen, a team of several hundred trainers would need to be trained and prepared to teach the entire system in roughly the same period. If asynchronous trainings were chosen, it could take extensive time for a single or few facilitator(s) to complete the trainings across the whole system, creating inconsistent operations. In either capacity, the manpower, cost, and time may hinder successful implementation.

Recommendations for Alternative Approaches

The problem noted on the campuses was that students were expressing frustration with their collaborative learning teams, and faculty were noting increased conflict, lack of

participation, grading concerns, and difficulty in facilitating the collaborative learning teams. The approach I took was to determine what the satisfaction levels were and how the learning teams were affecting student experiences to modify practice to improve student satisfaction, experience, and hopefully success. However, there are alternative approaches to addressing this problem.

One approach might be to write a policy paper to the university recommending the cessation of learning teams altogether. Many students indicated their dislike for the teams, including a few who stated they were the reason they dropped out of school. Roughly one-third of the survey respondents indicated that they would not like to continue using learning teams in the future. Another approach might be to design an academic course for students on collaborative learning. The course could be part of student first-year courses prior to moving into content courses that use collaborative learning teams. The course content could focus on collaboration, collaboration skills, active participation, conflict resolution, team building, and community building. Specific activities and discussion could foster the necessary skills and knowledge for success while also building program-specific teams in which students would remain throughout their coursework, providing the time and sense of community necessary to achieve success. A third approach might be to offer a learning team toolkit and/or a mentoring option through the student resource center intended to help students navigate the learning teams.

Scholarship, Project Development, and Leadership and Change

Scholarship

In something as immense as conducting a doctoral research study, one can only learn and grow as one goes. In the 10 years since I began my doctoral journey, I have learned numerous lessons regarding research and project design as well as many personal lessons. Of the many lessons I learned about conducting research, those of greater importance include adhering to a timeline, selecting a relevant topic, focusing on research methodology, and aligning with one's strengths and interests. I began my research and then took a 5-year break from my doctoral work. This break created several obstacles to overcome, including updating base research, finding a new study site, researching the new population, and gaining permissions to conduct the study. Each of these setbacks cost time and required additional adjustments to the study to adapt to changes at the study site. Relevancy of the study topic or the problem statement is imperative to success. Personal connection, recency, and ability to personally witness the problem ensures ease of access to information and participants as well as currency on problem development. Solid research methodology might be the most important key to success in conducting research. Of utmost importance is to choose a study design method that aligns with the study and the goals. This will aid in clarity, organization, and ability to conduct the study. Second, clear identification and access to participants increases the probability of obtaining a good sample for the study. Third, reviewing analysis methodology and conducting it in a methodical, step-by-step procedure ensures clean results. Aligning research with one's strengths and interests might be the most important of all.

Researching a topic of interest with passion and using a method that inspires one's best work to achieve a goal makes all the difference. Understanding the impact on the stakeholders as well as the potential social change can greatly affect the quality of work.

Project Development

Project study development occurs more organically than the research plan; however, clear planning and execution ensures a higher quality product. As the initial research was conducted, I had many ideas of how to fix the problem, and the project began. This continued to develop, mold, and evolve as I read more research, my colleagues offered ideas and information, and my mentors steered my direction. The project really came to life when I began data analysis and the themes emerged, preconceptions overturned, and solutions came to light. The critical portion of project development was bringing theory to practice. Ensuring the professional development training aligned with research and demonstrated desired outcomes was my focus. This did, however, also turn out to be what I found most exciting to put together. To see it all come to fruition, with a tangible deliverable, sparked my excitement to see the project through.

Leadership and Change

The many years I worked on this study saw countless changes in my personal and academic life, which greatly affected me as a scholar. I learned strengths I did not know I possessed, and I became acutely aware of weaknesses that hinder multiple aspects of my life. I found after I took a 5-year break and essentially had to start the project over, taking a year to identify and approve new study sites and participant gathering methods, that

even in the face of these obstacles, I had resilience. I had the desire to see this project to the end. I also learned that I was able to adapt to changes, find new pathways when one was blocked, and complete the work even when it felt impossible. I learned that I am not alone in my work-- that my chair, peers, and support staff were there to see me through and that it was acceptable to use that help. Along with these strengths, I found my weaknesses. I learned that my procrastination is a great hindrance to progress and focus. Adding time does not help any aspect of this process. I learned that I am a master of excuses and use them to procrastinate. I learned that my mind will sometimes organize information, but usually, I will need to take the time, effort, and care to do so, and that following a process will reduce the chaos. I learned that even though I thought I was a numbers person and aligned with quantitative work, that I prefer people. Qualitative work was inspiring and gave my work life when I did not feel it. Human connection, stories, frustrations, celebrations, guidance, problem solving, and growth are why I am in education. I can make a difference as a scholar and practitioner.

Reflection on the Importance of the Work

My interest in this research topic began in 2008 when I was a faculty member of three ground campuses and the online campus for University X. I was introduced to the concept of collaborative learning teams and was impressed with the model and how it addressed student need for learning through social interaction, accessing the zone of proximal development, providing internal mentorship and support, and mirroring many of the business models at corporations the students would be working for after degree obtainment. However, it did not take long after I began teaching in the classroom to

discover where the drawbacks were and to start hearing the complaints from the students. My end-of-course surveys were flooded with negative comments from students regarding the learning teams. The faculty lounge was flooded with the laments of many faculty regarding student conflict, grading fairness, and other complications.

By the time I started my doctoral work in 2010, I was certain that there was a better way to implement the learning teams so that students could benefit as intended. As my research began, I also started in with a team of faculty who taught first-year courses and saw an opportunity to teach the students how to collaborate. This developed into the creation of some materials to help facilitate the learning teams and eventually both student and faculty workshops that saw some immediate success. Unfortunately, because of special life circumstances, I left my job at the university and never returned. I also left my doctoral work. Five years later, when I returned to my doctoral work and this subject, I discovered that much had changed on the campuses, including how collaborative learning teams were implemented. However, the problem still existed. In fact, while some changes held a positive difference, others only seemed to increase the need for intervention.

I now had to determine what was and was not working. Were students getting any of the benefits? Was this still a viable practice? By this time, the flush of research and literature on this topic had slowed as the idea of collaborative learning was no longer new, and most accepted it as good practice. However, one characteristic of University X kept it from fitting within the constructs of other universities with positive collaboration outcomes: short-term courses. University X courses are much shorter than those of any

other study lauding collaborative learning teams. This point made this study both viable and important.

As I developed the study, I ran into several obstacles, which only prepared me for the potential limitations of working within this large university system. Some campuses were struggling and closing, and others were facing reduced enrollment and lowered retention. The chain of command was long and disjointed, and it was difficult to infiltrate the system as they became protective of their highly criticized business model. However, this was reason enough to allow a study that may provide insights to improving practice that could improve student satisfaction and university success. After conducting the research, I determined that the findings did imply that certain simple changes in practice could improve student satisfaction and experiences.

University X has provided a model for many similar higher education institutions that have emerged in recent years. Many of these institutions also offer shorter terms and include collaborative learning. Because this study addresses collaborative learning in nontraditional environments with shorter terms, it adds to the current body of literature. Other institutions and future researchers may use these results as well as the project study as a guide to implementation and improvement on other campuses.

Implications, Applications, and Directions for Future Research

There are implications for positive social change through the implementation of a professional development seminar to improve teaching practices that may increase student satisfaction. At the individual level, the faculty and administrators who participate in the training will gain a deeper understanding of current student beliefs and

best practices from the research. Attendees may also have the benefit of adding skills and knowledge to create a richer learning environment in which to teach and participate in creating a more satisfactory learning environment for their students. This, in turn, can lead to increased job satisfaction. The students will benefit from new and improved practices that will redefine the collaborative learning process, making it more conducive to learning. Reducing the negative aspects of the collaborative learning process will make a more satisfactory experience and could improve learning and overall success. The university may also benefit from the implementation of new practice. Because increased student satisfaction can lead to increased retention and referrals, the university system could see a boost in business. The larger implications of this study are an improved student atmosphere that could lead to reduced academic criticism.

University X may benefit from future research at other campuses in the system. Should the findings of those studies compare to these findings, it would be beneficial to make policy changes throughout the entire system. Further, it may benefit University X to pursue research in other areas of student satisfaction. Through the qualitative interviews, I learned that student satisfaction goes beyond the collaborative learning teams and appears to be affected by course sequencing, reduced first-year or preparatory courses, short course terms, student resources, and student support.

Conclusion

University X's mission statement emphasizes their intention to provide educational opportunities for students to increase their professional abilities and become leaders in their fields. University X's mission and purpose statements emphasize the

intention to provide opportunities for students to increase their professional abilities and become leaders in their fields. With eight comprehensive purposes for higher education listed, I focused this study on facilitating effective student learning and developing collaboration skills as well as improving the educational system to provide the highest level education possible.

In response to perceived problems observed on the campuses, I created this study to determine student satisfaction levels with the current use of collaborative learning teams and the ways in which students believed collaborative learning teams affected their student experiences. The findings of this comprehensive mixed-methods study showed that students were generally satisfied with collaborative learning teams; however, there were notable areas in practice that could benefit the students and the university if improved. Increased student satisfaction is linked with increased student success (Daniel et al., 2017; Hyun et al., 2017; Larbi-Siaw & Owusu-Agyeman, 2017; Sears et al., 2017). Further, increased student success is linked with increased graduation rates, retention, and referrals (Daniel et al., 2017; Hyun et al., 2017; Larbi-Siaw & Owusu-Agyeman, 2017; Sears et al., 2017).

