College Students' Perceptions of Learner-Centeredness in Their Undergraduate Courses

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COLLEGE STUDENTS’ PERCEPTIONS OF LEARNER-CENTEREDNESS IN THEIR UNDERGRADUATE COURSES

By

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DISSERTATION

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy
Educational Psychology

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Dedication

I dedicate this dissertation to my mother, Josina Vigil, who diligently and lovingly supported me through the writing of this manuscript. Mom was there for me through the good and especially difficult times in this process. Her consistent reminders that “you can do it” gave me the strength and internal fortitude to complete my writing. “Thanks so much mom, I love you very much.”

I also want to dedicate this dissertation to my daughter, Amanda Gomez, who is truly my inspiration, and the driving force in motivating me to complete my work on this transcript. “I love you my daughter”.
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ABSTRACT

This study investigated college students’ perceptions of learner-centeredness in their undergraduate courses. The goal of this study was to examine what those perceptions were in order to inform future instructional practices that better serve the needs of college students.

A demographic questionnaire and the Learner-centered Battery Student Survey (LCBSS) consisting of Total Score, 2 subscale and 11 subscale scores, were used to examine 196 students’ perceptions of learner-centered instructional practice. Descriptive statistics were presented, and data were analyzed using \( t \) tests, repeated measures ANOVAs, and one-way ANOVAs to examine the relationship and extent to which students perceived their instructors’ practices to be learner-centered. Qualitative data was also collected to more closely examine students’ understanding of learner-centeredness.

From the one way ANOVAs, in eight demographic variables, statistical significance was found between the LCBSS subscale scores of ethnicity and epistemic curiosity, and age and mastery oriented goals. From the repeated measures ANOVAs, statistical significance
was found in total scale scores, and many subscales scores. Qualitative data also contributed important information that enhanced the results of the quantitative part of this study. Results of this study provided a broad descriptive picture of the participants, and the outcomes of this study provided information that can assist in facilitating learner-centered instructional practice at the college level in the future.
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Chapter 1

Conceptual Framework

McCombs and Vakili (2005) called attention to a bold and innovative new view of learning that challenged society’s older notions about learning that was based on agrarian, factory, and standardized educational models. This new view is built upon a foundation of standardized models of learning, but also examines learning as it relates to human development, and motivation to learn. Its purpose is to examine individual learners in holistic terms by merging these models into one comprehensive pedagogical approach regarding the nature of learning, with a focus on the needs of all learners, and their learning processes (McCombs & Vakili, 2005).

This innovative pedagogical approach is known as learner-centeredness. According to research on the learner-centered approach, curriculum design, content and standardized assessments are important factors that facilitate learners’ success. However, they are not exclusive factors that promote human development, motivation to learn, and academic achievement. It is equally important to consider learning that occurs when content and curriculum design are tied to the needs and viewpoints of individual learners (McCombs, 1997).

Brown (2003) expands on this notion of learner-centeredness in her description of critical factors in the learner-centered approach that promote positive human development, motivation, and achievement. Brown points out that the focus of the learner-centered approach is on an individual learner’s prior experience, heredity, perspectives, cultural backgrounds, talents, interests, capacities, and especially their needs. She describes learner-centeredness, from a research-based perspective, as a foundation for clarifying what is
needed to create positive learning contexts that enhance academic success. In light of this perspective, educators must provide scaffolds that support metacognitive processes, in a learning environment that is context sensitive, which focuses on the needs of a diversity of student populations. This differentiated instruction has the potential to meet the needs of diverse populations with a focus on content, process, and learning profiles, in a learning environment where learner needs take precedence over knowledge of fact and skills (Brown, 2003). The goal of learner-centered instruction is to promote learners’ deeper understanding of their own learning processes rather than emphasizing learning for the purpose of simply retaining and understanding information.

**Learner-centered Principles (LCPs): Development of the Learner-centered Battery Student Survey (LCBSS)**

In 1993 the American Psychological Association (APA) drafted its list of Learner-centered Principles (LCPs) in order to provide a research based framework that described learner-centeredness (APA Task Force on Psychology in Education, 1993). The LCPs are discussed in greater detail on page 26 of the review of literature.

In 1997, the APA appointed a task force on psychology in education whose goal it was to define and document the LCP principles in specific terms. The resulting document specified 14 fundamental principles about learners and learning that deepen our perspectives about factors that influence learning (American Psychological Association, Work Group of the Board of Educational Affairs, 1997). These LCPs about learners and learning postulate a model of integrated factors that have the potential to facilitate deeper and more meaningful learning for all learners (McCombs & Vakili, 2005).
In response to development of the LCPs, in 1997 McCombs and Pierce introduced an instrument called the Learner-centered Battery Student Survey (LCBSS) (see Appendix A) that was designed for investigating learner-centeredness, based on the 14 LCPs. The LCBSS is a self-report instrument that was designed to help learners examine their instructors’ levels of awareness and reflective thinking regarding (a) their beliefs about learners, instructors, and their relationship to the learning process, (b) the relationship of those beliefs to their instructional practices from the learners' perspectives, and (c) the impact of these factors on learning (McCombs, Laur, & Peralez, 1997). It was also designed to provide (1) increased awareness of what learners believe instructors are doing to facilitate learner-centeredness, (2) understanding how each learner experiences this, and (3) research based sources of information about the perceptions of individual learners, while focusing on their perspectives and experiences (Fasko & Grubb, 1995). The LCP’s are broken down into four domains in the LCBSS.

The four domains consist of (1) Cognitive and metacognitive factors that describe what the intellectual capacities of learners are and how they facilitate the learning process, (2) motivational and affective factors that describe the roles played by motivation and emotions in learning, (3) developmental and social factors that describe the influence of various diverse aspects of learner development and the importance of interpersonal interactions in learning and change, and (4) Individual differences factors that describe how individual differences influence learning, how instructors, learners, and administrators adapt to learning diversity, and how standards and assessment can best support individual differences in learners (McCombs, 2006).
These four domains provide a framework for designing learner-centered practices at all levels of education that define what it means to be learner-centered from a reliable and research validated perspective (McCombs & Vakili, 2005). These LCPs change the focus of instruction to a more learner-centered perspective that is designed to address a variety of complex emotional, psychological factors inherent in individual’s learning processes, while recognizing how environmental factors interact to affect learning.

**LCBSS: Its Importance at the University Level**

McCombs and Pierce (1999) point out that using the Learner-centered Battery Student Survey (LCBSS) to measure conceptual change over the course of university programs represents a valuable instrument for examining learner-centered dispositions. They underscore the reliability and validity of the LCBSS as an instrument that has research based promise for measuring the perceived importance of whether instructors address learners’ biological, cognitive, and emotional needs, as compared to non-learner-centered beliefs that ability is fixed. Beyond this, administration of the LCBSS in college settings allows educators in higher education to design programs that promote seamless professional development that further benefit individual learners at all levels of education, as well as designing research based pedagogy that facilitates positive human development, motivation to learn, and academic achievement at the university level (Pierce & Kalkman, 2003). In addition, the LCBSS, as part of a greater battery of measures, has the potential to consider the development of learner-centered beliefs among pre-service instructors who are transitioning to becoming professional educators (McCombs, 2002: McCombs & Pierce, 1999).
The learner-centered paradigm promotes effective college instruction that revolves around what the learner is doing, rather than predominantly focusing on what the instructor is doing. This paradigm shift requires college instructors to facilitate the learning process rather than simply instructing and reporting learning outcomes. O’Neil & McMahon (2005) explain that this requires a change in educational philosophy that requires instructors to make the following paradigm shift in instructional practice:

1. Instruction must shift from learning that is content driven and instructor-centered to one which is learner-centered and process driven.

2. The learner’s role changes from one of being a passive receptor of learning to being an active and engaged learner, who is an agent that is empowered to explore his or her own learning processes.

3. The instructor expands his or her role as professor from one who disseminates truth to being a facilitator and mediator of learning. In this role, the instructor engages in the following key functions:
   a. Creates learning tasks and conditions that promote active learner engagement.
   b. Facilitates and coordinates learning “as a side player”, while learners assume the role as active participants in their own learning processes.
   c. Evaluates the effectiveness of what is learned by collecting, analyzing, and evaluating data on learning outcomes, which is used as information that informs and improves learning outcomes and processes.

In learner-centered instruction, individuals spend less time being instructed and more time engaging in and being active in the learning process. This does not imply that the
instructor is eliminated. Rather, in order for the learner to be actively engaged, instruction must be alternated so that the learner is empowered to take a more active and responsible role in their own learning.

Cuseo (2005) reinforces this paradigm shift by suggesting that the following changes in college instructors’ instructional practices should occur:

1. Instruction should change from one in which the instructor simply lectures to one in which class-time, responsibility, discussion and control for learning is shifted to the learner.

2. The student’s role should change from one in which they are passive receptors of knowledge to one in which they become active and involved participants in their own learning processes.

3. The instructors’ role should move from one in which they instruct and disseminate knowledge to one in which they facilitate or mediate learning.

Bilimoria & Wheeler (1995) go on to explain that this paradigm shift from instructor-centered methods to a more learner-centered focus relies on the following key premises. First, it assumes that learners become more engaged and academically successful as power shifts to more egalitarian instructional methods. It asserts that content is not seen as a collection of isolated facts, but as a method for promoting critical thinking in learners in whatever field they are studying. Beyond this, the role of the instructor is not as the authoritarian, but as a “fellow traveler” in the search for knowledge. This shift assumes a return of responsibility for learning to the learner. This helps them better understand their learning strengths and weaknesses, and the feeling of being self-regulated in their own quest
for knowledge. Finally, it advocates for assessment that is used not simply for assigning grades, but rather to develop effective instructional tools that facilitate learning.

With respect to learning at the college level, Fahraeus (2013) defines this changing paradigm as a shift in practices that change the role of instructors from one in which they are the center of learning to one in which they are facilitators of learning. There is shift towards a shared balance of power in coursework, to increased learner responsibility for learning, and a change in attitudes towards the purpose and process of evaluation. The point is that learner-centered teaching, especially at the college level, engages students rather than subjecting them to being passive receptors of instruction. In this process, control over the learning environment is shared by the instructor and learner in a spirit of collaboration that promotes self-reflection on how and what is learned.

In considering instructional practices that reflect learner-centered practice in action, Fahraeus (2013, p. 127) sets out seven principles that guide the implementation of learner-centered instruction in college settings. Those principles are:

1. Instructors should let individuals do more learning tasks. For example, letting them summarize, draw their own conclusions, and pinpointing difficult areas in reading, etc.
2. Instructors should do less telling and improve at asking questions.
3. Instructors should do instructional design work more carefully, and create more in class assignments that help learners apply cognitive skills to relevant material.
4. Faculty should more explicitly model how experts learn. They are willing to share their own learning processes and thoughts in answering unexpected questions.
5. Faculty should encourage students to learn from and with each other.
6. Faculty and students must work to create climates for learning. This is about honoring students’ options so that they accept responsibility for their learning.

7. Faculty should use evaluation to promote learning. For example, use peer assessment and feedback as a point of departure for a discussion.

**Learner-centered Instruction: The Need for Further Research**

Although research in the area of learner-centered instruction has increased, based on a search of the literature, evidence is still lacking that the LCBSS has been used to study undergraduate students’ perceptions of learner-centered instructional practices in colleges of education. Therefore, it is prudent to examine learner-centeredness in college of education courses, because it has the potential to assist us in understanding barriers to learning, to inform us in our understanding of learner-centeredness, and to develop learner-centered techniques that promote learning in college of education courses (Barr & Tag, 1995).

This researcher utilized the LCBSS for his study to examine undergraduate students’ perceptions of their instructors’ learner-centeredness in college of education courses in a southwest university. One important assumption of this study was that through the use of the LCBSS, college instructors can gain a better understanding of what learner-centered principles are, and how they are perceived by the learner in context of college of education courses. Through this increased understanding, educators can design instructional practices that better represent the needs of the individual, while promoting positive personal development, increased motivation, and academic achievement.

The goals of this study were threefold. The first goal of this study was to examine to what extent undergraduate students, who are enrolled in Educational Psychology courses, perceived instructional practices to be learner centered. The second goal was to examine the
relationship between these perceptions of learner-centeredness and demographic variables that included gender, age, ethnicity, family income, college credits earned, Grade point average (GPA), college major, and whether the student had been accepted into a teacher preparation program. The third goal of this study was to use qualitative data to more closely examine undergraduate students’ understanding of learner-centered classroom practices.
Chapter 2
Review of Literature

Learner-centeredness: A Foundation for Theory and Research

According to Rallis (1995), it is important to be concerned about the process by which humans construct meaning and knowledge in their worlds. Piaget (1950) emphasizes the importance of stimulating intellectual environments for learners, based on their developmental levels. As such, it is important for educators to consider constructive and human factors in the learning process designed to stimulate a learner's intellectual interests as well as being sensitive to developmental characteristics, and stages of development (Ahara, 1995). Brooks (1993) explains that Learner-centered Theory is derived from various cognitive, humanistic and constructivist disciplines that have been in existence from the 1950s through this day and age. In the following section, I discuss a few of these constructivist theories and their importance to positive learner-centered outcomes; Cognitive Theory, Humanist Theory, Constructivist Theory, Achievement Goal Theory of Motivation, and Attachment Theory.

Cognitive theory. Cognitive theory emphasizes the importance of the learner in construction of knowledge. It stresses the critical role that social interaction plays in learning processes. In these processes, active learning is seen as central to learning outcomes that occur in an appropriate learning environment that facilitates learner engagement. In these environments, individuals learn best when they are active participants in instruction that promotes knowledge and understanding of course content (Peer & Martin, 2005).

Humanistic theory. Humanistic theory is based on the notion (which both instructor and learner facilitate) that students, who deal with real problems on a daily basis, want to
learn, have a desire to grow, and seek to create, all in a learning environment that facilitates a climate where these tendencies can thrive and evolve (Pitrik & Holzinger, 2002). It involves learners as complex beings, who are responsible, understanding, self-realized individuals, who have a vested interest in their own learning processes.

**Constructivist theory.** In constructivist theory, learning is an active process of knowledge construction that builds upon knowledge that is already possessed by learners (Pitrik & Holzinger, 2002). It is based on the understanding that learners construct knowledge for themselves (Hein, 1991; Krause et al, 2003). With regard to learner-centered schools, Thomas & Bartlett (2011) explain that constructivist theory positions these learners in a place where they are not passive recipients of knowledge, but as individuals who are active participants in learning, who connect new information to their current understanding, knowledge, experiences, and ideas.

According to Gredler, 2001), constructivist theory is based on two principles. First, learning occurs through active experience and exploration of the learning environment, which reveals inconsistencies between current knowledge and the learners’ experiences. Second, learning occurs within social contexts, where active interaction occurs between learners, their peers, and the learning community. Williams & Burden (1997) expands on these principles in his belief that constructivist instruction empowers learners to think for themselves. With regard to learner-centered schools, Thomas & Bartlett (2011) explain that constructivist theory positions students in a place where they are not passive recipients of knowledge, but as individuals who are active participants in learning, who connect new information to their current understanding, knowledge, experiences, and ideas.
**Achievement Goal theory.** Achievement Goal Theory assumes that learners have reasons for performing and persisting, for choosing learning activities, and for the quality of the effort and engagement they put forth in those activities. It stresses the importance of instructional environments that promote a positive shift in motivational orientation from performance goal orientation to mastery goal orientation (Meece, 2003). Meece (2003) defines mastery goal orientation as:

A desire to improve one's ability, master a skill and understand learning material. Self-improvement is the goal and the students derive satisfaction from the inherent qualities of the task as its challenge, interests or enjoyment. Performance oriented goals are concerned with demonstrating high ability relative to others, competing for grades, or gaining recognition of their abilities. The student’s sense of accomplishment is derived from demonstrating high ability, or avoiding negative judgments of ability, regardless of the learning involved. (p. 109)

Meece points out that Achievement Goal Theory of Motivation can provide a useful framework for describing learner-centered environments in that it assumes children are motivated to engage actively in learning environments for many reasons, and the goals learners adopt play an important role in how they approach and engage in learning.

**Attachment theory.** Elements of the learner-centered model can also be explored through the perspective of attachment theory (Bowlby, 1969), which is thought to be influential in examining the dynamics of learner/instructor relationships. Attachment theory emphasizes the importance of relationships that foster long-lasting attachments that create secure and reciprocal relationships, which enhance a learners’ ability to engage in functional relationships with teachers and peers (Bowlby, 1969). These attachment based relationships
facilitate the learner’s positive self-concept, but also build a sense of well-being in the learning environment (Cornelius-White, 2007).

**Learner-centeredness: A Definition**

McCombs, Laur, and Peralez (1997) define learner-centeredness as:

A perspective that couples a focus on individual learners – their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs – with a focus on learning – the best available knowledge about learning and how it occurs, and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners. This dual focus informs and drives educational decision making. Learner-centeredness is a reflection in practice of the fourteen Learner-centered, Psychological Principles – in the programs, practices, policies, and people that support learning for all. (p. 5)

Gibbs (1992) describes learner-centeredness as the process by which learners are empowered to have greater control over choice of subject matter, methods used, and the pace of learning instruction that scaffolds learning; all in an environment that holds individuals responsible for their own educational advancement. This requires learners, with the guidance of instructors, to set their learning goals and determine the resources and activities that will help them find academic success. It is therefore important to change educational practice by shifting the balance of instructional power and responsibility for learning from the teacher to the learner. This can be accomplished by designing content that builds knowledge rather than treating knowledge as an end in itself. In this process, the instructor becomes a facilitator of learning rather than the driver of knowledge, while promoting learning by designing instructional method that more accurately examines academic performance (Weimer, 2002).
The goal is to shift the role of instructor from disseminator of knowledge to a facilitator of learning that does not treat learners as empty vessels that need to be filled (Pederson & Liu, 2003). Knowledge is not the property of the instructor but instead is shared with learners.