In a climate when nontraditional institutions are on the rise but also often criticized, it is imperative to remain abreast of modern research and continually improve practice to maintain relevancy in a competitive market (Hodgman, 2018). Furthermore, as an institution whose model provides opportunity for disadvantaged students to obtain higher education degrees, there is even more of an obligation to provide high quality education to validate the degrees earned. Although the university aligns with a business

model, undergoing professional development to improve practice to increase student

satisfaction and success could help gain the university recognition for a student-centered

approach to education.

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Appendix A: The Project

<u>Collaborative Learning Faculty Development Training</u>
Daily Lesson Plans, PPT Slides, Worksheets, Evaluations

Day 1

9:00am-	**Welcome**- introductions, basic timeline, ground rules
	Goals & Objectives (Slide 3)
	Stakeholders (Slide 4)- who is there and why
	Purpose Statement (Slide 5)- establish purpose and relevancy
9:30am-	The Problem & Research Questions (Slide 6)
10:00am-	The Study- quick background /study done for Walden Ed.D
	Theoretical Framework (Slides 7-13)
	The Study Format- design, population, sample (15)
10:45am-	Qualitative Portion /Results (Slides 16-29)
12:00pm-	**Lunch**
1:00pm-	Qualitative Portion/Results continued (Slides 31-35)
1:30pm-	Quantitative Portion/Results (Slides 36-41)
	Combined Analysis (Slides 42-45)
2:30pm-	**Small Group Activity-** Let participants group as they like in 3-5 to discuss questions on benefits, detriments, experiences, etc.… Visit groups and facilitate the discussion
3:30pm-	Conclusion (Slide 47)- quick recap, take questions, final thoughts
	Reflection (Slide 48)- ask students to complete the **Day 1 Evaluation**
4:00pm-	**Dismissal**

Collaborative Learning
Professional Development Training

████████████████

Jacquelyn L. Jenkins, MA.T

Welcome to Day 1

9:00am- Welcome, Goals & Objectives
9:30am- The Problem & Research Questions
10:00am- The Study
11:00am- The Results
12:00pm- Lunch
1:00pm- The Results continues
2:30pm- Small Group Activity
3:30pm- Reflection & Conclusion
4:00pm- Dismissal

Purpose & Goals

The purpose of this collaborative learning training is to inform UOPX faculty and staff of the current state of students' satisfaction with collaborative learning practices and gain the confidence and abilities to implement practice, foster skills, and improve the learning community on the university campuses.

- Goal #1: Gain knowledge on seminal and modern perspectives of collaborative learning, its benefits, potential detriments and limitations, current student satisfaction levels and specific ways in which students perceive their learning
- Goal #2: Learn research-based best practices for implementation of collaborative learning activities and fostering collaborative learning skills
- Goal #3: Provide an opportunity for dialogue and small-group collaboration to see practice in action as well as further develop the faculty/administrator community

Stakeholders

- The UOPX learning community is ENORMOUS!
  - Administrators
  - Staff
  - Faculty
  - Students
  - UOPX Community Worldwide

  Each member of this community influences the student experience!

Purpose Statement

The purpose of this study was to explore student satisfaction with the use of collaborative learning teams and how collaborative learning teams affected students' educational experiences during the five-week courses at three University of Phoenix campuses in California.

Research Questions

RQ#1: How satisfied are students with the collaborative learning teams at three ABC University campuses in California?

RQ#2: In what ways do students believe collaborative learning teams affect their educational experience?

Theoretical Framework

- Vygotsky's (1978) Social Learning Theory

- Astin's (1984) Theory of Student Involvement

Social Learning Theory

- Learning is a product of social interaction
1. Learn through observation, interpretation, mimicking, and mutual active experiences
2. Learn from those who obtain more or higher knowledge
   - learn from each other using various backgrounds, perspectives, and experiences.
3. Zone of Proximal Development (ZPD)
   - link between the knowledge, learning, and problem-solving capabilities of a group versus that of the individual.

Zone of Proximal Development

- Defined as the difference between a person's current developmental level and his or her potential developmental level through expert guidance and collaboration with people in different zones.
- Facilitator provides meaningful problem-solving tasks that are too difficult to accomplish alone but that can be accomplished as a group, causing "disequilibrium"
- Dialogic interaction and scaffolding → sharing personal understandings and develop new understandings together
  - Use prior knowledge while stretching a learner's core knowledge and abilities
  - scaffolding changes to reflect the new knowledge
- Individuals have various sizes of ZPD- some learners will be outside current ZPD→ challenges
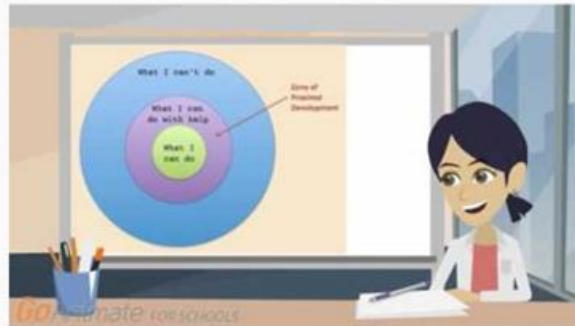
(Lamorte, 2016)

embedded video link

Theory of Student Involvement

- In many learning theories, the student's role in his or her education is overlooked
- TIME = Student Resource
- TIME + ENERGY = Student involvement
- More Involvement → More Success

Theory of Student Involvement

Five Postulates:

1. Students will invest energy in various objects and activities

2. The investment of energy occurs on a continuum where each student extends energies differently, and an individual extends his or her energy uniquely to each object or activity

3. The investment of energy has quantitative aspects (hours spent studying) and qualitative aspects (student's understanding of a task)

4. The amount of learning and individual development that comes from an academic program is proportional to the involvement level

5. The effectiveness of a policy or program is directly related to its ability to increase student involvement.

Theory of Student Involvement

How do we use this?

- Focus less on the content and teaching techniques and more on student involvement, motivation, time, and energy given to the educational experience

- Frames the necessity to study student satisfaction with collaborative learning practices

- Students who perceive higher satisfaction with the practice will invest more energy into the work, thus increasing the possibility of success

- Students who are more involved will likely perceive higher satisfaction with the program

Interview Protocol

- 13 prewritten questions + follow-up questions
- Phone call to participant at predetermined time
- Audio recorded for accuracy
- Additional notes during interview
- Average Interview Length = 30 minutes
- Professionally transcribed

Survey Instrumentation

- Collaborative Learning, Social Presence, and Satisfaction (CLSS) survey developed by So & Brush (2008)
- 22 Questions
  - 5 demographic
  - 10 student satisfaction with collaborative learning
  - 7 collaborative learning experiences
- Average Time Taken = 3 minutes

Data Analysis: Interview

Transcribe → Code using NVivo → Create Categories/Themes → RESULTS

Data Analysis: Survey

SPSS → Error Testing → Descriptive Statistics by Demographic Categories → Comparing → RESULTS

INTERVIEW PARTICIPANT DEMOGRAPHIC DATA

Participant	Sex	Age	Campus	Military Affiliation	No. of Learning Teams	Participant	Sex	Age	Campus	Military Affiliation	No. of Learning Teams
A	M	52	S	N	3	K	M	35	SD	Y	10
B	F	28	SC	N	15	L	F	27	SD	N	7
C	F	25	SC	N	10	M	F	33	SC	N	4
D	F	44	Sd	Y	10	N	F	21	SC	N	3
E	M	42	SD	Y	3	O	M	43	SD	Y	20
F	M	30	SC	Y	15	P	F	23	SD	N	3
G	F	29	SD	N	6	Q	F	25	SC	N	5
H	F	46	SD	Y	15	R	F	56	SD	N	20
I	M	30	SD	Y	10	S	F	27	SD	N	8
J	F	45	SC	N	8						
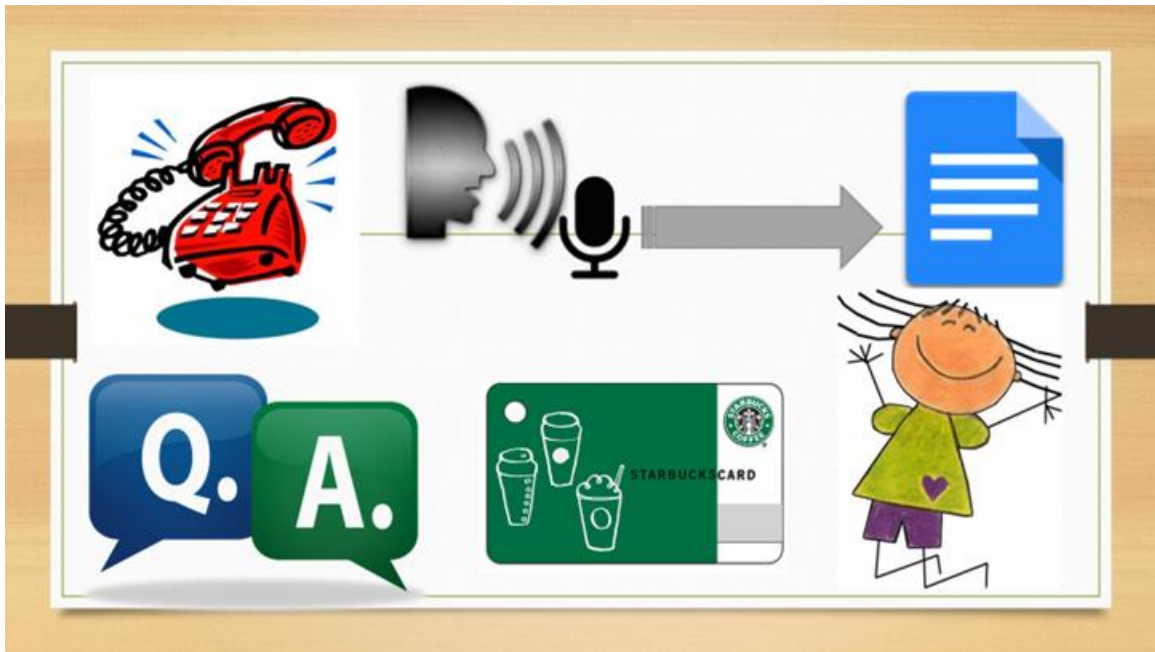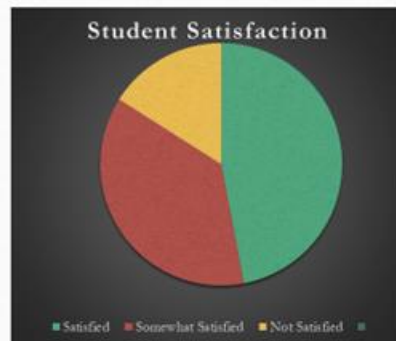
Satisfied Students