Meece (2003) makes some important assumptions about learner-centeredness. First, learners are unique, and distinct in their learning processes. This must be considered and attended to if learners are to become more self-regulated in their learning. Second, these unique differences include emotional states of mind, learning styles, human development, individual abilities and talents, as well as feelings of efficacy, and other academic attributes. These attributes must be taken into account if society is to ensure that all learners are to be provided with opportunities for learning and self-development. Third, learning is a constructive process that flourishes when what is learned is relevant and meaningful, and when learners are actively engaged in the creation of their own knowledge and understanding, based on their own prior experience. Fourth, learning occurs best in supportive learning environments that promote positive interpersonal relationships in a context that is comforting, yet orderly; one in which learners feel honored, respected, and validated. Finally, learning is natural process in which learners are curious and interested in learning about how to master their worlds. Although negative behavior may sometimes interfere with this natural tendency, the learner does not need to feel the need to be “fixed.”

What is most important is that emphasis is placed on teacher empathy and understanding, unconditional positive regard, and self-awareness, in a learning environment where learners are encouraged to utilize their critical thinking skills to initiate learning through self-regulation. (Cornelious-White, 2007). McCombs (2004) and White (2007) assert that these practices are reciprocal and relational in nature. They are embedded in
instructional practice that honors learner-centered beliefs, and voices, as they are expressed through individual and cultural differences. In this process, learners experience supportive relationships in a learning environment that inspires a sense of ownership over their own learning, and individual needs (McCombs & Whisler, 1997).

**Learner-centered Instruction: A Research Based Perspective**

The learner-centered research framework shows promise for providing reliable and valid evidence of the potential learner-centeredness has for enhancing goal orientations, which predict more positive developmental outcomes for all learners (Meece, 2003).

McCombs (1997) proposes that in order to better understand learner-centered practice, educators must embrace a research based perspective, which views learning as a nonlinear and recursive process that is complex, yet natural to all learners. It is important that we examine and define learner-centeredness through this research based perspective in order to build a scientific foundation for our understanding of learners’ cognitive, motivational and developmental needs.

Anton (1995) supports this contention by pointing out that it is important to understand the depth and complexity of learner-centered practices in terms of what is reliable and valid research. Doing so assures researchers, educators, policy makers, and school communities that the principles that support it are more reliable and valid. In her opinion, there is a need for more reliable and valid theoretical and empirical research that examines learning from the perspective of the learner.

Brown (2003) points out that in order to incorporate this nonlinear and recursive, reflective process of inquiry, a paradigm shift that more closely considers learner-centered approaches of instruction is needed. It is important to design research based pedagogy that
supports a diversity of learners, where learner-centeredness is considered to be an important factor in promoting academic success. By doing so, educational systems of the future have the potential to maximize standardized methods of instruction, while investigating the motivational and developmental aspects of pedagogy that facilitate achievement for all learners (Brooks & Brooks, 1993).

It is also important that stakeholders commit to this reflective, research based inquiry, in a process of pedagogy that constantly examines the quality of instruction, and applies that knowledge to creating improved, more learner-centered environments at all levels of education (Brown, 2003). This reflective, research based perspective should focus on learner needs as important factors that have the potential to facilitate instructors’ increased clarity about the dispositions and characteristics of the learners they are serving (McCombs, 1997).

Anton (1999) asserts that instructors must engage learners and negotiate meaning, language forms, and classroom rules by initiating these discursive processes in an environment that promotes learners’ active mental participation in the educational process. When learners engage in this type of negotiation with their instructors, the functions of scaffolded assistance are achieved. From a traditional learner-centered perspective, such opportunities for negotiation and scaffolding within the zone of proximal development have the potential to increase learners’ motivation, personal development and academic success.

**Learner-centered Instruction: A Focus on Learners**

Weimer (2002) describes learner-centered instruction, based on five key variables:

1. Rather than learners meeting the Instructors’ objectives, it is learners who set the learning objectives in response to a primary question.
2. Instructors present the questions but then act as facilitators, while learners determine the nature of the response they develop, and they carry out the process of developing that response.

3. Instructors present questions that are interesting and motivating, but it is learners who take ownership of the process of developing responses to the questions. These questions are driven by the goals they have set for themselves, rather than the rewards that are promised by instructors.

4. In learner-centered instruction, assessment is open ended and is designed to involve individuals in the examination of their own learning, focusing on their needs, and elevating understanding rather than basing learning on grades.

5. Learner-centered approaches emphasize self-governance, allowing learners to decide how they work. This means negotiating relationships with each other, articulating their own meanings, and engaging in a disciplined process of social interaction.

A primary focus of learner-centered instruction is on variables related to learner-centered perceptions, which are considered essential to the facilitation of positive academic outcomes (American Psychological Association, 1997; Lambert & McCombs, 1998). Cornelius and White (2007) point out that examination of these learner-centered variables in instruction has the potential to provide constructive, research based answers, about our ever changing educational processes, in order to answer a myriad of “perplexities” that affect learners in this new day and age.

McCombs and Vakili (2005) describe learner-centered instruction as a complex interaction of programs, practices, and policies, as they are perceived by the individual
learners. These interactions are foundational in designing evaluation programs that promote the creation of holistic learner-centered instructional-practices that serve all learners’ needs. The focus of learner-centered instruction is on the needs of individuals rather than simply the knowledge we wish to transmit (Ahara, 1995). Learning is influenced by the instructor but it is learners who determine what is learned. The idea is that in order to understand the complex processes of learners, it is necessary to see their point of view (Massouleh & Jooneghi, 2012).

Barton and Booth (1995) point out that the purpose of learner-centered instruction is not simply to transmit knowledge and facts, but rather to enhance the process of knowledge transmission by developing a learner’s innate capacities and intelligence. Instructors train learners to make informed instructional decisions, but it is learners who are educated in the skills and knowledge that are needed to make those decisions (Nunan, 1999). Learner-centered instruction facilitates this process by connecting learning to individual learners’ needs. When these needs are met, diverse experiences are provided, which motivates them to actively explore stimulating educational environments. Learner-centered instruction also nurtures critical thinking by connecting learning to individuals’ needs. It helps them to develop as unique, self-regulated learners at whatever stage of development they are in. The idea is that when learners have choice in what and how they study, and when they are given voice in this process, they are enabled to acquire the democratic experiences they need to express what they think and desire (Massouleh & Jooneghi, 2012).

Ahara (1995) expands on the notion of learner-centeredness in his assertion that the purpose of learner-centered instruction is to cultivate individual differences, and to develop a sense of independence, while it facilitates good character in an environment that promotes
active participation in the learning community. Learner-centered instruction promotes each learner’s sense of responsibility and self-regulation in this process, and each learner is empowered to share in the body of knowledge and wisdom of the learning community. In this learner-centered community, the learner is viewed as a vital and contributing member of the classroom, where each one contributes in unique ways to construct knowledge that emphasizes support and caring that meets the needs of a diverse set of learners (McCombs, & Vakili, 2005). This community is built on a foundation of trust that facilitates critical thinking, reflection and dialogue, all in an open and caring social context (Schaeffer, 2003) that is less hierarchical, and focuses on building strong relationships that promote mental health and social awareness in learners (Ahara, 1995).

Shaefer and Zygmont (2003) explain that learner-centered instruction is built on collaborative relationships between instructors and learners. These relationships promote active engagement in instructional content, and process. Within this content and process, collaboration and negotiation is expected, while learners are encouraged to question, and conjecture, in a learning environment that promotes creativity. Such relationships promote focus on learners by grounding them in an environment that is supported by a stable and resilient community that focuses on their needs, while it facilitates collaboration between learners and the instructor (Ahara, 1995). Doing so promotes active and cooperative participation in learning processes by all members of the instructional community. What is most important is that the critical function of instruction is to affect learners on an individual basis, while supporting the group as a whole.

When individuals perceive more learner-centered practices, they also report greater interest in instruction, and academic participants as well as more positive perceptions of their
competencies. Furthermore, when individuals’ experiences with their instructor are more learner-centered, they feel more positive about their own abilities in terms of general aptitude or creativity (McCombs, Daniels, & Perry, 2008). The point is that perceptions about their instructors’ learner-centered practices play a significant role in the social emotional outcomes of learners. This lends credible support for the theoretical and empirical expectations that learners can provide meaningful reports of the instructional experiences that are associated with how they come to feel about learner-centeredness (McCombs, Daniels, & Perry, 2008).

Fraser, Wahlberg, Welch, and Hattie (1987) found that at a broad level learner-centered relationships are well worth pursuing, that reciprocal effects of instructor and learners behavior need further exploration, and that much of the correlations in learner-centered instruction in academic success merit further investigation. They point out that overall, learner-centered instructional variables show above average associations with positive learner outcomes, positive relationships, none directivity, empathy, and encouraging critical thinking and learning, which are the specific variables that are exceptional compared with other instructional innovations. In addition, critical thinking skills, satisfaction, achievement, dropout prevention, self-assessment, verbal achievement, motivation, social connection, IQ, grades, decreased disruptive behavior, increased attendance, and perceived achievement are also important variables when considering learner motivation and achievement.

From the standpoint of instructors, Henderson and Hawthorne (2002) explain that it is important to engage learners in the process of reflecting on what is thoughtful instruction as it relates to learner-centered perceptions. It is imperative that instructors analyze their assumptions and feelings about learning in order to develop instructional practice and theory
that ties in with education and practice that challenges us to reconsider our assumptions about current instructional practice. If we can accomplish this, we can challenge our current notions of what instruction means. We can then act on the basis of the resulting theory, and practice, to create instructional practices that are more learner-centered.

**Characteristics of learner-centered instruction.** Ahara (1995) suggests that it is important to establish a foundation of trust between learners and instructors that facilitates open dialogue and exploration of issues that affect learning outcomes. He points out that the aim of education should change from one in which instructors are thought of as the “all-knowing sage” to one in which learners are active participants, who travel alongside their instructors in the constant exploration of the learning environment. The goal is to share individual heritage in learning-communities that promote collaboration and meaningful learning. Such learning facilitates consistency in the day-to-day lives of learners. In this context, learner-centeredness promotes social and cultural interaction, where individual values and beliefs are supported, while learners are allowed to critically examine the ways in which they think and believe.

Meece (2003) provides the following examples of key characteristics of learner-centered instruction that expand our insight into what learner-centeredness looks like in the instructional environment.

Learner-centered instruction is a system that organizes educational activities around meaningful themes in an environment that is complex and challenging, yet reachable by all learners. This is facilitated through conducting learning activities that promote higher order thinking skills. Developing such skills help learners to refine and improve their understanding through consistent application of individual abilities.
Learner-centered instruction provides opportunities for learners to self-select their own learning projects, which they can work on at their own pace. But it also facilitates peer teaching opportunities, where learners are given the opportunity to collaborate with others of different ages, cultures, backgrounds and abilities. Learner-centered instruction uses instructional strategies and methods that match learners’ needs, especially in terms of educational activities that are culturally relevant to them.

Another key characteristic of learner-centered instruction is in the use of heterogeneous grouping practices that promote cooperation, shared responsibility, and a sense of belonging. In this environment, learners are encouraged to take responsibility for their own understanding by promoting shared decision making and student autonomy, while listening to and respecting their instructors, and others perspectives. In this environment, learner-centered instructors monitor academic progress consistently and continually, while providing feedback on each individual’s growth. Instructors accomplish this by using standardized and alternative forms of evaluation that allow instructional standards to be demonstrated in variety of ways,

Learner-centered instructors also facilitate instructional practices, where learners are included in educational decision making, in terms of what they focus on in their learning, and rules that are established in that process. Through these practices, diverse perspectives of learners are encouraged and rewarded, while the commonalities and differences of individuals’ cultures, abilities, learning styles, and developmental needs are considered. What is most important is that learners are honored as co-creators in the educational process, where they are treated as individuals with ideas that deserve consideration, and that their personal life issues require attention (McCombs, 1997).
Learner-centered Psychological Principles (LCP’s): The theoretical base for learner-centered instruction. According to McCombs and Laur (1997), the best measure of learner-centeredness is learners’ perception of classroom practices that are in keeping with principles found in the four domains of the Learner Centered Principles (LCPs) that have been shown in current research to be related to positive student motivation and achievement, supporting higher order thinking, problem solving skills, self-efficacy and students taking responsibility for their own learning, and supporting individualized instruction and instructional management. For these reasons, among others, in 1993 the American Psychological Association (APA) drafted its list of Learner-centered Principles (LCPs) in order to provide a framework that described learner-centeredness (APA Task Force on Psychology in Education, 1993). In 1997, the APA appointed a task force on psychology in education whose goal it was to define and document those principles in specific terms. The resulting document specified 14 fundamental principles and 4 domains about learners and learning that integrate our perspectives about factors that influence learning (American Psychological Association, Work Group of the Board of Educational Affairs, 1997). These LCPs postulate a model of integrated factors that have the potential to promote deeper, more meaningful learning (McCombs & Vakili, 2005). The four domains and 14 principles as described by McCombs, Laur, & Peralez (1997) are:

**Cognitive and metacognitive factors:** The six principles in this domain address the nature of learning as an intentional process of constructing meaning, which requires instructional support and guidance that supports learners in acquiring and retaining knowledge. In this process, learners link new information with existing knowledge that is facilitated by a variety of reasoning strategies, which facilitate critical thinking skills about
instructional matter. It also promotes higher order metacognitive strategies for monitoring and regulating learning in a variety of instructional contexts; the classroom, college course, school, and community that include technology and innovative instructional practices.

1. The nature of the learning process – There are different types of learning - from motor skills, to retaining and generating knowledge, to cognitive skills and learning strategies. Learning of complex instructional matter is most effective when it is an intentional function of constructing meaning around this process. Within this process, successful learners are active, goal-directed, self-regulated, persistent, and assume personal responsibility for contributing to their own learning.

2. Goals of the learning process – The successful learner over time, with support and guidance, are empowered to create meaningful, logical representations of knowledge. To construct useful knowledge and acquire learning strategies for life-long learning, individuals need to pursue personally relevant goals. Instructors can help learners set short- and long-term goals that are meaningful and instructionally sound.

3. The construction of knowledge – The successful learner links new information with existing knowledge in deep and meaningful ways. Because each individual has different experiences and because the mind works to link information meaningfully, each learner organizes information in a way that is unique to that particular individual. Instructors can help learners develop shared understandings about critical knowledge and skills. However, unless new knowledge becomes
integrated with the learner’s prior understandings, the new knowledge remains isolated and difficult to apply in new situations.

4. Strategic thinking – The successful learner creates and uses a range of strategic thinking skills to achieve complex learning goals. Successful learners use strategic thinking in learning, reasoning, problem solving, and concept learning. They use a variety of strategies to expand their repertoire by reflecting on and changing current strategies, observing others, and benefiting from instruction.

5. Thinking about thinking – Higher-order strategies for “thinking about thinking”, and monitoring mental operations, facilitate critical thinking and the creative development of expertise. Successful learners reflect on how they learn, set reasonable goals, choose appropriate strategies, monitor progress toward goals, and change strategies as needed. These abilities can be developed through learner-centered instruction.

6. Context of learning – Learning is influenced by environmental factors, including culture, technology, and instruction. Instructors play important interactive roles with both learners and the instructional environment. They promote instruction that fits the learners’ prior knowledge, cognitive abilities, and unique ways of thinking. In addition, they nurture qualities of the instructional environment that are influential in the instructional process.

**Motivational and affective factors**: The three principles in this domain acknowledge the role of motivation, epistemic curiosity, and emotion in learning that include emotional states, self-beliefs, interests, goals, and, ways of thinking. It is important to consider the critical nature of intrinsic motivation to creativity and higher order thinking. In addition, it is
important to consider the conditions that stimulate intrinsic motivation (e.g., novelty, relevance, optimal difficulty, choice, and control) as being especially important to functional learning.

1. Motivational and emotional influences on learning – The depth and breadth of information processed, and the depth of how much is learned, is influenced by (a) Awareness and beliefs about ability, personal control, and competence, (b) clarity of values, interests, and personal goals; (c) expectations for success and failure; (d) emotions, and cognitive states of mind; and (e) motivation to learn. Beliefs, goals, and expectations can enhance or stifle learning, while negative cognitions and affect (e.g., feeling insecure, being concerned about failure, being self-conscious, fearing punishment, ridicule, and stigmatizing labels) hamper complex learning.

2. Intrinsic motivation to learn – Intrinsic motivation, creativity, and higher-order thinking are stimulated by authentic learning tasks that are challenging yet relevant, reachable, and novel. Individuals need opportunities to make choices about learning that are in line with their personal interests if they are to be creative in thinking deeply about projects that are as complex as real-world scenarios.

3. Effect of motivation on effort – Learning complex skills and knowledge requires effort, persistence, and practice that must be facilitated through instructional guidance and feedback. Learning of complex instructional matter requires considerable investments of time and energy. Unless individuals are motivated to
learn, they are unlikely to expend the needed effort to succeed without being forced to do so.

**Developmental and social factors:** The first principle in this domain focuses on developmental processes across physical, intellectual, affective, and social spectrum, and how these processes unfold within and across each unique individual, which influences learning in ways that instructors need to acknowledge. The second principle focuses on the area of social influences on learning that include social interactions, interpersonal relationships, and communication with others in the instructional environment, home, and the larger community.