- Female
- Civilian
- Below the average age of students
- Below average number of learning team experiences

Somewhat Satisfied Students

- Female
- Civilian
- Below average age of students
- Below average number of learning team experiences.

Not Satisfied Students

- Male
- Civilian
- Above average age of students
- Below average number of learning team experiences

Positive Effect on Educational Experience

Positive Effects	Number of References	
Development of a Successful Team Over Time		96
Equal Responsibility	23	
Learning Team Formation	20	
Definitive Roles & Leadership	19	
Trust	19	
Sense of Community	15	
Improved Learning Experience		73
Multiple Perspectives	30	
Reduced Workload	18	
Increased Learning	13	
More Responsible	12	
Skill Development		11
Develop Team/Collaboration Skills	11	

Negative
Effect on
Educational
Experience

Negative Effects	Number of References	
Bad Teammates		98
Poor Work Quality:		75
Do Not Participate	36	
Poor Work Quality	23	
Plagiarism/Unethical	9	
Untimely	7	
Lack Skills:		15
Communication	8	
Collaboration	4	
Leadership	3	
Military Motivation		8
Detriment to Learning		52
Negatively Affects Grades	19	
Adds Time & Work	14	
Conflict & Chaos	12	
Development of Negative Feelings Toward the University		19
Waste of Time	9	
Ineffective Faculty	6	

What are They Saying?

"We've had three team assignments so far already. One of the team members has not contributed one sentence…not to the team charter, even"

"I'm a little worried about my grade"

"The level of academic professionalism and academic ethics are absolutely deplorable"

"There was a student that actually plagiarized like 85% of the portion that she sent me. It was hard because it created tension between the group because we had to talk to her about it, and then she had the opportunity to redo her portion. But nothing happened. Nothing came of it."

Oh, no!

"It's just very stressful."

The degree is kind of my secondary reason for going to school. Yeah, it looks good… that's why fees paid by the military is more my higher drive than the degree…you have a lot of people who are doing that. I don't necessarily attend all of my classes. I don't care about being marked down for not having participation. But if it brings down my grades…I'm getting C's, D's, because I'd rather spend my time [on] something else.

"There were quite a few times where I had to end up making up for that person because I wasn't going to get a bad grade."

"You have those slackers who will just do the minimum and try to get away with it."

"I didn't necessarily have time to babysit everyone else."

"I have not met a single instructor in there yet who knows how to manage a classroom, meaning allowing students to equally share."

SURVEY PARTICIPANT DEMOGRAPHIC DATA

Demographic	Category	Number	Percent	Demographic	Category	Number	Percent
Gender	Male	30	40%	GPA	Under 1.0	0	0%
	Female	45	60%		1.0-1.4	0	0%
					1.5-1.9	0	0%
Age	18-25	17	22.67%		2.0-2.4	3	4%
	26-35	30	40%		2.5-2.9	6	8%
	36-45	19	25.33%		3.0-3.4	15	20%
	46-55	8	10.67%		3.5-3.9	39	52%
	Above 55	1	1.33%		4.0+	12	16%
Program of Study	Business	35	46.67%	No. of Courses	0-1	0	0%
	Education	0	0%		2-3	4	5.33%
	Nursing	16	21.33%		4-5	15	20%
	Health Admin.	1	1.33%		6-7	9	12%
	Criminal Justice	5	6.67%		8-9	6	8%
	Other	18	24%		10	3	4%
					More than 10	38	50.67%

How Satisfied are Students?
-Responses to Items 6-22-

- 84% of students responded with either strongly agree or agree on items reflecting positive CLT experiences
- For 15/16 of the items, more than 50% of the sample responded positively
- Only 16% of students responded with neutral, disagree, or strongly disagree

Learning Team Experiences
(Responses to Item 22)

Overall Satisfaction with CLT
-Responses to Item 22-

- 62.6% of students were overall satisfied

- 21.3% of students were neutral

- 16.1% of students were dissatisfied

Satisfaction with CLT
(Responses to Item 22)

- Strongly Agree/Agree
- Neutral
- Disagree/Strongly Disagree
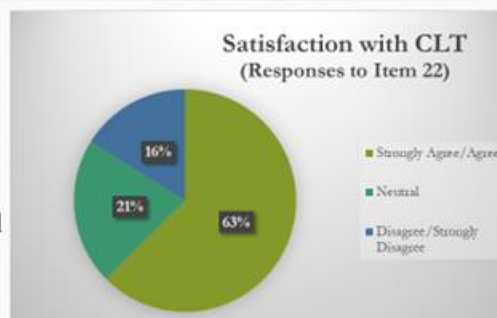
EFFECTS OF EDUCATION EXPERIENCE

Effect	Percent Agree	Percent Disagree/Neutral	Effect	Percent Agree	Percent Disagree/Neutral
Instructors met expectations	75%	25%	Developed new skills	68%	32%
Courses met expectations	77.3%	22.7%	Developed problem-solving/collab. skills	65.3%	34.7%
Activities & assignments met expectations	60%	40%	Ability to exchange ideas	84%	16%
CLT was effective	60%	40%	Gain new perspectives	73.4%	26.6%
CLT was useful	57.4%	42.6%	Diversity of topics increased participation	61.4%	38.6%
Able to work effectively in CLT	58.7%	41.3%	LT stimulated further research	48%	52%

Areas of Improvement

- ~50% of the participants felt that learning teams were time consuming

- 52% of participants were not stimulated to do any research or further investigation on their own

- 33% of participants do not believe they receive high-quality education/learning through the learning teams

- 33% of participants would not work in a learning team again if given the choice

Combined Analysis

- Students ARE overall satisfied with collaborative learning teams

- While many would not choose to work in a LT, they DO see the benefits to doing so

- Skill Development: collaboration, problem-solving, and conflict resolution skills

- Major Benefits: gaining multiple perspectives & actively exchanging ideas, becoming a learning community
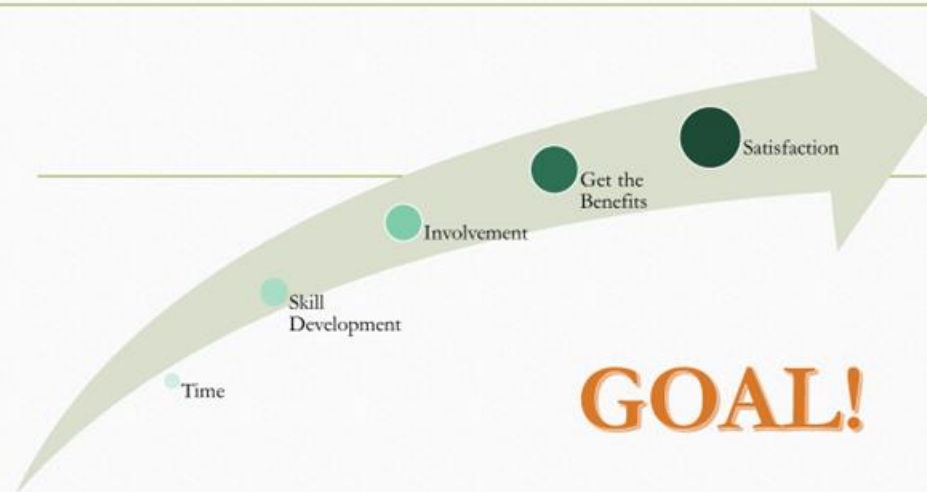
What's Important?

- Careful Planning
- Implementation
- Support for Students and Faculty
- Collaborative Training for Students and Faculty

WHY
ARE
WE
HERE?