1. Developmental constraints and opportunities – Learners progress through stages of physical, intellectual, affective, and social development that are a byproduct of genetic and environmental factors. Individuals learn best when instructional materials are developmentally appropriate. Overemphasis on one kind of developmental readiness (i.e., math and reading readiness) may interfere with development in other areas.

2. Social influences on learning – Learning is influenced by social interactions with others. It is enhanced when learners have the opportunity to interact collaboratively with others. Instructional situations that scaffold and respect diversity encourage flexible thinking, social competence, and moral development. Learning potential and self-esteem is heightened when learners are respected and cared for in relationships, where their potential is acknowledged, their talents are appreciated, and they are accepted as unique learners.
**Individual differences factors:** The three principles in this domain focus on the range of individual difference factors learners bring to instructional contexts, including factors that are a function of prior experience, heredity, linguistic, cultural, and social backgrounds. It is recommended that individual differences be addressed by setting reachable yet challenging standards and exploring learning processes with a variety of formative and summative evaluation methodologies.

1. **Individual differences in learning** – Individuals have diverse capabilities that are communicated as a function of culture, social environments, and heredity. Through social acculturation, learners acquire preferences for how and at what pace they prefer to learn. However, these preferences are not always useful in helping these individuals reach their goals. Therefore, instructors need to help learners examine their educational preferences and expand or modify them, while respecting their unique individual and cultural differences.

2. **Learning and diversity** – Optimal learning is influenced, when differences in learners’ linguistic, cultural, and social dispositions are honored. Although principles of learning, motivation, and effective instruction apply to learners, language, ethnicity and race, beliefs, and socioeconomic status potentially influence learning. When learners see that their individual differences in abilities, background, and cultures are valued, motivation is facilitated and learning is supported.

3. **Standards and assessment** – Setting appropriate yet challenging standards, while assessing both the learner and learning are integral components of successful instructional practice. Assessment provides important information to both the
learner and the instructor at all levels of education. Ongoing assessment has the potential to provide functional feedback about progress toward goals, while standardized, performance, and self-assessments—used appropriately—guide instructional planning, support motivation, and provide necessary corrections to guide learning. (pp. 7-8)

**The Learner-centered Battery Student Survey (LCBSS).** The Learner-centered Battery Student Survey (LCBSS) (see Appendix A) is a self-report and reflection tool, developed to help learners measure their instructors’ levels of awareness and reflective thinking about (a) their beliefs about learners, instructors, and their relationship to the learning process, (b) the relationship of these beliefs to their instructional practices, from the perspective of the learner, and (c) the impact of these factors on learning (McCombs, Laur, & Peralez, 1997). The LCBSS is discussed in greater detail in the methods section of this paper.

Information contained in the LCBSS is based on the American Psychological Associations’ Learner-centered Principles (LCPs) (Fasko & Grubb, 1997). Those principles are translated into two scales, and eleven subscales in the student survey. According to McCombs (2006), the domains consist of (1) cognitive and metacognitive factors that describe what the intellectual capacities of learners are and how they facilitate learning, (2) motivational and affective factors that describe the roles played by motivation and emotions in learning, (3) developmental and social factors that describe the influence of various diverse aspects of development and the importance of interpersonal interactions in learning and change, and (4) Individual differences factors that describe how individual differences influence learning, how instructors, learners, and administrators adapt to diversity, and how standards and assessment can best support individual differences in learners.
These domains provide a framework for designing learner-centered practices at all levels of education that define what it means to be learner-centered from a research validated perspective (McCombs & Vakili, 2005). What is important is that the LCPs, as they are reflected in the two scales and eleven subscales of the LCBSS, change the focus of instruction to a more learner-centered one that is designed to address a variety of complex psychological and affective factors inherent in an individual’s learning process, while recognizing the importance of how those environmental factors interact to affect learning (McCombs, 1993). In addition, they “provide opportunities for learners to draw on their personal experiences which help them to interpret what occurs in the learning environment” (McCombs & Vakili, 2005, p. 5).

Instructional methods that follow from learner-centered practices need not take a particular form. Rather, they must be consistent with the knowledge base, domains, and factors represented by the LCP’s (McCombs, 1997). But they must also function in a manner consistent with the premises of the LCP’s, as demonstrated through instructor beliefs, dispositions, and characteristics. Such dispositions and characteristics have been shown to promote higher instructional standards, which help learners achieve to their highest potential (McCombs, 1997).

When examining learner-centered instruction, Fasko and Grubb (1995) point out that (1) learner-centered instructional practices can be observed reliably; (2) instructors demonstrate three learner-centered practices of creating positive interpersonal relationships (Factor 1), honoring student voice, providing challenge, and encouraging perspective taking (Factor 2), and encouraging higher order thinking and the self-regulation (Factor 3); (3) learners’ self-efficacy ratings are significant predictors of academic performance; and (4) the
quality of instructional practice can be predicted with the LCBSS (Fasko & Grubb, 1995, p. 9).

Fraser, Wahlberg, Welch, and Hattie (1987) found that at a broad level learner-centered relationships are well worth pursuing, that reciprocal effects of instructor and learner behavior require further exploration, and that much of the correlations in learner-centered instruction in educational success are bidirectional. What is indicates is that overall, learner-centered variables showed above average associations with positive learning outcomes. In addition, positive relationships, none-directivity, empathy, and encouraging critical thinking and learning are specific instructional variables that are exceptional compared with other educational innovations. Finally, correlations for participation, critical thinking skills, learner satisfaction, achievement, dropout prevention, self-assessment, verbal achievement, motivation, social connection, IQ, grades, decreased disruptive behavior, increased attendance, and perceived achievement are important variables when considering learners’ motivation and achievement.

Learner-centered Instruction: Diversity, Culture and Ethnicity

When conducting one way ANOVAs of demographic variables and 11 subscales contained in the LCBSS, the most significant group differences observed in this study were between White and Hispanic groups (see Table 4.13). For this reason, it was prudent to search the literature for more information about Race, ethnicity, culture, and learner centeredness. However, in searching the literature the researcher discovered that information in the area of race and learner-centeredness is lacking. Therefore, it became expedient to expand the literature review in the area of culture and ethnicity. In the following sections, the
researcher presents some of the literature on the diverse nature of culture and ethnicity in instructional practice.

**Learner-centered Instruction: Cultural Diversity**

In considering the vast array of relationships that occur in the learning environment, it is important to examine cultural diversity in instruction, in light of a learner-centered approach that incorporates learning strategies that focus on the needs and preferences of a diversity of learners’ (Keengwe, Ochwari, & Onchwari, 2009).

It is evident that in the United States every learner has equal access to the instructional systems. The question is, what does this say about equity, “the state or quality of being just, impartial, and fair” (Equity, 1994, p.287) to a wide diversity of learners in our private and public instructional systems? According to Keengwe, Ochwari, & Onchwari, 2009), teaching to a wide diversity of learners in a fair and effective manner implies that instructors must provide all learners with opportunities to learn in safe environments that are conducive to encouraging them to achieve, while providing the best, most effective possible opportunities to grow and learn in modern, culturally diverse instructional environments. The challenge is to educate learners from diverse backgrounds (Sadker, Sadker, & Zittleman, 2008) in a fair and equitable manner.

McCombs & Whisler (1997) point out that meeting the needs of individuals in a learner-centered system has become acute, as school systems in this country face increasingly culturally diverse populations. Supporters of learner-centered systems explain that in order to support these learners, instructors must be concerned with how to provide education that accommodates them in contexts that are shaped by valuing and understanding the vast diversity of differences and individual needs that learners present. Salinas & Garr
(2009) contend that utilizing a learner-centered approach is potentially advantageous in forging learning environments that support culturally diverse populations.

At the university level, being learner-centered implies that in order to promote comprehension skills and attitudes that foster diverse cultural understanding, instructors must design systems that foster learning that models culturally competent instructional practice. They must develop cultural competence by striving to master awareness of the various bodies of knowledge that underlie effective cross-cultural instructional systems (Diller & Moule, 2005). These systems are considered to be learner-centered if they foster “cultures of caring” and collaboration that are inclusive and promote flexible, and respective practices that value and incorporate diversity in the learning community, as well as the physical characteristics of learning that convey welcoming learning environments, which value the culturally diverse nature of learners and learning (McCombs & Whisler, 2009).

Keengwee, Ochwari, and Ochwari (2009) explain that frameworks for understanding instruction that focuses on learners’ unique characteristics and identities must support all learners, especially those with diverse cultural heritages, who come from different backgrounds, in order to help them reach their highest potential. An important element of learner-centered instruction is that instructors should consider unique characteristics of individuals in order to promote learner-centered instruction (Gollnick & Chin, 2002).

**Ethnicity and Learner-centered Instruction**

In addition, it is important for instructors to facilitate “the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning more relevant and effective for them” (Gay, 2002, p. 29). This requires instructors to create learning environments that do not require learners to renounce their
unique cultural heritages (Nieto & Bode, 2008). Rather, it is important to respect these unique differences and approach instruction with a willingness to instruct from a multicultural perspective (Keengwee, Ochwari, & Onchwari, 2009). These are important elements of learner-centered models when considering cultural characteristics of learners. What is most important is that learners must be empowered in academics that are deeply embedded in their cultural heritage, while their cognitions and pedagogical practices facilitate mutually constructed meanings (Trent, Artilles, & Englert, 1988). Learner-centered instruction must be culturally, cognitively, and emotionally responsive in order for it to address the range of learning styles that build on the unique qualities of culturally diverse learners.

When considering instructional practice, in discussing the needs of a diversity of learners, especially in light of the findings of this study, it is evident that it is important to consider unique needs that can be attributed to ethnic backgrounds of learners (Keengwe, Ochwari, & Onchwari, 2009). It is imperative that consideration be given to the importance of transforming learning objectives into learner-centered instruction that has impact on factors that include ethnicity (Salinas & Garr, 2009). In addition, it is important that we continue to ground our understanding of ethnicity and learner-centeredness in sound research.

Summary

The purpose of this study was to examine to what extent students enrolled in undergraduate courses perceived instructional practices to be learner-centered, and to examine the relationship between student demographic variables and student perceptions of learner-centered classroom practices?
This literature review began with a discussion of learner-centered theory, which included cognitive, humanistic, constructivist, achievement goal, and attachment theories. The discussion continued with a definition of learner-centeredness followed by an overview of a learner-centeredness and its importance from a research based perspective. The discussion continued with a description of learner-centered instruction, followed by a discussion of the Learner-centered Psychological Principles (LCPs). The Learner-centered Battery Student Survey (LCBSS) was then presented. The literature review ended with a discussion of the importance of examining diversity, culture, and ethnicity as important factors that must be considered when examining learner-centered instruction.

This study extends the work done on learner-centeredness by looking specifically at undergraduate students, their perceptions of learner-centered practices in their COE classes, the relationships of important variables to these perceptions, and their understanding of learner-centered instructional practices.
Chapter 3

Methods

Research Design and Theoretical Framework

This was a quantitative dominant, mixed methods research study, which primarily relied on data collected through the use of a quantitative research approach, while incorporating a minimum qualitative research study approach (Johnson, Onwuegbuzie, & Turner, 2007). Within this research design, examination of data from both quantitative and qualitative sources occurred in order to add breadth and depth to this study (Creswell, 2003).

Quantitative data were collected utilizing the following instruments: (1) a demographic questionnaire (see Appendix B) was used to collect quantitative data for this study; (2) The Learner-centered Battery Student Survey (LCBSS) (see Appendix A) was utilized to measure participants’ perceptions of learner-centered instructional practices. Administration of the LCBSS took place in three steps, (1) participants completed the survey and demographic questionnaire, (2) participant data was analyzed, and (3) perceptions of instructional practices in two scales and 11 subscales were then calculated. The LCBSS and demographic questionnaires provided broad descriptive information about participants’ perceptions and characteristics.

Qualitative data were also collected through the use of a student perceptions questionnaire (see Appendix C) to provide more in depth information about student perceptions in their own voices.

Participants

The participants selected for this study were undergraduate students enrolled in two educational psychology classes at a southwest college. The two targeted educational
psychology courses are required curriculum for the teacher education program, but are also required for a diversity of students who are not majoring in teacher education. One hundred and ninety six (n=196) participants from various educational programs participated in the study. In addition, all of the students in the undergraduate educational psychology courses were invited to participate in this research study, or write a research paper as an alternative. The study was approved by the University Institutional Review Board (IRB).

Materials

**Informed consent form** (see Appendix D). The informed consent form described the study, promised confidentiality to all participants involved, and assured them that there would be no deception, or harm to any individual involved. In addition, participants were informed that their involvement was voluntary, and that they would not be penalized if they withdrew from the study.

**Learner-centered Battery Student Survey (LCBSS)** (see Appendix A). The Learner-centered Battery Student Survey (LCBSS) was used to measure learner-centered perceptions in this study. It is a self-report and reflection tool, developed to help learners measure their instructors’ levels of awareness and reflective thinking about (a) their beliefs about learners, instructors, and their relationship to the learning process, (b) the relationship of these beliefs to their classroom practices, from the learners' perspectives, and (c) the impact of these factors on learning (McCombs, Laur, & Peralez, 1997).

Items for the LCBSS were generated by a team of educators and researchers to examine student beliefs and assumptions about learners, learning, and instruction that are consistent with the Learner-centered Principles (LCPs). Similarly items used to examine student perceptions of classroom practices were developed to identify best practices in the
four domains of the LCPs as they are reflected in the two scales, and 11 subscales of the LCBSS.

The LCBSS includes a four-page booklet, which allowed this researcher to examine participants’ perceptions and experiences about their perceptions of learner-centered instructional practices. The questionnaire assisted this researcher in the process of (1) developing increased awareness of what learners believed instructors were doing to facilitate learning, (2) understanding how each learner experienced this, and (3) provided a source of information about the perceptions of individual learners, while focusing on their perspectives and experiences. The survey contains 76 statements that are divided into two scales and 11 factors. Responses are recorded on a bubble sheet, and the answer choices are 1 = Almost Never; 2 = Sometimes; 3 = Often, and 4 = Almost Always.

**Description of student perception scales and factors contained in the LCBSS.**

*Scale #1* measured student perceptions of instructor’s classroom practices and was broken down into four subscales, which included:

1. Creates positive interpersonal relationships (7 items: 1, 5, 9, 3, 17, 21, and 24).
   - *Sample statement # 21:* Helps me feel like I belong in the class.

2. Honors student voice, provides challenge, and encourages perspective taking (7 items: 2, 6, 10, 14, 18, 22, and 25).
   - *Sample statement # 6:* Provides opportunities for me to learn how to take someone else’s perspective.

3. Encourages higher-order thinking and self-regulation (6 items: 3, 7, 11, 15, 19, and 23).
   - *Sample statement # 3:* Helps me learn how to organize what I’m learning so I can remember it more easily.
Adapts to individual developmental differences (5 items: 4, 8, 12, 16, and 20).

a. Sample statement # 16: Teaches me how to deal with stress that affects my learning.

Scale #2 measured student motivation variables, and included seven subscales:

(1) Self-efficacy ratings – Beliefs in competency to learn and achieve (6 items: 26, 33, 40, 47, 54, and 61 ).

a. Sample statement # 54: Even when the work is hard, I can learn it.

(2) Effort-avoidance strategies – Strategies directed at avoiding effort while learning (8 items: 28, 35, 42, 49, 56, 63, 69, and 72).

a. Sample statement # 69: If I need help to do an assignment in this class, I skip it.

(3) Performance-oriented goals – Extrinsic motivational orientation directed to achieving high grades or scores rather than to learning (6 items: 30, 37, 44, 51, 58, and 65).

a. Sample statement # 37: An important reason for why I do my class assignments is to get better grades than the other students.


a. Sample statement # 46: I think it is fun to increase my understanding about the subject matter.

b. Reverse sample statement #39: I find it difficult to concentrate on this material.

(5) Active Learning Strategies – Strategies directed at being actively engaged while learning (8 items: 27, 34, 41, 48, 55, 62, 68, and 71).

a. Sample statement # 27: I try to figure out how new work fits with what I have learned before in this class.
(6) Task-mastery goals – Intrinsic motivational orientation directed to learning and mastering task goals (6 items: 29, 36, 43, 50, 57, and 64).

   a.  *Sample statement #43:* An important reason for why I do my work in this class is because I want to get better at it.

(7) Work-avoidant goals – Motivational orientation directed to avoiding assignments and other work involved in learning (6 items: 31, 38, 51, 52, 59, and 66).

   a.  *Sample statement #66:* I feel most successful in this class when I get a good grade without working too hard.

**Reliability and validity of the Learner-centered Battery (LCBSS).** McCombs, Laur, and Peralez (1997) conducted a series of validation studies to determine validity and reliability scores for the LCBSS. In this process, pilot testing, and revisions were conducted in order to ensure internal consistency. Pilot testing was followed by further validation studies designed to enhance the validity and reliability of the instrument.

Validation of the LCBSS occurred in two phases:

   *Phase I* - The sample for the phase I validation study of the LCBSS included 4,828 students. Phase I validation efforts focused on establishing factor structures (theoretically sound subscales related to learner-centered beliefs and practices), and internal consistency (reliability) for the teacher and student scales (McCombs, Laur, and Peralez, 1997). Overall, all scales in this validation study demonstrated moderate to high internal consistencies (Chronbach’s alpha coefficients ranged from .67 to .96) and factor structures that were conceptually consistent with the theoretical framework (i.e., the LCPs) used in the development of the LCBSS.
In addition, low to moderate relationships between student and teacher perceptions of practice pointed to the importance of student perspectives as a guide to change in practice, given that instructors may not be sensitive to what the instructional experience is like for individual learners. Finally, results showed promise for the application of the self-report instruments as tools for enhancing instructor awareness and reflection, and for identifying areas of change that might be beneficial to professional development.

Phase II - The sample for phase II validation study of the LCBSS included 4,894 students. In general, data for this study supported the LCBSS's content, construct, and predictive validity. Furthermore, the results of these analyses provided support and insight for the overall Learner-centered Model of the relationships between instructor beliefs, their instructional practices, and the motivational and achievement outcomes of learners. Support for the content validity of the surveys that comprise the LCBSS was also obtained. In general, phase II factor analyses generally replicated Phase I analyses.

The predictive validity of the LCBSS was also supported by Phase II validation data. Results showed that learners’ perceptions of their instructors' learner-centered practices were good predictors of academic motivation. This finding is consistent with the overall learner-centered perspective, since the focus is on the learners’ experiences and perceptions rather than on instructors'. Finally, the relationships among groups of variables (i.e., instructors’ characteristics, their learner centered beliefs, learners’ perceptions of the instructors' learner-centered practices, and learners’ motivation and achievement) indicated in the multiple regression analyses strongly suggest that the overall learner-centered model is a valuable and worthwhile tool for examination and intervention of learner-centered perceptions of instructional practices.
Results of this study also demonstrated that instructor characteristics influence their learner-centered beliefs, which in turn impacts learners' perceptions of classroom practices. Beyond this, these perceptions influence learners' motivation and achievement. These findings demonstrate the efficacy of the Learner-centered Model in understanding and predicting learners’ motivation and achievement, as well as assisting instructors in their professional development.

**Demographic questionnaire** (see Appendix B). Demographic information was collected for the purpose of describing participant characteristics, and looking at possible differences between groups. Participants received a demographic questionnaire consisting of eight items that collected information regarding gender, age, ethnicity, family income, college credits earned, GPA, college major, and whether the participant had been accepted into a teacher preparation program.

**Student perceptions questionnaire** (see Appendix C). The perceptions questionnaire consisted of the following questions:

1. Do you consider your classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.
2. Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.
3. How could your classes be made more learner-centered? Please provide specific examples.

**Data Collection Procedures**

Participants of this study were contacted by the Educational Psychology Program to announce that research session times were available. After the announcement was made and
all participants were contacted, everyone was provided with an informed consent form and a session schedule sheet, where they were allowed to self-select at random to different sessions. All participants were scheduled for one two-hour session.

The researcher greeted participants when they arrived. They were given informed consent forms when they arrived. After forms were read, signed, and collected, the consent forms were stored in a secure folder that was put in a locked file. Participants were given a packet, which included the Demographic Questionnaire, the LCBSS, and the Student Perceptions questionnaire, which they had approximately 1 hour to complete. To facilitate randomization, the order of packets was changed by session. For example, in the first session participants were given a packet containing the demographic questionnaire, the student perceptions questionnaire, and the quantitative questionnaire (LCBSS). In the next session, participants were given the demographic questionnaire, the quantitative questionnaire (LCBSS), and the student perceptions questionnaire.

When the packets were completed and collected, participants were given the debriefing form to complete. Participants returned the debriefing forms to their instructor for credit. Packets were stored in a file cabinet and data was entered into a secure computer for analysis.

**Research Questions**

Question #1

To what extent do students enrolled in undergraduate courses perceive classroom practices to be learner-centered? To answer this question, the perceptions and motivation scale scores and 11 subscale scores were analyzed using repeated measures ANOVAS to
determine if there are significant differences among mean scores. Alpha was set at .01 to adjust for family wise error, and reliability was analyzed using Cronbach’s alpha.

Question #2

What is the relationship between student demographic variables and student perceptions of learner-centered classroom practices? To answer this question, demographic variables and LCBSS subscale scores were analyzed using ANOVA, and Tukey post hoc tests for follow up.

Question #3

What is the student’s understanding of learner-centeredness? This question was analyzed by examining students’ responses to the student perceptions questionnaire through the use of qualitative methods of coding.

Method of Analysis

**Descriptive statistics.** The study consisted of the following statistical analyses:

1. From the Demographic Questionnaire, frequencies and percentages for gender, age, ethnicity, family income, college credits earned, GPA, college major, and whether the student has been accepted into a teacher preparation program was presented.

2. From the LCBSS means and standard deviations for the total LCBSS scores, and the two subscale scores were analyzed.

**Inferential statistics.** From the LCBSS Questionnaire the students’ perceptions of learner-centeredness were compared using repeated measures ANOVAs, and t-test, followed by Cohen’s D and Greenhouse Geisser correction.
From the LCBSS and the Demographic Questionnaire, One way ANOVAs were conducted and the following data was compared:

1. Total scores for LCBBS x gender. 11 subscale scores x gender.
2. Total scores for LCBBS x age. 11 subscale scores x age.
3. Total scores for LCBSS x ethnicity. 11 subscale scores x ethnicity.
4. Total scores for LCBBS x family income. 11 subscale scores x gender.
5. Total scores for LCBSS x college credits earned. 11 subscale scores x college credits earned.
6. Total scores for LCBSS x GPA. 11 subscale scores x GPA.
7. Total scores for LCBSS x college major. 11 subscale scores x college major.
8. Total scores for LCBSS x acceptance into a teacher training program. 11 subscale scores x acceptance into a teacher training program.

Check for Internal Consistency

Satisfactory levels of reliability depend on a number of factors (e.g., how measures are to be used, inter-item correlations, number of items that compose a scale, low number of questions, and poor alpha due to poor interrelatedness of and between heterogeneous constructs). With regard to the importance of considering these factors, a general standard for reliability has been accepted. Nunnally (1978) recommends that .70 should be the tolerable minimum score and .90 and above should be ideal scores when determining reliability. However, Henson (2001) suggests that reliabilities of .65 can be indicative of sufficient reliability.

Cronbach’s alpha was calculated to estimate reliability for the perception (p_) and motivation (m_) subscale scores in this study, based on recommendations made by Nunnally
(1978) and Henson (2001). For this study, alphas of .65 to .69 were deemed tolerable minimum levels of reliability, alphas of .70 to .89 were considered good, and alphas of .90 and above were considered excellent for determining reliability of subscale scores in this study.

Conducting Cronbach’s alpha on the four perception (p) and seven motivation (m) subscale scores resulted in the following alphas: .92 for perceptions subscale, creates positive interpersonal relationship (7 items); .80 for perceptions subscale, honors student voice, provides challenge, and encourages perspective taking (7 items); .85 for perceptions subscale, encourages higher-order thinking and self-regulation (6 items); .80 for perceptions subscale, adapts to individual developmental differences (5 items); .64 for motivational subscale, self-efficacy ratings (6 items); .65 for motivational subscale, effort avoidance strategies (8 items); .60 for motivational subscale, performance oriented goals (6 items); .84 for motivational subscale, state epistemic curiosity (6 items); .82 for motivational subscale (m_5) active learning strategies; .89 for motivational subscale, task mastery goals (6 items); and .70 for motivational subscale, work avoidant goals (6 items).

Based on reliability estimates for the LCBSS subscale scores, reliability scores for (m_1), (m_2), and (m_3) are lower than other subscales but within acceptable ranges (Henson, 2001).

Qualitative Data Analyses

Introduction. To answer research question three, “what is the student’s understanding of learner-centeredness? Qualitative analyses were conducted through a three-step coding procedure. In the first step, a large scale matrix was developed in which all
utterances and phrases made by participants in response to each survey question were coded and entered. The qualitative survey questions included:

a. Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.

b. Do you consider your classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.

c. How could your classes be made more learner-centered? Please provide specific examples.

In the next step of the process, category tables were developed through inductive analysis of the three open-ended questions that were given to participants. The tables were comprised of categories that were developed to identify students' answers to each of the questionnaire items. Through this process, themes (repeated patterns) were identified and summarized to illustrate the most salient themes. These themes were presented as samples in the final taxonomy tables.

In the following section, the researcher describes the procedures used in the coding process. Examples of the most prominent themes that emerged from this coding process are presented in the results section of this study.

**Coding procedures.** Participant voice was honored in this study by using phenomenological reduction “to free ourselves from prejudices and secure the purity of our detachment as observers, so that we can encounter ‘things as they are in themselves, independently of any presuppositions” (Husserl, 1962, p. 3). In this way the researcher opened himself to these phenomena in their own right with their own meaning. It was postulated that commonalities might be found in quantitative and qualitative data that would
give deeper meaning to the students responses, which would produce emerging patterns and themes that could be examined in future studies.

Content Analysis, “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005, p. 1278), was used to code and analyze the data from the Student Perceptions Questionnaire, to reduce data in order to make sense of and identify core consistencies and meanings (Patton, 2002). Content analysis was used as the process for manually coding of words, phrases, or word-phrase clusters for purposes of qualitative analysis (Chan, Fung, & Chien, 2013).

From the Student Perceptions Questionnaire, analysis of open-ended questions consisted of coding participant responses, and identifying relevant themes and categories. These data were used to enhance quantitative results and give voice to the participants of this study. Each participant’s response was considered and coded individually, which allowed the researcher to identify the responses and compare them across the three sets of responses to questions in order to develop categories and themes.

The three-step coding process. Speech coding was constructed through a three-step process the researcher developed to reduce the data, identify categories, and develop salient themes that emerged from the coding process.

To gain a more in-depth understanding of the lived experience of the participants (Chan, Fung, & Chien, 2013), to eliminate potential bias and minimize their influences in this study (Ahern, 1999), the researcher ensured the rigor of his analysis by making sure to carefully attend to all of the data in his analysis, the following method was followed to maintain the integrity of the utterances and phrases made by participants of this study. The
next section describes the three-step coding process developed to describe relevant themes that emerged from the raw data. The process consisted of developing a large scale transcript matrix from which the speech categories and taxonomies emerged.

**Large Scale Transcript Matrix.** The researcher began the coding process by developing the Large Scale Transcript Matrix (See Appendix F). The document was used to reduce, transpose and codify utterances made by participants’ responses into utterances and phrases for each of the three qualitative questions. Each utterance or phrase was coded. In addition, the researcher coded each utterance to assure that he could return to the original participant file to verify and extract quotable statements made by each participant. The researcher was interested in developing a unique coding process that could be used for qualitative purposes in the future.

Utterances were taken from the Student Perceptions Questionnaire and transcribed into the large scale transcript matrix, which reflected the 196 X 3 answers given by the participants. Statements were reduced into Utterances and phrases, for each of the three qualitative questions asked. The purpose of the transcript was to maintain a complete record of participants’ answers to each of the three questions so that this researcher might develop a more precise picture of what they were trying communicate about learner-centeredness through their responses. For example, one participant made the following utterances and phrases in response to question 1 of the qualitative questionnaire:

1. **3-1A – “Discussions.”**
2. **3-1B – “The small group or large group are beneficial.”**
3. **3-1C – “And focus on the students themselves”**
4. **3-1D – “Rather than lectures where students are disengaged.”**
Large Scale Transcript Matrix Sample (Appendix F)

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.</td>
<td>Do you consider your classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.</td>
<td>How could your classes be made more learner-centered? Please provide specific examples.</td>
</tr>
<tr>
<td>3-1A Discussions, 3-1B the small or large group, are beneficial 3-1C and focus on students themselves 3-1D rather than lectures where students are disengaged.</td>
<td>Yes 3-2A we partake in discussion groups. 3-2B We work on activities as groups 3-2C and the learning is really ours. 3-2D We also get to choose the material we focus on 3-2E which gives us ownership of our learning.</td>
<td>3-3A If some of my classes were discussion-based 3-3B And allowed the students to pick what was taught the class would be more learner-centered.</td>
</tr>
</tbody>
</table>

**Category tables.** From the Large scale matrix, a key word table (see Table 3.1) was developed. It is a compilation of key words that emerged from every utterance and phrase made from all research participants, which were then used to develop four category tables.

**Table 3.1: Key Words**

<table>
<thead>
<tr>
<th>Group work - Key words that relate to group work: Group work, small group, cooperative learning, cooperation, group member, member, roles, active learning, interaction(s), pair up, and collaborate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion - Key words that relate to discussion: classroom discussion, talk, communicate, ideas, respond, response, question, questioning, questions, open ended questions, answer(s)(ing), comments, feedback, present(s), presenting, presentations, critique, topic(s), engage, engaged, engagement, words, review, debate, argument, grade(s), grading, elaborate, elaboration, and clarification, conversation, topic, talk, input, spoke, speak.</td>
</tr>
<tr>
<td>Curriculum – Key words that relate to curriculum. Curriculum, Quiz, Guest speakers, field trips, projects, workshops, assignments, homework, test, lesson(s), activities, lectures, Lab, hands on, Power points, syllabus, material(s), book report, slides, videos, structure, cooperative learning, participant(s), writing, reflect(ing), studying, studies, study, lectures, audio, lessons, strategies, techniques, participants, definitions, course, examples, read, reads, reading, syllabus, multiple choice, short answer, information, same page, practice(s), modelling, tools, books, note taking, embedded</td>
</tr>
<tr>
<td>Psychological Learning Environment – These key words that refer to a psychologically safe and nurturing class environment: universal, caring, safe, respect, healthy, rules, judged, embarrassed, comfortable, positive reinforcements, and motivated, motivating, motivate, intrinsic, inviting, encouraging, passionate, support, excited, gratitude, scaffolding, support, supports, supported, self-fulfillment, values, social, productive, environment(s), welcome, welcoming, welcomed, there for us, open, and concern.</td>
</tr>
</tbody>
</table>

| Student Voice – Key words there refer to the opportunity for students to express their opinions: opinion(s), voice, perspective(s), conclusions, personal, thought(s), diversity, beliefs, viewpoints, ideas, express, and speak. |

| Student Centered Learning – Key words that refer to student-centered learning: student(s’) needs, need, needed, choice, choose, learn, learner, learning, learning, centered, ours, pace, giving, allow, allows, allowing, reminder, help, helps, helping, clarify, clarifies, clarifying, relate, relates, relating, relatable, complicated, grasping, interest, interests, interesting, understand, understands, modifying, core, betterment, effort, like, liked, disliked, discover, discovery, discovering, accommodating, learning styles, participate, participating, practices, concepts, flow, expectations, success, content, one-on-one, grasp, holistic, organized, focus, involved, involvement, personal, schemas, reflection, metacognition, experiences, guided, guides, strengths, clear, concise, prep, prepare, control, involvement, know students, relationship(s), input, knowledge construction, assistance, revolve, invested, meaning(s), ideas, and preference(s). |

| Instructor Centered Learning – Key words that refer to instructor-centered learning: discipline, expectation, expectations, rules, repetition, summarizes, reviews, gives examples, involve, involvement, leader, drive, walks, output, and example. |

| Online Learning - Key words that refer to any learning that occurs online: Web Ct, online, online learning, and posts. |

| Class set up – Key words that refer to the physical set-up of the classroom: desk, tables, arrangement, large class size, small class size, lighting, equipment, and too many students. |

| Miscellaneous - Utterances that are uncertain, or where no comment is made: I am not sure, no comment, and utterances that don’t make sense. |

Four category tables were then developed that separated all the utterances and phrases made by participants into categories (see Tables 3.2, 3.3, 3.4, and 3.5), based on their
answers to the three qualitative questions. As each of the category tables was being
developed, each utterance and phrase was carefully examined to identify key words that
appeared most frequently in text in order establish thematic categories. Based on the
frequency of key words the thematic category tables were developed. Thematic categories
that emerged included group work, discussion, curriculum, psychological learning
environment, student voice, learner-centered learning, instructor-centered learning,
online learning, physical class setup, and miscellaneous.
Table 3.2 is a sample taken from the category table of utterances and phrases provided by participants for qualitative question number one, “Describe classroom practices that you believe reflect learner-centered instruction”.

**Table 3.2: J. Gomez Dissertation Study - Question 1: Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.**

<table>
<thead>
<tr>
<th>Group Work</th>
<th>Discussion</th>
<th>Curriculum</th>
<th>Psychological learning Environment</th>
<th>Student Voice</th>
<th>Student-centered learning</th>
<th>Instructor-centered learning</th>
<th>Online Learning</th>
<th>Physical Class set up</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1D</td>
<td>1-1A</td>
<td>1-1B</td>
<td>11-1B</td>
<td>1-1F</td>
<td>3-1C</td>
<td>2-1D</td>
<td>12-1E</td>
<td>16-1A</td>
<td>181-1A</td>
</tr>
<tr>
<td>Small groups give students opportunity to talk about their own perspectives</td>
<td>Teacher holds discussion groups every class.</td>
<td>Focuses on concepts and material most important for us to learn.</td>
<td>It helps when the instructor was passionate about the teaching.</td>
<td>while hearing perspectives of group members and figuring out what fits in.</td>
<td>and focus on students themselves</td>
<td>and the teacher chooses from them.</td>
<td>I also enjoy what my classmates posted about my discussions</td>
<td>Desk arrangement and environment is the first part of any classroom before instruction begins.</td>
<td>Not sure what is meant by learner centered.</td>
</tr>
</tbody>
</table>
Table 3.3 is an example of utterances and phrases taken from the category table of utterances that represents utterances made for question 2, “Do you consider your classes to be learner-centered?” Because utterances made in this question were based on whether the question was answered by yes or no, two tables were designed to reflect the “yes” and “no” aspect of responses made to this question (see Tables 3.3 and 3.4).