Small Group Activity

- How many courses have you taught using Collaborative Learning Teams? Or for how many years?
- What are the benefits that you have seen in your classrooms?
- What are the detriments that you have seen in your classrooms?
- What do you feel YOUR role is as facilitator in the classroom?
- How much time do you spend facilitating the learning teams per class? On Blackboard?
- What improvements would YOU make?
- If it were up to you, would you continue the practice?

Conclusion

- TOMORROW: Background on Collaborative Learning

                                   Why We Care

                                   Areas of Improvement

Reflection Survey

- Please fill out an evaluation form on today's training and drop it off on your way out

- YOUR OPINION → BETTER TRAINING & PRACTICE

COLLABORATIVE LEARNING FACULTY DEVELOPMENT TRAINING
Day 1 Evaluation

Date:

Location:

On a scale of 1-5, rate each statement with 1 as strongly disagree and 5 as strongly agree.

1. The workshop location and amenities meet my needs.
   1 2 3 4 5
2. The facilitator tone and style were appropriate.
   1 2 3 4 5
3. I gained new information and/or skills in today's workshop.
   1 2 3 4 5
4. The content was clear and concise.
   1 2 3 4 5
5. The content was relevant to my work.
   1 2 3 4 5
6. I remained engaged throughout the workshop.
   1 2 3 4 5
7. I had the opportunity to participate in small-group dialogue and collaborative activities.
   1 2 3 4 5
8. The handouts and activities were relevant to the content.
   1 2 3 4 5
9. The workshop was a good use of my time today.
   1 2 3 4 5
10. I am satisfied with today's workshop.
    1 2 3 4 5

Comments:

_____
_____
_____
_____
_____
_____

Day 2

9:00am-	**Welcome**- timeline for the day
	Review (Slides 50-51)- see if there are any lingering questions from Day 1
9:15am-	Collaborative Learning
	Collaboration Video (Slide 52)
	Basic History of Collaborative Learning (Slide 53-54)
	Partner Activity (Slide 55)- ***Worksheet: Benefits of Collaborative Learning***
	Benefits of Collaborative Learning (Slides 57-58)
10:45am-	Relevancy to ▮▮▮▮ (Slides 59-62)
	Student Satisfaction (Slides 63-66)
11:30pm-	The 4 P's of Collaboration (Slides 67-68) ***Prezi Presentation Link***
12:00pm-	Lunch
1:00pm-	Areas of Improvement (Slide 70)
	Stages of Group Development (Slides 71-76) ***Stages of Group Development Handout***
	Partner Discussion (Slide 77)
1:45pm-	**Small Group Activity** (Slide 78) ***Consensus Worksheet***
	Group Share (Slide 79)
2:30pm-	Areas of Improvement Continued – Bad Teammates (Slides 81-82)
	Think. Pair. Share (Slides 83-84)
	Areas of Improvement Continued – Lack of Skills (Slides 85)
	Areas of Improvement Continued – Lack of Motivation (Slides 86-87)
	Areas of Improvement Continues – Grading (Slide 88)
	Think. Pair. Share. (Slide 89)
3:30pm-	Faculty Involvement/Intersubjectivity (Slides 90-92) – will be discussed more on Day 3
3:45pm-	Conclusion (Slide 93)- quick recap, take questions, final thoughts
	Reflection (Slide 94)- ask students to complete the **Day 2 Evaluation**
4:00pm-	**Dismissal**

Welcome to Day 2

- 9:00am- Welcome, Questions & Review
- 9:15am- Collaborative Learning
- 10:45am- Why Does UOPX Care about CL?
- 12:00pm- Lunch
- 1:00pm- Areas of Improvement
- 2:45pm- Areas of Improvement Continued
- 3:45pm- Conclusion
- 4:00pm- Dismissal

We Now Know…

- Students ARE overall satisfied with collaborative learning teams
- While many would not choose to work in a LT, they DO see the benefits to doing so
- Skill Development: collaboration, problem-solving, and conflict resolution skills
- Major Benefits: gaining multiple perspectives & actively exchanging ideas, becoming a learning community

Learning Communities

- Founding adult learning theorist, Eduard Lindeman (1926) posited that learning communities are…

"small groups of aspiring adults who desire to keep their minds fresh and vigorous; who begin to learn by confronting pertinent situations; who dig down into the reservoirs of their experiences before resorting to texts and secondary facts; (and) who are led in the discussion by teachers who are also searchers after wisdom and not oracles (p. 7).

Collaborative Learning

- 1926 Eduard Lindeman develops the idea of learning communities
- By 1970s- CL is the bee's knees and everyone is doing it, but differently
- By 2000s- collaborative learning is common practice in education K-D worldwide

It's a SUCCESS!!

Partner Worksheet

- Partner up
- Discuss: What are the Benefits of Collaborative Learning that YOU have witnessed?
- Discuss: What are the Benefits that you WOULD LIKE to see that maybe you don't right now?
- Write a list
- Think: What do you do to facilitate those benefits in the classroom?

Take a break.
You deserve it!

15 MINUTES

BENEFITS OF COLLABORATIVE LEARNING THAT YOU SEE:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

BENEFITS OF COLLABORATIVE LEARNING THAT YOU WANT TO SEE:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

THINK: *How do you facilitate these benefits in the classroom?*

Benefits of Collaborative Learning

- Increased participation, critical thinking, communication, and knowledge base
- Learners are stimulated when engaging in discussion, sharing ideas, and co-constructing knowledge that leads to improved individual performance, including critical thinking and communication skills
- Improved the co-construction of knowledge through discourse and hypothesis building
- Fostered more developed communication skills and increased involvement as well as formed higher-level thinking abilities

(Barkley, Cross, & Major, 2005; Chen & Chang, 2016; Cho, 2015; Fakomogbon & Bolaji, 2017; Hyun, Ediger, & Lee, 2017; Kozlov & Große, 2016; Larbi-Siaw & Owusu-Agyeman, 2017)

Benefits of Collaborative Learning

- Aids in connecting information to prior knowledge
- Offers situations for sharing and understanding different perspectives that leads to improved attitudes toward diversity
- Increased attendance and participation due to increased engagement

(Chen & Chang, 2016; Hyun, Ediger, & Lee, 2017; Kozlov & Große, 2016)

Traditional university students were reaping the benefits of this practice and the universities were seeing increased success as well!

YAY!

But, wait......**TRADITIONAL** universities?

What about **NONTRADITIONAL** universities

like University of Phoenix??!!??

University of Phoenix	**Traditional University**
• Students are typically working adults	• Students are 18-22 years of age
• Classes held on evenings and weekends	• Classes typically held days, M-F
• Classes are 4 hours long, once a week	• Classes are 1-2 hours long, 4-5 days/week
• Courses are 5 weeks in length	• Courses are 12-16 weeks in length

How do we know that CLTs at █████ are just as beneficial?

Especially when considering:

- Faculty and administrators have reported that students complain about learning teams in person and in SEOCS, and they are sometimes the source of conflict in the classroom

- Research states it takes time to develop a successful learning community

- █████ students only get 5 weeks end to end

- █████ students have busy lives & schedules that do not revolve around school

So, What's the Problem?

Well… not all research indicates success all the time

- Can cause conflict
- Marginalization of less-capable learners
- Increased cognitive load/ "psychological distress"
- Distractions causing lower levels of participation
- Students unsatisfied with their learning environment

Satisfied Students

Satisfied students have higher levels:

- Attendance
- Participation
- Achievement
- Interest in learning

Satisfaction leads to an increase in:

- Student success
- Retention
- Referrals
- Recruitment

Satisfied Students & UOPX

- Students benefit from an education based in best practices that increase academic success

- The university benefits from the increase in enrollment, retention, and referrals that tend to accompany student satisfaction

Satisfied Students

Keys to Student Satisfaction:

- Levels of active learning
- Classroom atmosphere
- Student interactions
- Faculty involvement
- Student offerings
- Academic performance

COLLABORATIVE LEARNING TEAMS!

We Need to Know a Little More

- What are the key parts of collaboration?
- How do collaborative learning groups form?
- What does collaboration look like?

The 4 P's of Collaboration

embedded video link

(Lamont, 2010)

There's One 'P' Missing!

PARTICIPATION!

Note that "Participation" is not one of the P's involved. Why do you think this is?

Brookfield (1986) posited that all collaboration must be participatory in nature, whether that be face-to-face, through asynchronous learning environments, or in non-traditional environments.

And we already know that Astin (1984) found that participation and involvement are key to satisfaction and student success

A person must participate in one's learning to get something out of it.

Do you agree?

Areas of Improvement

1. Time- Stages of Group Development
2. Bad Teammates- Identify, Conflict Resolution
3. Grading- Revise, Individualize
4. Facilitator Involvement- Intersubjectivity

5-Stage Model of Group Development

Tuckman and Jensen (1977) identified stages of group development. The stages, in short, are:

Forming- the group members try to find their place in the group; there is anxiety; group members try to please.

- Learning teams have just formed and exchanged information. They set up a schedule for meeting the first time. Everyone is super nice to each other and feels that this is going to work out really well.

Storming- the group begins to have conflict and indecision; progress is not made or made very slowly; trust has not yet been built; people are more self-conscious and defensive.

- Learning teams encounter an obstacle. One team member wants to lead, but the others won't follow. There may be no leader who will take initiative. One member may not communicate with the team, does not post on time or at all, or turns in sub-par work. The group is irritated and not sure how to handle things. The "offending" member may be ostracized from the group. The others may take over or they may fall apart.

Norming- the group becomes more cohesive; there is acceptance of one another; group members begin to unite and feel a "we" sense about the group.

- The group figures out a method for overcoming the obstacle. They begin to communicate and understand each other. A leader has emerged and the do-ers are happy to do. Trust is not completely solidified, but it is beginning. The team is eager to get the work done and to the best of their abilities.

Performing- the group produces work and does is cohesively and well; interpersonal skills are high; the group listens to each other and acts as a group

- The team is now producing their work on time, communicating effectively, and has built trust. Each person knows what their job is and how the group works together best.

Adjourning- the group accepts the ending of the group though both hope and anxiety about the future without the group creep in. (as cited in Fall and Wejnert, 2005)

- The team finalizes and turns in their project. They may be happy to be done with each other and no longer communicate. They may continue to communicate beyond the course and support each other. The group members may see each other in the next class. If so, the manner of adjournment will make a big difference in the treatment of one another in that class.

Stages of Group Development

Tuckman and Jensen (1977) identified stages of group development. The stages, in short, are:

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- Performing- the group produces work and does is cohesively and well; interpersonal skills are high; the group listens to each other and acts as a group
- Adjourning- the group accepts the ending of the group though both hope and anxiety about the future without the group creep in (as stated in Fall and Wejnert, 2005).

Partner Discussion

- In the groups that you have been a part of, do you believe that you went through these five stages?
- Did it happen in this order?
- Is any one stage more important than the other?

Small Group Activity

- Groups of ~4 people
- Use the Stages of Group Development Consensus worksheet
- Discuss: What does each stage mean? What does it look like? Provide examples.
- Consensus: Come to consensus as a group and write it down on the worksheet
- Share: Group Share

5 Stages of Group Development Consensus Activity

My understanding of each stage:

Forming-

_____

_____

Storming-

_____

_____

Norming-

_____

_____

Performing-

_____

_____

Adjourning-

_____

_____

My order of importance and why:

1. _____

2. _____

3. _____

4. _____

5. _____

p.1

5 Stages of Group Development Consensus Activity

The group's understanding of each stage: CONSENSUS

Forming-

_____

_____

Storming-

_____

_____

Norming-

_____

_____

Performing-

_____

_____

Adjourning-

_____

_____

The Group's Order of Importance: CONSENSUS

1. _____

2. _____

3. _____

4. _____

5. _____

THINK: During this process, did THIS group go through any of the stages of group

development? If so, which ones and how?

_____

_____

_____

p.2

Group Share: Consensus

Take a break.
You deserve it!

15 MINUTES

We've had three team assignments so far already. One of the team members has not contributed one sentence…not to the team charter, even, so I don't have his information… and not any of the other assignments. So, I finally submit the assignments. I submit the assignment at 1 o'clock on the Thursday… the assignment is due by 6pm. At 3 o'clock he chimes in and goes, 'Hey guys… did you need anything from me for this assignment? It looks like you've already got it in.' And I was, like, *three hours before it's due, now you're chiming in after a whole week to do [it]?* So this week, I've already done the full assignment. It's just sitting on my desktop. I haven't done anything [with the learning team]. I haven't reached out to anybody, and you know what's on the [team assignment] board? Nothing.

SOUND FAMILIAR?

Think. Pair. Share

- *Think:* What have I noticed as the main complaints regarding teammates work? Participation? Quality? Timing? Personalities? Plagiarism? Something else? All of the above? How do I deal with this?
- *Pair:* Pair up with your neighbor
- *Share:* Discuss what you believe to be the issues in your classrooms. Share your methods to deal with these issues.

- Adds workload
- Reduces morale
- Reduces motivation
- Reduces productivity
- Additional worries about grades
- Increases stress

Lack of Skills

- NO communication skills

- NO collaboration skills

- NO leadership skills

Lack of Proper Motivation

- ▮UOPX▮ #1 school receiving GI Bill money from 2009-2017→ $1.9 Billion
- Student enrolled in full-time courses = ▮UOPX▮ $$ & Student $$
- Participants noted a motivational imbalance in the classroom

What Do YOU Think?

"I have to pay to be there, so for me, it's very important. And for them, I'm not saying all of them, but a lot of them, they have said it, 'I'm here because I'm here for the money.'" – Civilian Student Participant

"The degree is kind of my secondary reason for going to school. Yeah, it looks good... that's why fees paid by the military is more my higher drive than the degree...you have a lot of people who are doing that. I don't necessarily attend all of my classes. I don't care about being marked down for not having participation. But if it brings down my grades...I'm getting C's, D's, because I'd rather spend my time [on] something else." – GI Bill Participant

Grading

"Working with someone that didn't really do that much work...there were quite a few times where I had to end up making up for that person because I wasn't going to get a bad grade."

"Why should your sloppy work affect my grade?"

"I will do the work if somebody else doesn't do it...it affects my grade if somebody else doesn't do their work."

"So I have to do whatever I have to. And if that means I have to work twice as hard just because I have to carry your butt, well, I guess I'm going to have to do it."

Think. Pair. Share.

- *Think:* Do you grade individually or as a group? What are the merits to group grading? What are the downfalls? What do you think is the "right" thing to do? How do you make it "fair?"

- *Pair:* Partner up

- *Share:* Discuss. Debate.

- *Think Again*

Faculty Involvement

Oh, man! This one is about you guys!

But WAIT….
Don't get *defensive*, it isn't really about *you.*

It's about …

Intersubjectivity

Intersubectivity

DEFINITION: The establishment of shared understanding between teacher and student.

- But what kind of understanding? And how to you establish it?
- Social interaction (Vygotsky)
- Student Involvement (Astin)

"I have not met a single instructor in there yet who knows how to manage a classroom."

Is your job to manage or direct the classroom?

Or is your job to facilitate the classroom, provide learning opportunities, aid in skill development, and offer conflict management solutions while allowing students to develop and grow?

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Conclusion

- TOMORROW: Implementation

  Collaborative Group Work!

Reflection Survey

- Please fill out an evaluation form on today's training and drop it off on your way out

- YOUR OPINION → BETTER TRAINING & PRACTICE

COLLABORATIVE LEARNING FACULTY DEVELOPMENT TRAINING
Day 2 Evaluation

Date:
Location:

On a scale of 1-5, rate each statement with 1 as strongly disagree and 5 as strongly agree.

1. The workshop location and amenities meet my needs.
   1 2 3 4 5
2. The facilitator tone and style were appropriate.
   1 2 3 4 5
3. I gained new information and/or skills in today's workshop.
   1 2 3 4 5
4. The content was clear and concise.
   1 2 3 4 5
5. The content was relevant to my work.
   1 2 3 4 5
6. I remained engaged throughout the workshop.
   1 2 3 4 5
7. I had the opportunity to participate in small-group dialogue and collaborative activities.
   1 2 3 4 5
8. The handouts and activities were relevant to the content.
   1 2 3 4 5
9. The workshop was a good use of my time today.
   1 2 3 4 5
10. I am satisfied with today's workshop.
    1 2 3 4 5

Comments:
_____
_____
_____
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_____

Day 3

9:00am-	**Welcome**- timeline for the day
	Review (Slide 96)- see if there are any lingering questions from Day 2
9:15am-	Andragogy (Slides 96-98)
	Learning Teams (Slides 99-100)
9:30am-	**Welcome to Your Learning Teams** (Slide 101)
	Participants will form learning teams of 3-4 people. Split the room roughly into thirds: 1-form by random numbering, 2-form by personal choice, 3-form by personality spectrum/MI (for those who are aware of their style and can share with the group. This division serves as discussion for purposeful group creation.
	Activity Once in groups, introduce each other, and discuss questions on Slide 101
10:30am-	Facilitating the Stages of Group Development- explain stages (Slide 103)
	Think. Pair. Share.
	Video (Slide 105)
	Continued (Slide 106-107)
12:00pm-	**Lunch**
1:00pm-	Problem: Bad Teammates (Slide 109)
	Think. Pair. Share. (Slide 110)
	Learning Team Charter Activity (Slide 111) ***Learning Team Charter Worksheet***
	Have the learning teams complete the charter completely, discussing each aspect as they go. Facilitate the groups, making sure they are including the important pieces and understand how these can help students be more successful in their teams.
2:45pm-	Problem: Work Quality (Slide 113)
	Problem: Lack of Skills (Slide 114-115)
	Problem: Conflict (Slide 116) ***Conflict Resolution Video***
	Overcoming Obstacles Activity (Slide 117) ***Overcoming Obstacles Worksheet***
	Problem: Grading (Slide 118)
3:45pm-	Conclusion (Slide 119)- quick recap, take questions, final thoughts
	CELEBRATE! (Slide 120)
	Reflection (Slide 121)- ask students to complete the **Day 3 Evaluation**
4:00pm-	**Dismissal**

Welcome to Day 3

9:00am- Welcome, Questions & Review

9:15am- Welcome to Your Learning Teams

10:30am- Facilitating the Stages of Group Development

12:00pm- Lunch

1:00pm- Learning Team Charter

2:45pm- Work Quality, Skill Development, Conflict Resolution, Grading

3:45pm- Conclusion

4:00pm- Dismissal

We Now Know…

- The history of collaborative learning
- That success at ████ hinges on successful collaborative learning teams
- The areas of improvement: Time, Bad Teammates, Grading & Facilitator Involvement

So, how do we implement CLT

and foster the necessary skills development to ensure success?