**Table 3.3: Question 2 - No: Do you consider your classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.**

<table>
<thead>
<tr>
<th>Group Work</th>
<th>Discussion</th>
<th>Curriculum</th>
<th>Psychological Environment</th>
<th>Student Voice</th>
<th>Student-centered instruction</th>
<th>Instructor-centered instruction</th>
<th>Online Learning</th>
<th>Physical Class set up</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>but does not provide any in class opportunities to work together in groups.</td>
<td>and to have discussion.</td>
<td>Just gives guidelines and tells us to write about it.</td>
<td>However, could give more praise toward our input.</td>
<td>With the exception of one, opinions of students don’t seem to matter.</td>
<td>The instructor doesn’t check with students about understandings of material.</td>
<td>and instructor in front with the podium.</td>
<td>Online course – I rarely get feedback, I’m bored with the work, and feel uninvolved.</td>
<td>Classes too large for each student to receive individual help.</td>
<td>What’s with all the teachers’ heavy accents! Stop giving jobs to people who don’t speak English.</td>
</tr>
</tbody>
</table>
Table 3.4 is an example of utterances and phrases taken from the categories table that represents utterances made for question 2, “yes”. It represents utterances made for the yes aspect of responses to question 2.

**Table 3.4: Question 2 – Yes: Do you consider your classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.**

<table>
<thead>
<tr>
<th>Group Work</th>
<th>Discussion</th>
<th>Curriculum</th>
<th>Psychological learning Environment</th>
<th>Student Voice</th>
<th>Learner-centered instruction</th>
<th>Instructor driven instruction</th>
<th>Online Learning</th>
<th>Physical Class set up</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups, work on activities as groups</td>
<td>1-2B Classmates get insight from discussion groups</td>
<td>1-2C and readings.</td>
<td>1-2A Teacher shows caring for students.</td>
<td>2-2D Expressing opinions is encouraged.</td>
<td>1-2D Student’s learning is at center of the class.</td>
<td>5-2D Other more traditional classes follow a strict agenda, and tend to lose some students.</td>
<td>47-2A Online and with minimum contact.</td>
<td>16-2D Desks laid out in a way that makes it easy to see instructional aides.</td>
<td>5-2A many of them are. Also, an equal number that are not.</td>
</tr>
</tbody>
</table>

Finally, Table 3.5 is an example of utterances and phrases taken from the category table that reflect responses to question 3 of the qualitative questionnaire, “How could your classes be made more learner-centered? Please provide specific examples.”

**Table 3.5: Question 3 - How could your classes be made more learner-centered? Please provide specific examples.**

<table>
<thead>
<tr>
<th>Group Work</th>
<th>Discussion</th>
<th>Curriculum</th>
<th>Psychological learning Environment</th>
<th>Student Voice</th>
<th>Student-centered Instruction</th>
<th>Instructor centered learning</th>
<th>Online</th>
<th>Physical Class set up</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-3C and more group activities</td>
<td>3-3A If the classes were discussion-based.</td>
<td>1-3A More self reflections.</td>
<td>6-3C Ask how we’re doing, getting to know we are.</td>
<td>42-3E Students voices should be driving factor</td>
<td>1-3C More individual study time to focus on my own rather than being in a group for 100% of class time.</td>
<td>18-3A Be more instruction centered.</td>
<td>22-3D By taking a survey, especially for online courses, teachers can understand the students better and their situations.</td>
<td>2-3B Smaller classroom.</td>
<td>8-3A Not treating each class like mass (moneymaking).</td>
</tr>
</tbody>
</table>
**Taxonomy tables.** Once the four category tables were produced, four taxonomy tables that contain definitions for the ten prominent themes were created. These taxonomies are presented in Tables 3.6, 3.7, 3.8, and 3.9. They represent important themes that emerged from the many utterances and phrases made by participants in this study. These utterances and phrases were subjective construals made by participants about classroom practices that are indicative of a learner-centered orientation. They are authentic evaluations of the students’ lived experiences in their college level courses, relative to their understanding of learner-centeredness. They are utterances that are relative to the goals they recommend for transforming classroom instruction they perceive as being more learner-centered.

**Table 3.6: Taxonomy For Question #1: Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Examples of utterances and phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Work</td>
<td>Utterances and phrases that contain references to interactions between students and instructors that occur in a group setting.</td>
</tr>
<tr>
<td></td>
<td>“Work in pairs or groups.”</td>
</tr>
<tr>
<td></td>
<td>“Get into groups. Group members are assigned different roles and discuss the topic at hand. By doing this we get better understanding of the material.”</td>
</tr>
<tr>
<td>Discussion</td>
<td>Utterances and phrases that contain references to communications that occur between students and instructors in a discussion setting.</td>
</tr>
<tr>
<td></td>
<td>“Many discussions about material to reinforce the subject”</td>
</tr>
<tr>
<td></td>
<td>“Encourage discussion with students in order to turn the floor over to the students to stand back and see what they are grasping, stating opinions as well as other information may feel necessary.”</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Utterances and phrases that refer to lessons and academic content taught in a school or in a specific course or program.</td>
</tr>
<tr>
<td></td>
<td>“Curriculum that is comprehensible and achievable by all students.”</td>
</tr>
<tr>
<td></td>
<td>“Classroom activities are engaging. For example, plays, read alouds, story sharing, reflection.”</td>
</tr>
<tr>
<td>Definition</td>
<td>Examples of utterances and phrases</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Psychological Learning Environment</td>
<td>Utterances and phrases that make reference to a psychologically nurturing and safe class environment:</td>
</tr>
<tr>
<td>Student Voice</td>
<td>Utterances and phrases that make reference to the opportunity for students to express their opinions, contribute input, and make decisions regarding the planning, implementation, and evaluation of their learning experiences.</td>
</tr>
<tr>
<td>Learner-centered Instruction</td>
<td>Utterances and phrases that refer to educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, and cultural backgrounds of individual and groups of students.</td>
</tr>
<tr>
<td>Instructor-centered Instruction</td>
<td>Utterances and phrases that refer to methods, activities, and techniques where the teacher decides what is to be learned, what is to be tested, and how the class is to be run.</td>
</tr>
<tr>
<td>Online Instruction</td>
<td>Utterances and phrases that refer to any form of online instruction.</td>
</tr>
<tr>
<td>Physical Class Setup</td>
<td>Utterances and phrases that refer to the physical set-up of the classroom or class size.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Utterances that are uncertain or where no comment is made</td>
</tr>
</tbody>
</table>
Chapter 4

Results

Quantitative Results

Screening the data. Before analyzing the data, entries were double checked for errors and outliers. As for categorical and continuous variables, frequencies and descriptive statistics were inspected to examine the minimum and maximum scores and mean scores to check for accuracy and outliers. For the purpose of reporting demographic variables there were no missing data and all of the 196 participants in this study responded to all 8 items in the demographic survey.

Demographics. The sample for this study consisted of undergraduate students enrolled in educational psychology classes at a large university in the southwest, United States. The two targeted educational psychology courses are required courses for the teacher education program, but also required for some students who are not majoring in teacher education.

One hundred and ninety six participants, 155 female, and 41 males from various educational programs completed the demographics form (see Table 4.1).

Table 4.1: Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>41</td>
<td>20.9</td>
</tr>
<tr>
<td>Female</td>
<td>155</td>
<td>79.1</td>
</tr>
<tr>
<td>Total</td>
<td>196</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Participant ages ranged from 18 to 26 years and above. One hundred thirty nine were traditional students who were between 18 and 25 years of age and 57 were non-traditional
students who were ages 26 and above (see Table 4.2). The reason for using non-traditional and traditional as a proxy for age was because of the difference in life styles that exist between learners between the age of 18 to 26, and those who are 26 and older. Although some younger students may fit the category of non-traditional student, Hoyt, Howell, Touchet, Young & Wygant (2010) submit that non-traditional status includes life commitments, such as including raising children and full-time work place constraints on having the time and opportunity to pursue a degree and engage in campus activities. The degree to which a student is considered non-traditional may be determined by characteristics such as attending college part-time, being financially independent, being a single parent, having dependents, working at least 35 hours a week, delaying college enrollment, and failure to receive a high school diploma. Because of the major impact these life circumstances have on availability to attend college, and because most college students take on these responsibilities later in life, this researcher chose traditional and non-traditional as a proxy because of the interesting differences that exist between these groups, based on life constraints and opportunities.

Table 4.2: Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 25 (Traditional UG)</td>
<td>139</td>
<td>70.9</td>
</tr>
<tr>
<td>26 and above (Non-traditional UG)</td>
<td>57</td>
<td>29.1</td>
</tr>
<tr>
<td>Total</td>
<td>196</td>
<td>100.0</td>
</tr>
</tbody>
</table>

For ethnic composition, 82 students reported being White (n = 82), 85 reported being Hispanic (n = 85), and 29 reported being other (n = 29) (see Table 4.3).
The variable of family income ranged from 0 dollars (no income) to $60,001 and above. Of 196 participants, 51 reported an annual family income of between 0 and $20,000, 78 between $20,001 and $60,000, and 14 reported incomes of $60,001 and above (see Table 4.4).

Participants were asked to identify the number of college credits they earned. The sample included 31 participants who identified themselves as freshman and sophomores. 78 were identified as juniors, 72 were identified as seniors, and 15 identified themselves as graduate students (see Table 4.5).
Participants were asked to indicate their current cumulative grade point average (GPA). Grade point averages ranged from 2.0 to 3.6 and above. 49 participants reported GPAs between 2.0 to 2.9, 85 reported GPAs between 3.0 and 3.5, and 62 reported averages of between 3.6 and above (See Table 4.6).

**Table 4.6: GPA**

<table>
<thead>
<tr>
<th>GPA Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 - 2.9</td>
<td>49</td>
<td>25.0</td>
</tr>
<tr>
<td>3.0 - 3.5</td>
<td>85</td>
<td>43.4</td>
</tr>
<tr>
<td>3.6 and above</td>
<td>62</td>
<td>31.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>196</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

For the variable of college major, participants were asked to indicate their choice of college major. 91 reported that they were in Elementary Education, 46 were in Secondary Education, and 59 were classified as other (see Table 4.7).

**Table 4.7: College Major**

<table>
<thead>
<tr>
<th>Major</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary ed.</td>
<td>91</td>
<td>46.4</td>
</tr>
<tr>
<td>Secondary ed.</td>
<td>46</td>
<td>23.5</td>
</tr>
<tr>
<td>Other</td>
<td>59</td>
<td>30.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>196</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

For the variable of whether or not a student has been admitted to a teacher education program 51 participants reported that they had been admitted into a teacher training program, while 144 reported that they had not been admitted into a teacher training program. One participant was reported as missing (see Table 4.8).
Table 4.8: *Admitted to Teacher Ed. Program*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>51</td>
<td>26.0</td>
</tr>
<tr>
<td>No</td>
<td>144</td>
<td>73.5</td>
</tr>
<tr>
<td>Total</td>
<td>195</td>
<td>99.5</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td>196</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Descriptive statistics for total score.** A total of 196 participants, 139 traditional and 57 non-traditional students participated in administration of the Learner-centered Battery Student Survey (LCBSS). Table 4.9 presents descriptive statistics of total scores for the LCBSS are summarized below. Table 4.10 summarizes the means and standard deviations for total score attained by participants on the LCBSS.

Table 4.9: *Descriptive Statistics*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TotalScore</td>
<td>196</td>
<td>144.00</td>
<td>248.00</td>
<td>196.5561</td>
<td>22.76371</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>196</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Possible Range 25-100

**Descriptive statistics for perceptions total score.** Descriptive Statistics of total scores of the perceptions scale for the LCBSS are summarized below. Table 4.10 summarizes the means and standard deviations for perceptions total score attained by participants on the LCBSS.

Table 4.10: *Descriptive Statistics for Perceptions Total Score*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptions Total Score</td>
<td>196</td>
<td>29.00</td>
<td>100.00</td>
<td>71.9388</td>
<td>15.33878</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>196</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Possible Range 46-184
Descriptive statistics for motivation total score. Descriptive Statistics of total scores of the motivation scale for the LCBSS are summarized below. Table 4.11 summarizes the means and standard deviations for total score attained by participants on the LCBSS.

Table 4.11: Descriptive Statistics for Motivation Total Score

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation Total</td>
<td>196</td>
<td>96.00</td>
<td>161.00</td>
<td>124.6173</td>
<td>12.39113</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>196</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results for Research Question 1: Perception Motivation Scale Scores

A repeated measures analysis of variance was conducted to determine if the perception and motivation scale scores were statistically different from one another. Those means are displayed in Figure 4.1. There was a statistically significant omnibus effect $F (1, 195,) = 4856.826, p < .01, \omega^2 = .961$.

Figure 4.1: Perception versus Motivation Mean Scores
Non-Significant Results for Research Question 1: 11 Subscales

A repeated measures analysis of variance was conducted to determine if any of the 11 subscales were statistically different from one another. Those means are displayed in Figure 4.2. There was a statistically significant omnibus effect $F(4.373, 852.716) = 257.561$. $P < .01$, partial $n^2 = .569$. All the pairwise comparisons were statistically significant at $p < .01$ except for the following variables: creates positive personal interpersonal relationships was not different than encourages higher-order thinking and self-regulation $p = .290$; creates positive personal interpersonal relationships was not different than active learning strategies $p = .734$; honors student voice, provides challenge, and encourages perspective taking was not different than self-efficacy ratings $p = .142$; honors student voice, provides challenge, and encourages perspective taking was not different than task mastery goals $p = .261$; Encourages higher order thinking and self-regulation was not different than creates positive interpersonal relationships $p = .290$; Encourages higher order thinking and self-regulation was not different than active learning strategies $p = .289$; Adapts to individual developmental differences was not different than performance oriented goals $p = .219$; Self-efficacy ratings was not different than honors student voice, provides challenge, and encourages perspective taking $p = .142$; self-efficacy ratings was not different than task mastery goals $p = .718$; performance oriented goals was not different than adapts to individual developmental differences $p = .219$; active learning strategies was not different than creates positive interpersonal relationships $p = .734$; active learning strategies was not different than encourages higher-order thinking and self-regulation $p = .289$; task mastery goals was not different than honors student voice, provides challenge, and encourages perspective taking $p = .261$; and task mastery goals was not different than self-efficacy ratings $p = .718$. 

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Significant Results for Research Question 1: 11 Subscales

The following are all the pairwise comparisons that were statistically significant at p. < .01.

Results for Subscale 1: Creates interpersonal relationships. Mean scores for participants’ perceptions of their instructors’ practice of creating interpersonal relationships were higher than mean scores for adapts to individual developmental differences, effort avoidance strategies, and higher compared to performance oriented goals.

Mean scores for participants’ perception of instructors practice of creating interpersonal relationships were lower than their perception than honors student voice, self-efficacy ratings, state epistemic curiosity, and task-mastery goals.

Results for Subscale 2: Honors student voice, provides challenge, and encourages perspective taking. Mean scores for participants perceptions of their instructors’ practice of honoring student voice were higher than encourages higher order thinking and self-regulation, adapts to individual developmental differences, effort avoidance strategies, performance oriented goals, active learning strategies, and work-avoidant goals.

Mean scores for participants’ perceptions of their instructors’ practice of honoring student voice were lower than state epistemic curiosity and active learning strategies.

Results for Subscale 3: Encourages higher-order thinking and self-regulation. Mean scores for participants perceptions of their instructors’ practice of encouraging higher order thinking and self-regulation were higher than adapts to individual differences, effort avoidance strategies, performance oriented goals, state epistemic curiosity, and higher than work avoidant goals.
Mean scores for participants’ perceptions of their instructors’ practice of encouraging higher order thinking and self-regulation were lower than self-efficacy ratings, lower than state epistemic curiosity, and task-mastery goals.

**Results for Subscale 4: Adapts to individual developmental differences.** Mean scores for participants’ perceptions of whether the instructor adapts to individual differences was higher than effort avoidance strategies. They were also higher than work avoidant goals.

Mean scores for participants perceptions of whether the instructor adapts to individual differences was lower than self-efficacy ratings, lower than state epistemic curiosity, lower than active learning strategies, and lower than task-mastery goals.

**Results for Subscale 5: Self-efficacy ratings – beliefs in competency to learn and achieve.** Mean scores for participants’ perceptions of self-efficacy ratings was higher than effort avoidance strategies, performance oriented goals, state epistemic curiosity, active learning strategies, and higher than work-avoidant goals.

Mean scores for participants’ perceptions of self-efficacy ratings were lower than state epistemic curiosity.

**Results for Subscale 6: Effort avoidance strategies – strategies directed at avoiding effort while learning.** Mean scores for participants’ perceptions of effort avoidant strategies were lower than performance oriented goals. They were also lower than state epistemic curiosity, active learning strategies, task mastery goals, and work avoidant goals.

**Results for Subscale 7: Performance oriented goals – extrinsic motivational orientation directed to achieving high grades or scores rather than to learning.** Mean scores for participants’ perceptions of performance oriented goals were higher than work avoidant goals.
Mean scores for participants’ perceptions of performance oriented goals were lower than epistemic curiosity, active learning strategies, and task mastery goals.

Results for Subscale 8: State epistemic curiosity – knowledge seeking curiosity in learning situations. Mean scores for participants’ perceptions of state epistemic curiosity were higher than active learning strategies, task mastery goals, and work avoidant goals.

Results for Subscale 9: Active learning strategies – strategies directed at being actively engaged while learning. Mean scores for participants’ perceptions of active learning strategies were higher than work avoidant goals.

Mean scores for participants’ perceptions of active learning strategies were lower than task-mastery goals.

Results for Subscale 10: Task mastery goals – intrinsic motivational orientation directed to learning and mastering task goals. Mean scores for participants’ perception of task mastery goals was higher than their perception of work avoidant goals.

Results for Subscale 11: Work avoidant goals – motivational orientation directed to avoiding assignments and other work involved in learning. Results for subscale 11 are already included in results for the other 10 subscales so are not reported for this subscale.
Figure 4.2: Mean Scores for the 11 Subscales
Results for Research Question 2: Demographics and 11 Subscales

Table 4.12 reports the t-test for the 11 subscales and the relationship to age. None of the t-tests were significant except for mastery oriented goals. The t-test revealed that traditional students were more mastery goal oriented than non-traditional students.

Table 4.12: Age

<table>
<thead>
<tr>
<th>Subscales</th>
<th>18-25</th>
<th>26+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>139</td>
<td>57</td>
</tr>
<tr>
<td>Percent</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>3.00</td>
<td>2.90</td>
</tr>
<tr>
<td>SD</td>
<td>0.77</td>
<td>0.81</td>
</tr>
<tr>
<td>t</td>
<td>.806</td>
<td>.158</td>
</tr>
<tr>
<td>p</td>
<td>.421</td>
<td>.600</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.13</td>
<td>.30</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.23</td>
<td>3.11</td>
</tr>
<tr>
<td>SD</td>
<td>0.55</td>
<td>0.60</td>
</tr>
<tr>
<td>t</td>
<td>1.419</td>
<td>.525</td>
</tr>
<tr>
<td>p</td>
<td>.158</td>
<td>.600</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.21</td>
<td>.30</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>3.39</td>
<td>3.23</td>
</tr>
<tr>
<td>SD</td>
<td>0.52</td>
<td>0.55</td>
</tr>
<tr>
<td>t</td>
<td>.525</td>
<td>.921</td>
</tr>
<tr>
<td>p</td>
<td>.600</td>
<td>.01</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.30</td>
<td>.01</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.25</td>
<td>2.24</td>
</tr>
<tr>
<td>SD</td>
<td>0.67</td>
<td>0.77</td>
</tr>
<tr>
<td>t</td>
<td>.099</td>
<td>.626</td>
</tr>
<tr>
<td>p</td>
<td>.921</td>
<td>.532</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.14</td>
<td>3.10</td>
</tr>
<tr>
<td>SD</td>
<td>0.44</td>
<td>0.44</td>
</tr>
<tr>
<td>t</td>
<td>.626</td>
<td>.815</td>
</tr>
<tr>
<td>p</td>
<td>.532</td>
<td>.815</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.09</td>
<td>.02</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.61</td>
<td>1.67</td>
</tr>
<tr>
<td>SD</td>
<td>0.39</td>
<td>0.40</td>
</tr>
<tr>
<td>t</td>
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<td>.234</td>
</tr>
<tr>
<td>p</td>
<td>.327</td>
<td>.815</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.18</td>
<td>2.14</td>
</tr>
<tr>
<td>SD</td>
<td>0.58</td>
<td>0.61</td>
</tr>
<tr>
<td>t</td>
<td>.442</td>
<td>.707</td>
</tr>
<tr>
<td>p</td>
<td>.659</td>
<td>.007</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.07</td>
<td>.41</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>2.99</td>
<td>2.98</td>
</tr>
<tr>
<td>SD</td>
<td>0.57</td>
<td>0.58</td>
</tr>
<tr>
<td>t</td>
<td>.234</td>
<td>.003</td>
</tr>
<tr>
<td>p</td>
<td>.815</td>
<td>.317</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.22</td>
<td>2.96</td>
</tr>
<tr>
<td>SD</td>
<td>0.63</td>
<td>0.63</td>
</tr>
<tr>
<td>t</td>
<td>2.707</td>
<td>.007</td>
</tr>
<tr>
<td>p</td>
<td>.007</td>
<td>.317</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.41</td>
<td>.01</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.79</td>
<td>1.87</td>
</tr>
<tr>
<td>SD</td>
<td>0.55</td>
<td>0.58</td>
</tr>
<tr>
<td>t</td>
<td>1.003</td>
<td>.961</td>
</tr>
<tr>
<td>p</td>
<td>.317</td>
<td>.051</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>.01</td>
<td>.30</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 194
Table 4.13 reports the analyses of variance for the 11 subscales and the relationship to ethnicity. None of the analyses of variance were significant except for epistemic curiosity, where Tukey’s HSD (p < .011) revealed that whites are more epistemically curious than either Hispanics or others.

**Table 4.13: Ethnicity**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>White M</th>
<th>Hispanic M</th>
<th>Other M</th>
<th>White SD</th>
<th>Hispanic SD</th>
<th>Other SD</th>
<th>MSE</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>3.11</td>
<td>2.85</td>
<td>2.91</td>
<td>0.81</td>
<td>0.71</td>
<td>0.84</td>
<td>2.48</td>
<td>.09</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.29</td>
<td>3.08</td>
<td>3.27</td>
<td>0.52</td>
<td>0.58</td>
<td>0.61</td>
<td>.31</td>
<td>3.07</td>
<td>.05</td>
<td>.02</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>3.06</td>
<td>2.82</td>
<td>2.88</td>
<td>0.65</td>
<td>0.67</td>
<td>0.81</td>
<td>.47</td>
<td>2.68</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.36</td>
<td>2.12</td>
<td>2.28</td>
<td>0.73</td>
<td>0.70</td>
<td>0.60</td>
<td>.49</td>
<td>2.59</td>
<td>.08</td>
<td>.02</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.24</td>
<td>3.06</td>
<td>3.03</td>
<td>0.42</td>
<td>0.44</td>
<td>0.46</td>
<td>.19</td>
<td>4.26</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.60</td>
<td>1.64</td>
<td>1.68</td>
<td>0.38</td>
<td>0.39</td>
<td>0.42</td>
<td>.15</td>
<td>4.96</td>
<td>.61</td>
<td>.01</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.15</td>
<td>2.12</td>
<td>2.36</td>
<td>0.52</td>
<td>0.59</td>
<td>0.67</td>
<td>.34</td>
<td>1.83</td>
<td>.16</td>
<td>.01</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>3.08</td>
<td>2.91</td>
<td>2.97</td>
<td>0.60</td>
<td>0.55</td>
<td>0.50</td>
<td>.66</td>
<td>2.08</td>
<td>.13</td>
<td>.01</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.27</td>
<td>3.07</td>
<td>2.99</td>
<td>0.63</td>
<td>0.61</td>
<td>0.70</td>
<td>.40</td>
<td>3.03</td>
<td>.05</td>
<td>.02</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.80</td>
<td>1.83</td>
<td>1.79</td>
<td>0.55</td>
<td>0.61</td>
<td>0.49</td>
<td>.32</td>
<td>.095</td>
<td>.90</td>
<td>.01</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.49</td>
<td>3.25</td>
<td>3.22</td>
<td>0.50</td>
<td>0.53</td>
<td>0.59</td>
<td>.27</td>
<td>5.25</td>
<td>.01</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 2, 193
Table 4.14 reports the t-test for the 11 subscales and the relationship to gender. The t-test was not significant for gender.

**Table 4.14: Gender**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Male</th>
<th>Female</th>
<th>$M$</th>
<th>$SD$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$t$</th>
<th>$p$</th>
<th>Cohen’s $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>2.98</td>
<td>3.01</td>
<td>0.77</td>
<td>0.54</td>
<td>2.98</td>
<td>0.78</td>
<td>.08</td>
<td>.938</td>
<td>.01</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.16</td>
<td>3.08</td>
<td>0.61</td>
<td>0.63</td>
<td>3.21</td>
<td>0.55</td>
<td>.51</td>
<td>.611</td>
<td>.09</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.95</td>
<td>3.01</td>
<td>0.71</td>
<td>0.54</td>
<td>2.92</td>
<td>0.69</td>
<td>.18</td>
<td>.854</td>
<td>.04</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.23</td>
<td>2.15</td>
<td>0.75</td>
<td>0.54</td>
<td>2.25</td>
<td>0.69</td>
<td>.14</td>
<td>.890</td>
<td>.03</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.19</td>
<td>3.08</td>
<td>0.43</td>
<td>0.63</td>
<td>3.11</td>
<td>0.44</td>
<td>1.00</td>
<td>.319</td>
<td>.18</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.70</td>
<td>1.86</td>
<td>0.41</td>
<td>0.56</td>
<td>1.61</td>
<td>0.38</td>
<td>1.97</td>
<td>.233</td>
<td>.23</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.15</td>
<td>2.01</td>
<td>0.53</td>
<td>0.46</td>
<td>2.17</td>
<td>0.60</td>
<td>.23</td>
<td>.817</td>
<td>.04</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>3.01</td>
<td>3.08</td>
<td>0.54</td>
<td>0.58</td>
<td>2.98</td>
<td>0.58</td>
<td>.27</td>
<td>.840</td>
<td>.05</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.08</td>
<td>1.86</td>
<td>0.63</td>
<td>0.56</td>
<td>3.16</td>
<td>0.64</td>
<td>.72</td>
<td>.470</td>
<td>.12</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.86</td>
<td>3.07</td>
<td>0.56</td>
<td>0.54</td>
<td>1.80</td>
<td>0.57</td>
<td>.59</td>
<td>.554</td>
<td>.11</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.32</td>
<td></td>
<td>0.52</td>
<td>0.54</td>
<td>3.35</td>
<td>0.54</td>
<td>.26</td>
<td>.788</td>
<td>.06</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 194*
Table 4.15 reports the t-test for the 11 subscales and the relationship to whether the participant was admitted into a teacher training program. The t-test was not significant for being admitted into a teacher training program.

**Table 4.15: Admitted to Teacher Ed. Program**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Yes</th>
<th>No</th>
<th>t</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>2.97 0.78</td>
<td>2.97 0.78</td>
<td>.046</td>
<td>.963</td>
<td>.00</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.16 0.60</td>
<td>3.21 0.56</td>
<td>.508</td>
<td>.612</td>
<td>.09</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.91 0.72</td>
<td>2.94 0.68</td>
<td>.260</td>
<td>.796</td>
<td>.04</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.26 0.75</td>
<td>2.24 0.69</td>
<td>.150</td>
<td>.881</td>
<td>.03</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.14 0.41</td>
<td>3.13 0.45</td>
<td>.136</td>
<td>.892</td>
<td>.02</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.58 0.37</td>
<td>1.65 0.39</td>
<td>.108</td>
<td>.281</td>
<td>.02</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.25 0.58</td>
<td>2.15 0.59</td>
<td>1.021</td>
<td>.309</td>
<td>.17</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>3.00 0.49</td>
<td>2.98 0.60</td>
<td>.169</td>
<td>.866</td>
<td>.04</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.20 0.62</td>
<td>3.13 0.65</td>
<td>.683</td>
<td>.496</td>
<td>.11</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.84 0.62</td>
<td>1.81 0.54</td>
<td>.373</td>
<td>.710</td>
<td>.05</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.40 0.56</td>
<td>3.33 0.53</td>
<td>.785</td>
<td>.433</td>
<td>.13</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 193
Table 4.16 reports the analyses of variance for the 11 subscales and the relationship to grade point average. None of the analyses of variance were significant for grade point average.

**Table 4.16: GPA**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>2.0 - 2.9</th>
<th>3.0 - 3.5</th>
<th>3.6+</th>
<th>(M)</th>
<th>(SD)</th>
<th>(M)</th>
<th>(SD)</th>
<th>(MSE)</th>
<th>(F)</th>
<th>(p)</th>
<th>(\omega^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>2.94</td>
<td>0.77</td>
<td>2.91</td>
<td>0.77</td>
<td>3.06</td>
<td>0.80</td>
<td>.61</td>
<td>.668</td>
<td>.51</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.14</td>
<td>0.60</td>
<td>3.22</td>
<td>0.53</td>
<td>3.22</td>
<td>0.59</td>
<td>.32</td>
<td>.365</td>
<td>.70</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.79</td>
<td>0.72</td>
<td>2.94</td>
<td>0.66</td>
<td>3.03</td>
<td>0.70</td>
<td>.47</td>
<td>1.767</td>
<td>.17</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.16</td>
<td>0.71</td>
<td>2.24</td>
<td>0.65</td>
<td>2.31</td>
<td>0.77</td>
<td>.49</td>
<td>.690</td>
<td>.50</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.20</td>
<td>0.43</td>
<td>3.09</td>
<td>0.44</td>
<td>3.13</td>
<td>0.44</td>
<td>.19</td>
<td>.924</td>
<td>.40</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.67</td>
<td>0.36</td>
<td>1.64</td>
<td>0.42</td>
<td>1.59</td>
<td>0.36</td>
<td>.15</td>
<td>.616</td>
<td>.54</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.18</td>
<td>0.61</td>
<td>2.20</td>
<td>0.59</td>
<td>2.11</td>
<td>0.55</td>
<td>.34</td>
<td>.444</td>
<td>.64</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>2.89</td>
<td>0.53</td>
<td>2.98</td>
<td>0.62</td>
<td>3.07</td>
<td>0.52</td>
<td>.32</td>
<td>1.400</td>
<td>.25</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.12</td>
<td>0.65</td>
<td>3.16</td>
<td>0.64</td>
<td>3.15</td>
<td>0.64</td>
<td>.41</td>
<td>.050</td>
<td>.95</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.79</td>
<td>0.55</td>
<td>1.82</td>
<td>0.54</td>
<td>1.82</td>
<td>0.62</td>
<td>.32</td>
<td>.050</td>
<td>.95</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.30</td>
<td>0.48</td>
<td>3.33</td>
<td>0.56</td>
<td>3.39</td>
<td>0.54</td>
<td>.29</td>
<td>.364</td>
<td>.70</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 2, 193*
Table 4.17 reports the analyses of variance for the 11 subscales and the relationship to income. None of the analyses of variance were significant for income.

Table 4.17: Income

<table>
<thead>
<tr>
<th>Subscales</th>
<th>0-20,000</th>
<th>20,000-60,000</th>
<th>60,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>51</td>
<td>78</td>
<td>67</td>
</tr>
<tr>
<td>Percent</td>
<td>26.0</td>
<td>39.8</td>
<td>34.2</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>2.97</td>
<td>0.86</td>
<td>3.01</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.24</td>
<td>0.59</td>
<td>3.21</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.99</td>
<td>0.74</td>
<td>2.92</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.40</td>
<td>0.78</td>
<td>2.25</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.15</td>
<td>0.42</td>
<td>3.11</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.69</td>
<td>0.41</td>
<td>1.60</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.19</td>
<td>0.63</td>
<td>2.23</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>2.96</td>
<td>0.53</td>
<td>3.07</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.13</td>
<td>0.66</td>
<td>3.22</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.91</td>
<td>0.61</td>
<td>1.73</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.29</td>
<td>0.53</td>
<td>3.40</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 2, 193
Table 4.18 reports the analyses of variance for the 11 subscales and the relationship to grade college status. None of the analyses of variance were significant for college status.

Table 4.18: College Status

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Freshman-Sophomore</th>
<th>Junior</th>
<th>Senior</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>31</td>
<td>78</td>
<td>72</td>
<td>15</td>
</tr>
<tr>
<td>Percent</td>
<td>15.8</td>
<td>39.8</td>
<td>36.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>2.98 0.84</td>
<td>3.02 0.76</td>
<td>2.84 0.80</td>
<td>3.29 0.68 .60</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.28 0.60</td>
<td>3.20 0.60</td>
<td>3.13 0.54</td>
<td>3.35 0.54 .32</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.97 0.75</td>
<td>2.94 0.68</td>
<td>2.83 0.70</td>
<td>3.24 0.50 .47</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.25 0.69</td>
<td>2.24 0.68</td>
<td>2.18 0.72</td>
<td>2.57 0.74 .49</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.23 0.46</td>
<td>3.16 0.42</td>
<td>3.07 0.45</td>
<td>3.07 0.40 .19</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.64 0.42</td>
<td>1.67 0.38</td>
<td>1.59 0.38</td>
<td>1.60 0.39 .15</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.09 0.57</td>
<td>2.19 0.62</td>
<td>2.20 0.54</td>
<td>2.10 0.63 .35</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>3.13 0.66</td>
<td>2.91 0.58</td>
<td>2.97 0.51</td>
<td>3.15 0.49 .31</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.43 0.61</td>
<td>3.13 0.61</td>
<td>3.03 0.67</td>
<td>3.20 0.56 .39</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.69 0.48</td>
<td>1.90 0.63</td>
<td>1.78 0.52</td>
<td>1.78 0.52 .32</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.49 0.50</td>
<td>3.35 0.54</td>
<td>3.26 0.54</td>
<td>3.41 0.55 .28</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 3, 192
Table 4.19 reports the analyses of variance for the 11 subscales and the relationship to college major. None of the analyses of variance were significant.