5 Major Postulates of Andragogy

- Prior Knowledge – adults come with experience and this should serve as the basis for lessons, accessing prior knowledge, etc.…

- Self-Motivation – adults are self-motivated and need to be involved in their learning (planning, evaluation)

- Readiness/Relevance – adult students need to see the relevance in their education and how information applies

- Orientation- lessons should be problem-based and include real-life scenarios

- Reflection- in order to make meaning, develop higher understanding, and grow, adult students must engage in critical reflection

(Knowles, 1968)

Motivation & Learning Communities

- We also know that motivation is key to success, especially in learning communities

- To increase motivation, 4 things are needed
  - Inclusion- Belonging
  - Attitude- Relevance
  - Meaning- Experience & Engagement
  - Competence- High level of knowledge

- Successful learning communities are built upon a positive and safe environment

(Astin, 1984)

5 Keys to Successful Learning Teams

- Importance of explaining purpose and relevancy
    - List benefits and provide literature to support it
- Strategically separate into LTs
- Teach the stages of group development
    - Use it as an activity to come to consensus/discuss obstacles and ways to overcome (link to charter)
- Use LT Materials / Charter
- Intersubjectivity

Forming Learning Teams

- Random
- Self-Chosen
- Split by Personality Spectrum or other inventory

ACTIVITY: Split into learning teams of 4. Follow instructions to determine which group you will be in. Please move your chairs and bring your materials with you.

Forming Learning Teams

1. In your learning team, DISCUSS:

   - How was your team formed?

   - What are the benefits to the way your team formed?

   - What are the drawback to the way your team formed?

   - Would you recommend this method for your classroom?

   - Do you believe it is necessary to now delegate a leader or jobs? Why or why not?

2. DISCUSS TOGETHER

Take a break. You deserve it!

15 MINUTES

Problem: Short Time
Facilitating Through the Stages of Group Development

- Explain the Stages
- Think. Pair. Share. / Activities
  - Recognize stages
  - Come to consensus (like you did)
  - Brainstorm ways to overcome obstacles (you'll do this later today)

Stages of Group Development

Tuckman and Jensen (1977) identified stages of group development. The stages, in short, are:

- Forming- the group members try to find their place in the group; there is anxiety; group members try to please
- Storming- the group begins to have conflict and indecision; progress is not made or made very slowly; trust has not yet been built; people are more self-conscious and defensive
- Norming- the group becomes more cohesive; there is acceptance of one another; group members begin to unite and feel a "we" sense about the group
- Performing- the group produces work and does is cohesively and well; interpersonal skills are high; the group listens to each other and acts as a group
- Adjourning- the group accepts the ending of the group though both hope and anxiety about the future without the group creep in (as stated in Fall and Wejnert, 2005).

Explain the Stages

- Provide a handout
- Discuss
- Present a video

Great job guys! Lunch is on me!

(Shook, 2016)

embedded video link

Present an Activity

- Remember the Stages of Group Development Consensus activity you did yesterday? That's a good one!
- Conflict Resolution activities are also good (one coming soon)

Problem: Bad Teammates

Responsibility: Learning Team Charter

- *Think:*
    - Why is the learning team charter an important formative assignment?
    - What types of things should be included on a charter to ensure success?

- *Pair*

- *Share*

LEARNING TEAM CHARTER

Course Title Faculty Development Training

Instructor Jacquelyn L. Jenkins, MA.T

Course Dates _____

All team members participated in the creation of this charter and all of its contents □ (Please check the box)

Team Member Personal Information

NAME	PHONE	EMAIL
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Team Member Skill Inventory
(Areas individual members can contribute/ want to develop)

Team Member	Strengths	Areas for Improvement

p.1

Team Member Multiple Intelligences
(Record each team members' strongest & weakest intelligences. Identify the implications of these results on team performance & communication.)

Team Member	Highest Intelligence	Weakest Intelligence	Implication for Team Performance	Implication for Team Communication

Team Member Personality Types
(Record each team members' personality type. List each team members' their personality characteristics. Identify the implications of these results on team performance and communication.)

Team Member	Personality Type	Implication for Team Performance	Implication for Team Communication

Learning Team Goals

(May include project assignment goals, group process goals, quality level goals, etc.)

What are the potential barriers to achievement of those goals?

p.2

Ground Rules

Meeting schedule, locations, attendance expectations, agenda, assignment completion, etc.

Communication Methods

How will the team stay in touch with each other? What are the expectations for frequency of communication? What if there is an emergency?

Conflict Management

What are potential conflicts that might arise among or between team members during this course?

How will team members deal with these and other conflicts?

Faculty Member Feedback to Students

_____
_____
_____

p.3

Problem: Work Quality

- Writing Center
- Plagiarism Checker
- Grammarly
- *Any Others?*

grammarly.com

Problem: Lack of Skills
Skill Development→Increase Performance

- *Think:* What are some ways to help a learning team increase performance?
  - What skills are necessary?
  - How do you foster those skills?

- *Pair*
- *Share*

Skill Development→ Increase Performance

- Delegating work to each member
- Taking responsibility
- Setting and meeting deadlines
- Setting and meeting goals
- Listening & being open to new ideas and ways of thinking
- Understanding one's strengths and weaknesses and how these relate to the team's success
  - Multiple Intelligences / Learning Styles / MBI

Problem: Conflict
Solution: Resolution

It is perfectly normal for conflict to occur when working in collaborative groups… especially when there is something big at stake, like…

- Grades
- Promotion
- Recognition

(Study.com, 2020)

embedded video link

Activity: Overcoming Obstacles

- In your groups, come up with a list of potential obstacles that may affect a group
- For each obstacle, brainstorm actions that may help the team overcome those obstacles
- Keep in mind that the actions may come before (preventative), during, or after the obstacle

worksheet

Problem: Grading

- Use the Charter
- Consider the final comments of the team members about each others' performances
- Use a Rubric
- BE FAIR
- Use your judgement

Let's Review

1. Strategic Separation
2. Providing Purpose
3. Facilitating the Stages of Group Development
4. Creating a Solid Team Charter
5. Skills Development
6. Conflict Resolution
7. Fair Grading

Reflection Survey

- Please fill out an evaluation form on today's training and drop it off on your way out

- YOUR OPINION → BETTER TRAINING & PRACTICE

COLLABORATIVE LEARNING FACULTY DEVELOPMENT TRAINING
Day 3 End of Workshop Evaluation

Date:

Location:

On a scale of 1-5, rate each statement with 1 as strongly disagree, 3 as neutral, and 5 as strongly agree.

1. The content provided was high quality.
   1 2 3 4 5
2. Content delivery was appropriate and effective.
   1 2 3 4 5
3. I gained knowledge on seminal and modern perspectives on collaborative learning.
   1 2 3 4 5
4. I was engaged throughout the workshop.
   1 2 3 4 5
5. I had ample opportunity to engage in and practice collaborative skills through dialogue and small-group activities.
   1 2 3 4 5
6. The activities were relevant to the workshop.
   1 2 3 4 5
7. The activities were relevant to my classroom.
   1 2 3 4 5
8. I understand of the benefits of collaborative learning.
   1 2 3 4 5
9. I understand the potential limitations of collaborative learning.
   1 2 3 4 5
10. I have a clear understanding of the current satisfaction levels of students on campus as well as their perceptions of learning experience. **1 2 3 4 5**
11. I gained knowledge and skills for implementation of best-practices.
    1 2 3 4 5
12. I feel capable of implementing new CL practices in my classroom.
    1 2 3 4 5
13. The facilitator of the workshop facilitated effectively.
    1 2 3 4 5
14. I am satisfied with the workshop as a whole.
    1 2 3 4 5

Comments: _____

_____

_____

Appendix B: Qualitative Interview Questions

1. With what gender do you identify?

2. How old are you?

3. How long have you been enrolled at the university?

4. How many learning teams have you participated in on this campus?

5. Do you believe age or gender influences learning team success? In what ways?

6. Can you describe your experience in the collaborative learning teams?

7. On average, how often have you met with your learning team?

8. In what ways do you believe working in collaborative learning teams will affect your academic success?

9. In what ways do you find collaborative learning teams beneficial?

10. In what ways do you find collaborative learning teams detrimental?

11. How has your perception of collaborative learning teams changed from your first experience to your most recent?

12. How satisfied are you with the use of collaborative learning teams?

13. In what way has your experience in collaborative learning teams affected your decision to continue your education?

Appendix C: The Collaborative Learning and Satisfaction (CLS) Questionnaire

(Modified)

Instructions: This questionnaire is designed to measure your perceptions on the level of collaborative learning and satisfaction. There is no right or wrong answer for each question. However, it is important for you to respond as accurately as possible by checking the most appropriate response.