Table 4.19: College Major

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Elementary Education</th>
<th>Secondary Education</th>
<th>Other</th>
<th>MSE</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>91</td>
<td>46</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>46.4</td>
<td>23.5</td>
<td>30.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Interpersonal Relationships</td>
<td>3.01 0.74</td>
<td>2.97 0.81</td>
<td>2.90 0.82</td>
<td>.61</td>
<td>.384</td>
<td>.68</td>
<td>0.01</td>
</tr>
<tr>
<td>Honors Student Voice</td>
<td>3.22 0.53</td>
<td>3.25 0.54</td>
<td>3.11 0.63</td>
<td>.32</td>
<td>.967</td>
<td>.38</td>
<td>0.00</td>
</tr>
<tr>
<td>Encourage Higher Order Thinking</td>
<td>2.96 0.65</td>
<td>2.97 0.71</td>
<td>2.86 0.75</td>
<td>.48</td>
<td>.478</td>
<td>.62</td>
<td>0.01</td>
</tr>
<tr>
<td>Adapts to Individual Differences</td>
<td>2.27 0.65</td>
<td>2.27 0.80</td>
<td>2.18 0.71</td>
<td>.50</td>
<td>.341</td>
<td>.71</td>
<td>0.01</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>3.19 0.39</td>
<td>3.15 0.38</td>
<td>3.03 0.53</td>
<td>.19</td>
<td>2.422</td>
<td>.09</td>
<td>0.01</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>1.59 0.39</td>
<td>1.63 0.36</td>
<td>1.69 0.41</td>
<td>.15</td>
<td>1.103</td>
<td>.33</td>
<td>0.03</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>2.13 0.56</td>
<td>2.18 0.65</td>
<td>2.22 0.57</td>
<td>.34</td>
<td>.372</td>
<td>.69</td>
<td>0.01</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>2.94 0.57</td>
<td>3.10 0.56</td>
<td>2.98 0.57</td>
<td>.32</td>
<td>1.244</td>
<td>.29</td>
<td>0.00</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>3.21 0.60</td>
<td>3.18 0.64</td>
<td>3.02 0.68</td>
<td>.40</td>
<td>1.604</td>
<td>.20</td>
<td>0.01</td>
</tr>
<tr>
<td>Work Avoidant Goals</td>
<td>1.76 0.56</td>
<td>1.83 0.59</td>
<td>1.88 0.56</td>
<td>.32</td>
<td>.810</td>
<td>.45</td>
<td>0.00</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>3.39 0.52</td>
<td>3.29 0.52</td>
<td>3.31 0.56</td>
<td>.29</td>
<td>.632</td>
<td>.54</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Note: Degrees of freedom = 2, 193
Summary

The goal of the quantitative part of the study was to gain a better understanding of college students’ perceptions of learner-centeredness to assist in informing future research that measure learner-centered needs. The Learner-centered Battery Student Survey was used to examine students' perceptions of their instructors' learner-centered practices, based on Total Score, the 2 scale cores of perception and motivation, and 11 subscales: Positive interpersonal relationships, honors student voice, encourage higher order thinking, adapts to individual differences, self-efficacy, effort avoidance strategies, performance oriented goals, active learning strategies, task mastery goals, work avoidant goals, and epistemic curiosity. Descriptive statistics and demographics (age, ethnicity, gender, whether or not the participant was admitted into a teacher education program, GPA, Income, college status, and college major) were also examined.

Repeated measures ANOVAs revealed significant differences on the perception and motivational scale scores, and many significant differences in the 11 subscales. One way ANOVAs revealed that there were significant differences in means on two demographic variables: ethnicity as it relates to epistemic curiosity and age as it relates to mastery oriented goals. There were no other significant findings.

The results provided a descriptive picture of the participants as well as statistical significances that have the potential to assist in the better understanding students’ perceptions of learner-centered instructional practice in a college setting. In Chapter V, the findings of this study, along with implications of these findings, limitations of the study, and suggestions for further research are discussed.
Qualitative Results

Utterances and phrases related to the seven prominent themes. Utterances and phrases were made regarding students’ perceptions of learner-centeredness, based on the three qualitative questions asked.

1. Describe classroom practices that you believe reflect learner-centered instruction.
2. Do you consider your classes to be learner-centered? Why, or why not?
3. How could your classes be made more learner-centered?

With these questions in mind, the researcher selected the utterances and phrases made by participants of this study that expressed participants’ perceptions about learner-centeredness in their College of Education courses, based on prominent themes that emerged. Of the ten themes that arose in this study (see table 3.6 thru 3.9), the researcher selected seven themes (group work, discussion, curriculum, psychological safety, student voice, student-centered learning, and online instruction) to discuss perceptions of learner-centered instructional practice, based on the frequency of utterances and phrases made in relation to a particular theme. For example, the most prominent theme that emerged was curriculum, which was referred to more times than any of the other themes. Those themes and participant utterances and phrases are discussed in the following section.

Participants responded to the qualitative questions in three steps. First, utterances and phrases are presented where participants commented about their perceptions of learner-centered instructional practice with regard to the seven prominent themes, they then commented on their perceptions of instruction they felt were not learner-centered, and they concluded with suggestions for how to develop more learner-centered instruction.
Curriculum. In his study of 127 instructors on the ethics of curriculum using learner-centered pedagogy, Fomari (2006) found that learner-centered instructional practice can assist in the development of curricula that actively engages and challenges learners in appropriate ways. It is important to focus on the learner in the creation of curricula that empowers both the learner, and the instructor as to share in the learning process. Curriculum developed through this interactional process helps curriculum grow. Barraket (2005) concludes that re-orientation of the curriculum toward a more learner centered approach has a positive effect on performance, learning and subject evaluation.

Some participants described what they perceived reflected a learner-centered curriculum:

- “Curriculum that is comprehensible and achievable by all students.”
- “Uses multiple means of delivering material.”
- “Making sure that information presented is relevant.”
- “Will mold the given curriculum around the students in the class.”

However, other participants considered curriculum to be non-learner-centered in the following ways:

- “they only hand out assignments and put grades in grade books.”
- “Professor will not change their teaching methods no matter the failure rate.”
- “Material we are learning is made to benefit logistical practices of being a teacher.“
- “If we center our classes around curriculum instead of the students then we are setting the students up to fail.”

Finally, some participants made the following suggestions for designing curriculum that is learner-centered:

- “Most lectures could include activities that help the students better understand the material.”
- “Important to keep course material relevant.”
- “Include different modes of learning (visual, audio, kinesthetic, etc.) not just lecture.”
- “A course is not above shoving facts down someone’s throat, but rather making sure the learner is getting the most out of class.”
**Student-centered learning.** Fahraeus (2013) points out that one of the key issues that must change that supports a more learner-centered style of instruction, is that instruction is often focused on what the teacher knows, rather than the facilitation of learning for its own sake. In her opinion, five key factors need to change in order to facilitate a more learner-centered environment: it promotes engagement of students in the learning process rather than subjecting them to being passive receptors of knowledge, it empowers and motivates them through shared control of instruction, it gives them choice over curriculum decisions, encourages collaboration between peers and the instructor, and includes instruction that promotes learning skills and student reflection on how, why, and what is learned.

Participants described what they perceived reflected learner-centered instruction:

- “Giving students the option of working at their own pace.”
- “The teacher modifying lessons to include the interest of the students.”
- “The learner is at the core of the instruction.”
- “When students are learning participants that interest them they will be more willing to listen and participate.”

However, participants considered instruction to be non-learner-centered in the following ways:

- “The student has no control in the direction of the class.”
- “and do not look intensely or more in depth with student needs.”
- “Not based on the learners needs and all. Based on the teacher’s needs.”

Participants made the following suggestions on how to create a more learner-centered environment:

- “Allow students to pick what was taught.”
- “Letting them work at their own pace.”
- “Teacher can allow each student to bring in some of their own personality, interests into the classroom.”
Discussion. Davis (1993) points out the importance of communication through discussion in his assertion that according to most experts, learning is maximized when learners take an active role in their education by discussing what they learn, and applying through practice, the concepts and ideas they have learned through discussion.

Participants described that they believed reflected learner-centered discussion:
- “Encourage discussion with students in order to turn the floor over to the students.”
- “Classroom discussions focus is on student input and construction of knowledge.”
- “Group discussions help students talk about the topic rather than listen to the lecture.”
- “Difficult to concentrate when you have a teacher talking at you as opposed to with you.

However, participants considered discussion to be non-learner-centered in the following ways:
- “We do little things in class to communicate our thoughts.”
- “Opportunities are missed Open-ended discussion and outlooks to be shared.”

Participants made the following suggestions on how to facilitate discussion that is more learner-centered:
- “Keeping the student discussions alive in class is great for the atmosphere of education classes.”
- “Discussions allow students to share their experiences.”
- “Conferences and multiple discussions would help.”

Group work. Barraket (2005) espoused the benefits of group work in the process of facilitating a more learner-centered environment. In his opinion, group work helps students understand others perspectives, increase their reflective capacities, and think critically about their assumptions. In addition, they enjoyed getting to know each other, felt more confident and more comfortable in the learning environment, and they also appeared to value the higher level of social interaction that comes for working in groups. In addition, the shift to learner-centeredness through small group activities significantly enhances learning, characterized by high levels of dialogue, group interaction, and active engagement.
Participants described what they perceived reflected a learner-centered group work:

- “Small groups give students opportunity to talk about their own perspectives.”
- “Involves students and learners working directly with other students.”
- “We learn to work together and interest is greater than when working alone.”

However, participants considered group work to be non-learner-centered in the following ways:

- “Does not provide any in class opportunities to work together in groups.”
- “There is little interaction and little opportunity to be learner centered.”

Participants’ suggestions for how to promote learner-centered group work included:

- “Students could be given time when they are required to return to school and work in groups.”
- “Group projects would allow more thinking with classmates and problem solving.”

**Psychological safety.** Mitchel, Forsyth & Robinson (2008) point out that when learners feel safe and supported, they are more likely to engage in learning. Van Maele & Van Houtte (2011) go on to explain that these positive and trusting relationships make learners feel comfortable at school, and motivates them to be more engaged in learning.

Participants described what they perceived reflected a learner-centered environment that promotes psychologically safety:

- “A universal learning environment that feels safe, inviting and encouraging to attend.”
- “When teachers demonstrate more caring about every student by proving support and understanding.”
- “Teachers that reinforce respect for individual students will foster a healthy environment.”

However, some participants also felt that psychological safety was not promoted in that:

- “Instructors do not care if you fail or not.”
- “fails to provide motivation and support.”
- “The professor is also rather unapproachable.”
Participants’ suggestions for how to promote a more psychologically safe learner-centered environment included:

- “Creating a safe place where students understand that instructor is there for them to provide them with support if they need help.”
- “Instructors should make themselves more available to students.”
- “By the teacher taking the time to take care how I am doing in the class.”

**Student voice.** Student voice is an important element in learner-centered pedagogy. Research in this area points out that when students are given the chance to have input, based on their individual learning experiences, they were motivated, increased engagement, and showed improved academic performance, especially in the case of marginalized learners (Babcock, 2011).

Participants described what they perceived reflected a learner-centered environment that promotes student voice:

- “Encourage students to evaluate others' perspectives.”
- “Allow students to draw their own conclusions and opinions.”
- “where diversity of thoughts and opinions can be expressed.”

However, some participants also felt that student voice was not promoted in that:

- “With the exception of one, opinions of students don’t seem to matter.”

Participants’ suggestions for how to promote student voice included:

- “Students voices should be driving factor.”
- “By including students and valuing their opinion.”
- “and allow more opinions to be expressed.”

**Online instruction.** Online learning has excellent potential as an effective avenue for instructors to accomplish academic and external motivational goals at both the individual and group levels. It has the potential to facilitate collaboration at the group level, while making each individual class experience more meaningful (An, Kim, & Kim, 2008).
Participants described what they perceived about online learning that reflects learner-centered practice:

- “Having to respond to our peers posts helps us reflect on the weekly assignments.”
- “I appreciate that in discussion posts we are asked to relate how the material we are studying has been useful or not in our real lives.”

However: some participants also felt that online learning was not learner-centered in that:

- “I rarely get feedback, I’m bored with the work, and feel uninvolved.”
- “Online material is there and students are simply to keep up.”
- “Class is treated as if it is online and instructor is horrible about responding to emails.”

Participants’ suggestions for how to promote learner-centered online instruction included:

- “Online teachers need to touch base with students especially if they seem to not be doing well.”
- “Online class – would be a little bit easier if we had Discussions amongst ourselves.”
- “Open up more personal exchange (even if it is written) between teachers and students in online courses.”
Chapter 5
Quantitative Discussion

The purpose of this study was to explore college students’ perceptions of their instructors’ learner-centered practices at a major southwest university. The quantitative part of this study focused on students’ perceptions in two parts. The first part examined the extent to which undergraduate college students perceived instructional practices to be learner-centered across 2 perception and motivation scales, and 11 subscales, as measured by the Learner-centered Battery Student Survey (LCBSS). The second part of the study examined the relationship between student demographic variables and student perceptions of learner-centered instructional practices across 11 subscales, as measured by the LCBSS.

Findings for Question 1 - To what extent do students enrolled in undergraduate courses perceive classroom practices to be learner-centered?: Perception and Motivation Total Score

In examining learner-centered instructional practice, as defined by perception and motivation scales, it was found that there was a statistically significant mean difference between perception and motivation scale scores along with a big effect size. It appears clear that the two scales can be deemed separate and unique measures that are theoretically and empirically distinctively strong indicators of attributes of learner-centered instructional practice. Although learner-centeredness is a complicated construct, based on findings of this study, findings support the researcher’s assumption that learner-centeredness as measured by perception and motivation scale scores are indeed unique parts of the domain of learner-centeredness.
Furthermore, in measuring components of learner-centered instruction for this sample of students, participants tended to identify learner-centered instructional practice more highly with regard to the motivation scale, and less so on the perception scale, as evidenced by the large differences between the mean scores for both scales. In other words, for this sample, motivation appeared to serve as a higher order indicator of learner-centered instructional practice, and was more salient to students than was the perception scale.

Findings for Question 1 - To what extent do students enrolled in undergraduate courses perceive classroom practices to be learner-centered? : 11 Perception and Motivation Subscale Scores

Learner-centeredness was further defined through an examination of the 11 perception and motivation subscale scores. Each of these subscales appeared to contribute as specific and unique attributes of learner-centered instructional practice, because so many were found to be statistically significantly different from one another with a medium effect size. It appears that each of these represents a unique and distinct measure of the domain of learner-centeredness.

In another finding, in examining scores for the 11 subscales, mean scores clustered or were virtually the same in three distinct areas. These areas are discussed in order of importance or salience to students. First, from the perspective of the students, what appeared to most salient to them tended to be mastery goals, student voice, and epistemic curiosity. That is, students saw honoring student voice, providing challenge, and encouraging higher order thinking; task mastery goals – the intrinsic motivational orientation directed to learning and mastering task mastery goals; and self-efficacy ratings – beliefs in competency to learn and achieve as higher order attributes of the model of learner-centered instructional practice.
for higher education. Second in order of importance, students appeared to feel that active learning strategies – strategies directed at being actively engaged while learning; creating positive interpersonal relationships; and encouraging higher-order thinking and self-regulation were next in importance when considering learner-centered instructional practices. Finally, in examining the lowest rated attributes, it appears that participants tended to find adapts performance oriented goals – extrinsic motivational orientation directed to achieving high grades or scores rather than to learning; work avoidant goals – motivational orientation directed to avoiding assignments and other work involved in learning; and effort avoidance strategies – strategies directed at avoiding effort while learning, as least salient to them as measures of learner-centered instructional practice. It is intriguing that as a group, students found that these lower order constructs appeared to be less salient as predictors of learner-centered instructional practice. Could it be that these variables are of less importance because their instructors are more learner-centered in practice, which may facilitate students being less prone to adopt these lower order constructs. Could it be that students are less prone to effort avoidance, work avoidant goals, and performance oriented goals, because instructor practices motivate them to believe and behave in ways that promote the higher order constructs mentioned above?

Another interesting finding is that performance oriented goals as opposed to mastery goals appeared to be less salient to students. As the literature in learner-centeredness points out, learner-centeredness is less about performance oriented goals and more about mastery oriented goals. Meece (2003) points out that according to achievement goal orientation theory, learning environments that promote a shift in motivational orientation from performance orientation to mastery orientation is an important element of learner-centered
theory. It appears that performance oriented goals are not as salient to students as mastery goals, which is a key element in learner-centered instruction. Does this mean that in terms of mastery goal orientation, students find instructors practices to be more learner-centered because students see mastery goal orientation as more important, which may be connected to instruction that is more learner-centered?

Finally, it is intriguing that state epistemic curiosity – knowledge seeking curiosity in learning situations was the highest rated construct according to results of both repeated measures ANOVAs, which were used to measure students perceptions across the 11 subscales, and the one-way ANOVAs that measured demographic variables across the 11 subscales. Is it possible that in terms of demographics and perceptions of learner-centeredness across the 11 subscales, students appeared to find that instructor practices may well facilitate more curiosity seeking in students? Could it be that because instructors facilitate this sense of epistemic curiosity that this indeed promotes higher order thinking (e.g. from encourages higher order thinking and self-regulation on up to honors student voice), and the reduction of lower order thinking skills such as effort avoidance, work avoidance and performance oriented goals?

Findings for Question 2 - What is the relationship between student demographic variables and student perceptions of learner-centered classroom practices? :

Demographics and 11 One Way ANOVAs

In examining learner-centeredness as measured by demographic variables and the 11 subscales, two demographic variables were found to be significantly different; ethnicity in terms of epistemic curiosity and age in terms of mastery oriented goals.
Findings for ethnicity. In epistemic curiosity (e.g. thinking for the sake of curiosity or knowledge seeking curiosity in knowledge seeking situations), between participants effects showed that mean scores for whites and Hispanics were significantly different from one another, and within participants effects showed that they were statistically different in epistemic curiosity.

In examining ethnicity, it was found that the mean score for whites was larger than the mean for Hispanics, although the effect size was small.

In considering the differences between these demographic variables, the question is why were whites higher than Hispanics in terms of epistemic curiosity? As one might surmise, the reason for this may be that this significant difference could be due to the effect of variables such as SES, level of education, English language proficiency (i.e. social as opposed as academic language), etc. These are more operative aspects of this difference than just epistemic curiosity. It is quite intriguing that in the course of this study, no significant differences were found in terms of variables such as income, college status, GPA, and income). Further research would emphasize the theoretical foundations of the effects of demographic traits on outcomes related to Whites and Hispanics in terms of epistemic curiosity.