SECTION 1: GENERAL INFORMATION

1. What is your gender?
   a. Female
   b. Male
   c. Other

2. What is your age?

   a. 18-25
   b. 26-35
   c. 36-45
   d. 46-55
   e. Above 55

3. What is your program of study?
   a. Business & Management
   b. Education
   c. Nursing
   d. Health Administration
   e. Criminal Justice & Security
   f. Psychology & Social Sciences
   g. Arts & Sciences
   h. Technology

4. What was your Grade Point Average at the end of your last class?
   a. Under 1.0
   b. 1.0-1.4
   c. 1.5-1.9
   d. 2.0-2.4
   e. 2.5-2.9
   f. 3.0-3.4
   g. 3.5-3.9
   h. 4.0+

5. How many [University X] courses have you taken so far?
   a. 0-1
   b. 2-3
   c. 4-5
   d. 6-7
   e. 8-9
   f. 10
   g. More than 10

SECTION 2: SATISFACTION

Please respond to these questions with your current or most recent learning team experience in mind.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I was able to learn from working in a learning team.	1	2	3	4	5
2. I was stimulated to do additional readings or research on topics discussed in the learning team.	1	2	3	4	5
3. Learning team discussions assisted me in understanding other points of view.	1	2	3	4	5
4. As a result of my experience with learning teams, I would like to work in a learning team in the future.	1	2	3	4	5
5. Working in a learning team is a useful learning experience.	1	2	3	4	5
6. The diversity of topics covered in the learning teamwork prompted me to participate in the discussions.	1	2	3	4	5
7. The level of learning that took place in the learning team was of the highest quality.	1	2	3	4	5
8. Overall, the learning activities and assignments given to the learning team met my learning expectations.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9. Overall, the instructor for this course met my learning expectations.	1	2	3	4	5
10. Overall, this course met my learning expectations.	1	2	3	4	5

SECTION 3: COLLABORATIVE LEARNING
Please respond to these questions with your current or most recent learning team experience in mind.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I felt part of a learning community in my group.	1	2	3	4	5
2. I actively exchanged my ideas with group members.	1	2	3	4	5
3. I was able to develop new skills and knowledge from other members in my learning team.	1	2	3	4	5
4. I was able to develop problem solving skills through peer collaboration.	1	2	3	4	5
5. Collaborative learning in my group was effective	1	2	3	4	5
6. Collaborative learning in my group was time-consuming.	1	2	3	4	5
7. Overall, I am satisfied with my collaborative learning experiences.	1	2	3	4	5

Appendix D: Disaggregated Data Tables

Table D1

Age v. Demographics

Demographic	Categories	18-35 (n = 47)	36+ (n = 28)
Gender	Male	17 (36%)	13 (46%)
	Female	30 (64%)	15(54%
Program of study	Business	15 (32%)	20 (71%)
	Education	0	0
	Nursing	14 (30%)	0
	Health Admin	0	1 (4%)
	Criminal Justice	3 (6%)	2 (7%)
	MFT	15 (32%)	3 (11%)
GPA	<2.0	0	0
	2.0-3.5	14 (30%)	10 (36%)
	3.6-4.0+	33 (70%)	18 (64%)
Number of courses	<10 courses	27 (57%)	10 (36%)
	10+ courses	20 (43%)	18 (64%)

Table D2

Age, Satisfaction, and CL Experience

Item	Age 18-35 (*n* = 47)			Age 36+ (*n* = 28)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Able to learn in CLT	9 (19%)	8 (17%)	30 (64%)	8 (29%)	6 (21%)	14 (50%)
Stimulated to do additional readings or research	9 (19%)	13 (28%)	25 (53%)	10 (36%)	7 (28%)	11 (39%)
Assisted in understanding other points of view	7 (15%)	5 (11%)	35 (74%)	6 (13%)	2 (7%)	20 (71%)
Would like to work in a learning team in the future	11 (23%)	14 (30%)	22 (47%)	14 (50%)	4 (14%)	10 (36%)
CLT is useful	8 (17%)	10 (21%)	29 (62%)	8 (29%)	6 (21%)	14 (50%)
Diversity of topics prompted participation	12 (26%)	6 (13%)	29 (62%)	7 (25%)	4 (14%)	17 (61%)
Learning was the highest quality	15 (32%)	8 (17%)	24 (51%)	10 (36%)	9 (32%)	9 (32%)
Activities and assignments met learning expectations	6 (13%)	14 (30%)	27 (57%)	6 (21%)	4 (14%)	18 (64%)
Instructor met learning expectations	6 (13%)	9 (19%)	32 (60%)	1 (4%)	3 (11%)	24 (86%)
Course met learning expectations.	3 (6%)	10 (21%)	34 (72%)	1 (4%)	3 (11%)	24 (86%)
Part of learning community	3 (6%)	9 (19%)	35 (74%)	6 (21%)	5 (18%)	17 (61%)
Actively exchanged ideas	2 (4%)	3 (6%)	39 (83%)	3 (11%)	4 (14%)	21 (75%)
Develop new skills and knowledge	7 (15%)	6 (13%)	34 (72%)	5 (18%)	6 (21%)	17 (61%)
Develop problem solving skills	5 (11%)	9 (19%)	33 (70%)	5 (18%)	6 (21%)	17 (61%)
CLT was effective	7 (15%)	10 21%)	30 (64%)	8 (29%)	5 (18%)	15 (54%)
CLT was time-consuming	12 (26%)	13 (28%)	22 (47%)	6 (21%)	6 (21%)	16 (57%)
Overall satisfaction	7 (15%)	11 (23%)	29 (62%)	5 (18%)	5 (18%)	18 (64%)

Table D3

Gender v. Demographics

Demographic	Category	Male (n = 30)	Female (n = 45)
Age	18-35	17 (57%)	30 (67%)
	36+	13 (43%)	14 (33%)
Program of study	Business	23 (76%)	12 (27%)
	Education	0	0
	Nursing	0	16 (36%)
	Health Admin	0	1 (2%)
	Criminal Justice	2 (7%)	3 (7%)
	MFT	5 (17%)	13 (28%)
GPA	<2.0	0	0
	2.0-3.5	15 (50%)	9 (20%)
	3.6-4.0+	15 (50%)	36 (80%)
Number of courses	<10 courses	11 (37%)	26 (58%)
	10+ courses	19 (63%)	19 (42%)

Table D4

Gender, Satisfaction, and CL Experience

Item	Male (n = 30)			Female (n = 45)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Able to learn in CLT	10 (33%)	2 (7%)	18 (60%)	7 (15%)	12 (27%)	26 (58%)
Stimulated to do additional readings or research	9 (30%)	7 (23%)	14(46.66%)	10 (22%)	13 (29%)	22 (49%)
Assisted in understanding other points of view	8 (26%)	2 (7%)	20(66.67%)	5 (11%)	5 (11%)	35 (78%)
Would like to work in a learning team in the future	10 (33%)	6 (20%)	14(46.67%)	15 (33%)	12 (27%)	18 (40%)
CLT is useful	8 (26%)	5 (17%)	17(56.66%)	8 (18%)	11 (24%)	26 (58%)
Diversity of topics prompted participation	8 (26%)	4 (13%)	18 (60%)	11 (24%)	6 (13%)	28 (63%)
Learning was the highest quality	10 (33%)	6 (20%)	14(46.67%)	15 (34%)	11 (24%)	19 (42%)
Activities and assignments met learning expectations	6 (20%)	6 (20%)	18 (60%)	2 (7%)	8 (26%)	20 (67%)
Instructor met learning expectations	2 (7%)	8 (26%)	20(66.67%)	5 (11%)	4 (9%)	36 (80%)
Course met learning expectations.	1 (3%)	7 (23%)	22(77.33%)	3 (7%)	6 (13%)	36 (80%)
Part of learning community	5 (17%)	6 (20%)	19(63.33%)	4 (9%)	8 (18%)	33 (73%)
Actively exchanged ideas	3 (10%)	4 (13%)	23(76.66%)	2 (4%)	3 (7%)	40 (89%)
Develop new skills and knowledge	5 (17%)	7 (23%)	18 (60%)	7 (16%)	5 (11%)	33 (73%)
Develop problem solving skills	4 (13%)	7 (24%)	19(63.33%)	6 (13%)	9 (20%)	30 (67%)
CLT was effective	9 (30%)	4 (13%)	17(56.67%)	6 (14%)	11 (24%)	28 (62%)
CLT was time-consuming	5 (17%)	9 (30%)	16(53.33%)	13 (29%)	10 (22%)	22 (49%)
Overall satisfaction	7 (23%)	3 (10%)	20(66.67%)	5 (11%)	13 (29%)	27 (60%)

Table D5

GPA v. Demographics

Demographic		<2.0 (n=0)	2.0-3.4 (n=24)	3.5+ (n=51)
Age	18-34	0	14 (58%)	33 (65%)
	35+	0	10 (42%)	18 (35%)
Gender	Male	0	15 (63%)	15 (29%)
	Female	0	9 (38%)	36 (71%)
Program of study	Business	0	17 (71%)	18 (35%)
	Education	0	0	0
	Nursing	0	1 (4%)	15 (29%)
	Health Admin.	0	1 (4%)	0
	Criminal Justice	0	2 (8%)	3 (6%)
	MFT		3 (13%)	15 (29%)
No. of courses	<10 courses	0	9 (38%)	28 (55%)
	10+ courses	0	15 (63%)	23 (45%)

Table D6

GPA, Satisfaction, and CL Experience

Item	< 3.4 (n=24)			3.5+ (n=51)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Able to learn in CLT	7 (29%)	3 (13%)	14(58%)	10 (20%)	11 (22%)	30 (59%)
Stimulated to do additional readings or research	5 (21%)	7 (29%)	12(50%)	14 (27%)	13 (25%)	24 (47%)
Assisted in understanding other points of view	5 (21%)	2 (8%)	17(71%)	8 (16%)	5 (10%)	38 (75%)
Would like to work in a learning team in the future	7 (29%)	5 (21%)	12 (50%)	18 (35%)	13 (25%)	20 (39%)
CLT is useful	6 (25%)	3 (13%)	15 (63%)	10 (20%)	13 (25%)	28 (55%)
Diversity of topics prompted participation	5 (21%)	2 (8%)	17(71%)	14 (27%)	8 (16%)	29 (57%)
Learning was the highest quality	7 (29%)	4 (17%)	13(54%)	18 (35%)	13 (25%)	20 (39%)
Activities and assignments met learning expectations	3 (13%)	5 (21%)	16(66%)	9 (18%)	13 (25%)	29 (57%)
Instructor met learning expectations	1 (4%)	7 (29%)	16(67%)	6 (12%)	5 (10%)	40 (78%)
Course met learning expectations.	1 (4%)	4 (17%)	19(79%)	3 (6%)	9 (18%)	39 (76%)
Part of learning community	4 (17%)	2 (8%)	18 (75%)	5 (10%)	12 (24%)	34 (67%)
Actively exchanged ideas	0	2 (8%)	22(92%)	5 (10%)	5 (10%)	41 (80%)
Develop new skills and knowledge	2 (8%)	7 (29%)	15 (63%)	10 (20%)	5 (10%)	36 (71%)
Develop problem solving skills	2 (8%)	4 (17%)	18 (75%)	8 (16%)	12 (24%)	31 (61%)
CLT was effective	7 (29%)	3 (13%)	14(58%)	8 (16%)	12 (24%)	31 (61%)
CLT was time-consuming	4 (17%)	5 (21%)	15 (63%)	14 (27%)	14 (27%)	23 (45%)
Overall satisfaction	3 (13%)	4 (17%)	17(71%)	9 (18%)	12 (24%)	30 (59%)

Table D7

Number of Learning Teams v. Demographics

Demographic		< 10 (n=37)	10+ (n=38)
Gender	Male	11 (30%)	19 (50%)
	Female	26 (70%)	19 (50%)
Program of study	Business	16 (43%	19 (50%)
	Education	0	0
	Nursing	11 (30%)	5 (13%)
	Health Admin	1 (3%)	0
	Criminal Justice	1 (3%)	4 (11%)
	MFT	8 (22%)	10 (26%)
GPA	<2.0	0	0
	2.0-3.5	9 (24%)	3 (8%)
	3.6-4.0+	28 (76%)	35 (92%)
Age	18-34	27 (53%)	20 (53%)
	35+	10 (27%)	18 (47%)

Table D8

Number of Learning Teams, Satisfaction, and CL Experience

Item	<10 (n=37)			10+ (n=38)		
	Disagree	Neutral	Agree	Disagree	Neutral	Agree
Able to learn in CLT	7 (19%)	5 (14%)	25 (68%)	10 (26%)	9 (24%)	19 (50%)
Stimulated to do additional readings or research	9 (24%)	6 (16%)	22 (59%)	10 (26%)	14 (37%)	14 (37%)
Assisted in understanding other points of view	5 (14%)	3 (8%)	29 (78%)	8 (21%)	4 (11%)	26 (68%)
Would like to work in a learning team in the future	11 (30%)	7 (19%)	19 (51%)	14 (37%)	11 (29%)	13 (34%)
CLT is useful	4 (11%)	9 (24%)	24 (65%)	12 (32%)	7 (18%)	19 (50%)
Diversity of topics prompted participation	7 (19%)	5 (14%)	25 (68%)	12 (32%)	5 (13%)	21 (55%)
Learning was the highest quality	11 (30%	9 (24%)	17 (46%)	14 (37%)	8 (21%)	16 (42%)
Activities and assignments met learning expectations	6 (16%)	8 (22%)	23 (62%)	6 (16%)	10 (26%)	22 (58%)
Instructor met learning expectations	5 (14%)	5 (14%)	27 (73%)	2 (5%)	7 (18%)	29 (76%)
Course met learning expectations.	3 (8%)	6 (16%)	28 (76%)	1 (3%)	7 (18%)	30 (79%)
Part of learning community	3 (8%)	6 (16%)	28 (76%)	6 (16%)	8 (21%)	24 (63%)
Actively exchanged ideas	3 (8%)	2 (5%)	32 (86%)	2 (5%)	5 (13%)	31 (82%)
Develop new skills and knowledge	5 (14%)	4 (11%)	28 (76%)	7 (18%)	8 (21%)	23 (61%)
Develop problem solving skills	4 (11%)	7 (19%)	26 (70%)	6 (16%)	9 (24%)	23 (61%)
CLT was effective	5 (14%)	8 (22%)	24 (65%)	10 (26%)	7 (18%)	21 (55%)
CLT was time-consuming	11 (30%)	9 (24%)	17 (46%)	7 (18%)	10 (26%)	21 (55%)
Overall satisfaction	6 (16%)	4 (11%)	27 (73%)	6 (16%)	12 (32%)	20 (53%)

Table D9

Program of Study v. Demographics

Demographic		Business (n=35)	Educ. (n=0)	Nursing (n=16)	Health (n=1)	Crim J. (n=5)	MFT (n=18)
Gender	Male	23 (66%)	0	0	0	2 (40%)	5 (28%)
	Female	12 (34%)	0	16 (100%)	1 (100%)	3 (60%)	13 (32%)
Number of	< 10	16 (46%)	0	11 (69%)	1 (100%)	1 (20%)	8 (44%)
courses	10+	19 (54%)	0	5 (31%)	0	4 (80%)	10 (56%)
GPA	<2.0	0	0	0	0	0	0
	2.0-3.4	17 (49%)	0	1 (3%)	1 (100%)	2 (40%)	3 (17%)
	3.5+	18 (51%)	0	15 (94%)	0	3 (60%)	15 (83%)
Age	18-34	15 (43%)	0	14 (88%)	0	2 (40%)	5 (28%)
	35+	20 (57%)	0	2 (13%)	1 (100%)	3 (60%)	13 (32%)

Table D10

Program of Study, Satisfaction, and CL Experience

Q	Business (n=35)			Nursing (n=16)			Health Ad. (n=1)			Crim. J (n=5)			MFT (n=18)		
	Dis	Neu	Agr	Dis	Neu	Agr	D	N	Agr	Dis	Neu	Agr	Dis	Neu	Agr
Q6	11(31)	6(17)	18(51)	2(13)	5(31)	9(56)	0	0	1(100)	2(40)	1(20)	2(40)	2(11)	2(11)	14(78)
Q7	12(34)	10(29)	13(37)	2(13)	4(25)	10(63)	0	0	1(100)	1(20)	2(40)	2(40)	4(22)	4(22)	10(56)
Q8	7(20)	2(6)	26(74)	1(3)	3(19)	12(75)	0	0	1(100)	2(40)	1(20)	2(40)	3(17)	1(6)	14(78)
Q9	15(43)	7(20)	13(37)	2(13)	6(38)	8(50)	0	0	1(100)	3(60)	1(20)	1(20)	5(28)	4(22)	9(50)
Q10	10(29)	7(20)	18(51)	2(13)	5(31)	9(56)	0	0	1(100)	2(40)	2(40)	1(20)	2(11)	2(11)	14(78)
Q11	9(26)	5(14)	21(60)	5(31)	2(13)	9(56)	0	0	1(100)	2(40	1(20)	2(40)	3(17)	2(11)	13(72)
Q12	13(37)	9(26)	13(37)	4(25)	5(31)	7(44)	0	0	1(100)	3(60)	0	2(40)	5(28)	3(17)	10(56)
Q13	7(20)	7(20)	21(60)	0	5(31)	11(69)	0	0	1(100)	2(40)	1(20)	2(40)	3(17)	5(28)	10(56)
Q14	2(6)	5(14)	28(80)	0	4(25)	12(75)	0	0	1(100)	0	1(20)	4(80)	5(28)	2(11)	11(61)
Q15	1(3)	6(17)	28(80)	0	3(19)	13(81)	0	0	1(100)	0	1(20)	4(80)	3(17)	3(17)	12(67)
Q16	6(17)	7(20)	22(63)	1(3)	4(25)	11(69)	0	0	1(100)	2(40)	0	3(60)	0	3(17)	15(83)
Q17	4(11)	4(11)	27(77)	0	1(3)	15(97)	0	0	1(100)	1(20)	1(20)	3(60)	0	1(6)	17(94)
Q18	6(17)	7(20)	22(63)	3(19)	1(3)	12(75)	0	0	1(100)	2(40)	2(40)	1(20)	1(6)	2(11)	15(83)
Q19	5(14)	9(26)	21(60)	2(13)	2(13)	12(75)	0	0	1(100)	1(20)	2(40)	2(40)	2(11)	3(17)	13(72)
Q20	10(29)	6(17)	19(54)	1(3)	5(31)	10(63)	0	0	1(100)	2(40)	1(20)	2(40)	2(11)	3(17)	13(72)
Q21	6(17)	8(23)	21(60)	8(50)	3(19)	5(31)	0	0	1(100)	0	2(40)	3(60)	4(22)	6(33)	8(44)
Q22	8(23)	5(14)	22(63)	0	6(38)	10(63)	0	0	1(100)	2(40)	1(20)	2(40)	2(11)	4(22)	12(67)

Q identifies survey questions as found in Appendix B