Findings for mastery goals. Differences for age included traditional students who were 18 to 25, and non-traditional students who were 26 and above. Findings showed that mean scores for traditional students showed statistically significant differences from non-traditional students, in terms of mastery oriented goals – intrinsic motivational orientation directed to learning and mastery, than did non-traditional students. The mean for traditional students was higher than for non-traditional students, which may indicate that traditional
students are more likely to focus on mastery goal orientation than non-traditional students. There may be a number of reasons why this may have occurred. It could be that non-traditional students, as opposed to traditional students, have only so many cognitive resources they can devote to school, being as they are so busy in their own lives outside of school. It is possible that having full time jobs, starting families, not having access to campus resources available to traditional students, being more focused on better pay, and career development, among other reasons, appears to be the greater focus for non-traditional students than it does for traditional students. It may be that traditional students may simply have the luxury of having more time to focusing on mastery than do non-traditional students. In addition, it may be that for traditional students, grades are more important markers of academic success than it is for non-traditional students, because of the importance of graduating with a high grade point average in order to get that first job.

**Other findings.** It is also interesting that the remaining nine subscales showed no significant differences in mean scores. On the positive side, it appears that subscales showed no difference because students appeared to elicit the same perceptions of learner-centeredness across the 10 subscales, which means they may have held common views about what learner-centeredness means this college setting. In this case, they may have viewed their courses as being more learner-centered in general.

Finally, it is fascinating that the repeated measures ANOVAs showed many differences in means across the subscales, while the one way ANOVAs showed very few differences. Specifically, the traits that manifested stability were the non-statistical differences found for the demographics, and the traits that manifested sensitivity were the statistically significant different findings across the 11 subscales. This suggests that they are
indeed different constructs and the implication is that the instrument is stable for the sample that was studied. Further investigation is needed in this area.

**Study Limitations**

In terms of external validity, the sample examined was a pretty narrow group. The population fits with the profile of undergraduate students attending educational psychology courses in the college of education, at UNM. This indicates that there may be restrictions on how generalizable these findings may be in terms of some other population. For example, one might ask, how does this apply to the university as a whole, and would I have found differences if I conducted study in the engineering department at UNM? Beyond the scope of UNM, we might ask, what about students who live in rural versus urban centers, those who earned a general equivalency diploma (GED) as opposed to those who earned a high school diploma. Finally, we may ask what about students who attended public vs private schools, or Bureau of Indian Schools (BIA) vs public schools?

In considering the demographic variables examined in this study, another question that may be asked is, are there other demographic variables I did not investigate. Are there other demographic variables that would have been interesting to look at as well? For example, would it be possible to examine demographic variable for parents of students to determine how they might influence their children’s perceptions of learner-centeredness in terms of demographic variables such as (parents’ education, SES, educational level, etc.)?

Data from this study was self-reported and data from the demographic was taken at face value. As is the case with studies in general, because data was based on self-report, inaccuracies in data could include memory issues, misunderstanding of questions, deception, and attributional biases, etc. that could affect the results of this study. For example, if a
participant was asked a question about income, he or she might inflate that figure in an attempt to create a conscious or unconscious socially favorable response to this question.

**Recommendations for Future Research**

This study should be conducted using a more diverse sample. Having a more diverse sample would increase the chances of finding more meaningful results. To increase the scope of this study, the same study should be conducted in another college of education setting with different demographics with a larger sample size. For example, it may be conducted in a setting that is predominantly white or Hispanic, where the sample size is larger. Doing so may increase the chances of finding significant results, and may more accurately reflect the perceptions of participants in a particular demographic sample.

In the interest of continuing mixed methods research, Dr. David Atencio and I worked in concert to develop a data set in which responses to the qualitative questionnaire compare to the 11 subscales found in the LCBSS. Correlations and one way ANOVAs were already run on the data set. It would be fascinating to see what comes of this research. It is recommended that this research continue, which has potential to further our understanding of mixed methods research in the future.

**Implications of this Quantitative Study**

Some interesting relationships among and between variables were found that will extend and promote opportunities for further work in this field. This descriptive study was intended to describe aspects of learner-centered instruction in a college setting. It is important in that it is a finger that points the way to future research. It shows intriguing implications for future researcher on learner-centered instructional practice, because it contributes to the literature on learner-centeredness, it adds to the research base by extending our knowledge
about learner-centeredness in terms of the extent to which students perceived their instructors practices a being learner-centered, and it adds to the research in terms of at least 8 demographic variables as they compare to at 11 subscales of the LCBSS.

**Qualitative Discussion**

The third part of the study was a qualitative examination of students’ understanding of learner-centeredness as measured by students’ responses to the student perceptions questionnaire. To answer research question three, qualitative analyses were conducted through a three-step coding process that utilized a large scale transcripts matrix, category tables, and taxonomy tables to answer the following qualitative survey questions:

- a. Describe classroom practices that you believe reflect learner-centered instruction. Please provide specific examples.
- b. Do you consider you classes to be learner-centered? Why, or why not? In what ways? Please provide specific examples.
- c. How could your classes be made more learner-centered? Please provide specific examples.

Participants in this study included undergraduate students in two Educational Psychology courses. 196 participants completed the study and qualitative methods of analysis were used to answer question 3. Findings of this study included seven prominent themes that were discovered, which reflect participants’ perceptions of learner-centered instructional practice in their own voice. In the following section, utterances and phrases that reflect the seven prominent themes (curriculum, student-centered learning, discussion, group work, psychological safety, student voice, and online instruction) are discussed.
Curriculum. Based on the results of this study, the following conclusions may be drawn about the theme of curriculum. College students in the College of Education seemed to place the most importance on curriculum as the most prominent theme that emerged from this study. Primarily, students focused on the importance of instructors molding curriculum around the needs of the students in the following ways: Providing greater variety of hands on activities, curriculum that is achievable by all, a diversity of assessment beyond quizzes and testing (i.e. presentations, projects, etc.), focusing on students’ different skills and learning styles, and teachers being more organized and structured. Students pointed out that some instructor practices were narrower in the variety of instruction used, were not consistent in their daily practice, and did not center on student needs or address a diversity of learning methods or styles. Still, a majority of students did point out that their instructors were consistent, diverse in teaching style, and they did focus on students’ needs as learners.

Student-centered learning. The next theme that arose was student-centered learning or whether instruction centered on the needs of students, and not the instructor. In this theme, students focused on the importance of various aspects of instruction that they recommended should include making students the center and reason for learning, giving students the option of working at their own pace, being freer to choose the approach they wanted to take in exploring learning, making course work more relatable to students, allowing students to lead teaching, having more one on one time with students, and presenting material from different viewpoints of students. Based on the data collected, it was evident that students perceived that instructors do value and incorporate the recommendations made above and in that process also challenge students to be more self-regulated and accountable for their own learning.
Discussion. The next most prominent theme that arose was discussion. Students focused on various aspects of discussion that they recommended should include more frequent discussion on what is learned in the classroom by allowing students more leeway to share their thoughts, feelings and suggestions, rather than just being lectured to. In this way learning is reinforced and the “floor is turned over to students”. Participants point out that allowing more discussion engages them, makes material easier to understand, and helps them to get better feedback because discussion helps promote questioning and talking about what is being taught. The result is that students are more able to do better on future assignments. While some students felt that their courses centered around the instructor as the focus of learning, as presented predominantly through lecture and “teacher talk”, which limits feedback and opportunities for students to question, and in the process limits learning. Still, other students felt that their instructors do facilitate lively discussion which promotes more diverse and deeper learning to occur.

Group work. The next prominent theme was group work. Primarily, students focused on the importance of instructors molding group work around the needs of the students in the following ways. By promoting large and small group work instructors facilitate clarification of material being taught, which helps students see educational material from different perspectives. This promotes more interest than by simply lecturing. Furthermore, allowing students to be supported in ways that are best for them, allows students to work together to better understand material they may have trouble understanding. Working in groups encourages students to be more active in their own learning processes allows them to better understand course content, as well as helping students to better learn from each other and how to work together in reaching course objectives. While a small minority of students felt
that their instructors did not facilitate group work, and the benefits that comes for group work, a majority of students point out that their instructors do facilitate group work, which promotes better communication skills, perspectives of other students, and the benefits of learning for their peers.

**Psychological safety.** The next prominent theme was the importance of facilitating a learning environment that was psychologically safe. Primarily, students focused on the importance of instructors molding psychological safety in the following ways. Students felt that it was important to create learning environments that “promote a universal learning environment that feels safe, inviting, and encouraging to attend”. Elements of this learner-centered environment include the instructor demonstrating that they care for students by listening to them, and providing support and understanding when students need help or are struggling to succeed. In addition, reinforcing respect for students fosters a healthy environment where students feel safe and secure, especially when approaching the instructor with questions and inquiries, and where a diversity of thoughts and opinions can be expressed. The idea is that when students feel safe their “creative juices can flow” and they can be themselves, which promotes intrinsic motivation. While some students felt that instructors only cared about passing out grades and handing out assignments, that some fail to provide support and motivation, and that they don’t care about others thoughts and feelings, others pointed out that most of their instructors do show care for students and what they have to say, they accommodate students with additional needs, and they do facilitate a sense of respect and safety in the classroom by making students feel valued and respected.

**Student voice.** The next most prominent theme was student voice. Primarily, students focused on the importance of allowing the learner to express their personal voice, even as
they pointed out the importance of respecting others perspectives and opinions. Their position was that, when this occurs the classroom becomes more open to a diversity of beliefs and viewpoints. In addition, honoring student voice allows “students to draw their own conclusions and opinions”. While some students felt that some instructors don’t believe that students’ opinions matter, and that little is done in class is done to communicate thoughts or to promote creative expression, others believed that instructors do promote a learning environment where expressing opinions is encouraged, that student opinions and input are respected by the instructor, and other students as well.

**Online instruction.** The next prominent theme was the importance of online instruction in facilitating instructional environments that were learner-centered. Students focused on the importance of instructors creating online learning that focuses on the needs of the students in the following ways. Students felt that online learning through weekly posts promoted learner-centeredness in that posting helps students better reflect on weekly assignments, which also helps them gain better understanding of what is being posted. This is because students must know and better understand material before posting online, and because online posts make students have to follow instructions, while doing assignments in the weekly modules. The point is that online posting may really prepare students for assignments, because it makes each student have to study in order to be more knowledgeable and prepared before posting online. Finally, questions on WEB CT help students take material learned and think about it in personal ways, and allow students to take control of their own learning at their own pace.
Study Limitations

Using a less diverse sample for this study may have resulted in a narrower range of perceptions that can be gleaned from this study.

Although this study was built on sound instructional practice, as revealed by the literature, it is lacking in that it did not sufficiently address learner-centeredness, based on qualitative theory (e.g. grounded theory) as a foundation for expressing what learner-centeredness is.

Recommendations for Future Research

This study could be conducted using a more diverse sample. Having a more diverse sample would increase the chances of finding perceptions that might be important.

The nature of the study of learner-centeredness/instruction concepts would benefit from a more in depth analytical treatment via grounded theory. Such insights from qualitative research would complement the results of qualitative, quantitative research and mixed methods research. In addition, a more inductive, “ground-up”, open approach might be informative. Therefore, a more in depth study of specific themes may be warranted. It may also be interesting to examine what the implications of this study for professors or instructors.

Implications for Future Research

This qualitative discussion included a presentation of findings that were drawn from the qualitative data analysis as previously discussed. Profiles were developed to allow readers a characterization of the research participants who chose to take part in this study. The data analysis procedures were discussed and the emergence of themes was illustrated in
narrative as well as visual displays. Finally, the conclusion process was presented to affirm the given results. It has been an honor and a privilege to work on this project.

There were useful interpretations in the qualitative study that did not reveal themselves in the quantitative research. Interesting insights were found in the qualitative parts that were not targeted within the scope of the 4-point Likert type instrument. For this reason, the qualitative part of this study has implications for presenting learner-centered instruction in the actual voice of students that could not be addressed through examination of perceptions based on the 4-point Likert system.

As the results of the qualitative part of this study indicate, the comments made by participants are consistent with the literature, which shows implications for future qualitative studies. It was also intriguing that a majority of comments made by participants were quite positive. There were far fewer comments that addressed instructional practices as being non-learner-centered.

This mixed methods study contributes to literature and the research base in the following ways. First, the large scale transcript matrix, the key word table, the thematic category tables and the taxonomy tables were original designs created by the researcher. It is hoped that future research can utilize these qualitative tools as a method that will make data collection easier and more user friendly. Next, the qualitative aspect of this study contributes to furthering research in that it is bolstered by the findings in the quantitative section of this study. This is the first mixed methods study of its kind that was used to triangulate data from the quantitative part of this study with data collected from the qualitative part of this study on learner-centered instructional practices. It is hoped that this study can act as a model for future mixed-methods studies on learner-centeredness, at least in colleges of education.
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Appendix A

Learner-centered Battery Student Survey (LCBSS)

**PART I DIRECTIONS:** Think of a course you are taking in the College of Education (COE) this semester. Consider your instructor's classroom practices. Please read each of the following statements. Then decide how often your instructor in this course does what is described in each statement—almost never, sometimes, often, or almost always. Read each statement and then, using a PENCIL, blacken the appropriate bubble on the answer sheet to indicate how you feel about your instructor's classroom practices. Answer carefully, but don't think too hard about any one question. PLEASE ANSWER EVERY QUESTION. Mark one answer only. Your responses will be strictly confidential. Thank you for your help.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My instructor shows me that he or she appreciates me as an individual.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. My instructor lets me express my own thoughts and beliefs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. My instructor helps me learn how to organize what I'm learning so I can remember it more easily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. My instructor changes learning assignments when I seem to be failing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. My instructor provides support and encouragement when I'm worried I won't perform well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. My instructor provides opportunities for me to learn how to take someone else's perspective.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. My instructor helps me think through what I'm interested in learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. My instructor encourages me to work with other students when I have trouble with an assignment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. My instructor makes me feel that he or she cares about me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. My instructor encourages me to challenge myself while learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. My instructor helps me put information together with what I already know so that it makes sense to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Almost Never</td>
<td>Sometimes</td>
<td>Often</td>
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</tr>
<tr>
<td>12.</td>
<td>My instructor encourages me to tell him or her the way I would like to learn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>My instructor makes me feel that he or she appreciates me for who I am, not just for how well I do.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>My instructor helps me understand different points of view.</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>My instructor helps me see how I can reflect on my thinking and learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>My instructor teaches me how to deal with stress that affects my learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>My instructor helps me feel good about my abilities.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>My instructor encourages me to think things out for myself while learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>My instructor helps me learn how to check how well I understand what I am learning.</td>
<td></td>
<td></td>
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<tr>
<td>20.</td>
<td>My instructor makes an effort to get to know me and my background.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>My instructor helps me feel like I belong in the course.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>My instructor asks me to listen to and think about my classmates opinions, even when I don't agree with them.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>My instructor helps me by explaining and teaching in different ways when I am having trouble understanding.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>My instructor treats me with respect.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>My instructor lets me work on activities that are challenging.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### PART II DIRECTIONS:
A number of statements which students have used to describe themselves are given below. Read each statement and then, using a PENCIL blacken the appropriate bubble on the answer sheet to indicate how you feel in this course. Answer carefully, but don’t think too hard about any one question. PLEASE ANSWER EVERY QUESTION.

<table>
<thead>
<tr>
<th></th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. I am certain I can do even the hardest work in this course if I try.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. I try to figure out how new work fits with what I have learned before taking this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. When doing work in this course, I guess a lot so I can finish quickly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. I do assignments in this course because I learn new things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. I want to do well in this course so my parents will think I am smart.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31. I feel most successful in this course when I can do my work without much effort.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32. The material in this course is very interesting to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33. I am sure I will do well in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34. I ask myself questions while I do my work to make sure I understand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35. I do my work without thinking too hard.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36. I want to learn as much as possible in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37. An important reason for why I do my course assignments is to get better grades than other students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Number</td>
<td>Statement</td>
<td>Almost Never</td>
<td>Sometimes</td>
<td>Often</td>
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<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>38</td>
<td>I feel most successful in this course when I get out of doing my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>39</td>
<td>I find it difficult to concentrate on course material.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40</td>
<td>I am certain I will be able to learn the material in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>41</td>
<td>I pay extra attention to the things the instructor in this course wants us to remember.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>42</td>
<td>When I have a difficult assignment in this course, I skip the hard parts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>43</td>
<td>An important reason for why I do my work in this course is because I want to get better at it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>44</td>
<td>I want to do well in this course so other students will think I'm smart.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>45</td>
<td>I try to do as little work as possible in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>46</td>
<td>I think it is fun to increase my understanding about the subject matter in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>47</td>
<td>I am sure I will get a good grade in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>48</td>
<td>When we have a difficult assignment in this course, I try to figure out the hard parts on my own.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>49</td>
<td>When I have trouble with an assignment in this course, I give up.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>50</td>
<td>I do assignments in this course because I want to improve my skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>51</td>
<td>The main reason I do my work in this course is because I want to get the highest grade.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Almost</td>
<td>Sometimes</td>
<td>Often</td>
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</tr>
<tr>
<td>52.</td>
<td>In this course, I prefer assignments that are easy so I don't have to work very hard.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>53.</td>
<td>I feel that the material in this course will be boring</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>54.</td>
<td>Even when the work in this course is hard, I can learn it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>55.</td>
<td>I go back over assignments I don't understand</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>56.</td>
<td>In this course, I only study things that will be on a test.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>57.</td>
<td>I do assignments in this course because the work is interesting.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>58.</td>
<td>When I do work in this course, it doesn't matter to me if other students get a better grade.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>59.</td>
<td>When I do work in this course, I just want to get it done as quickly as possible</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>60.</td>
<td>It is fascinating to me to learn new information in this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>61.</td>
<td>No matter how much I try, there is some work in this course I'll never understand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>62.</td>
<td>When I have trouble figuring out an assignment in this course, I try to think about it in different ways.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>63.</td>
<td>When I don't understand an assignment in this course, I get answers from my friends.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>64.</td>
<td>I want to do my work in this course because it really makes me think.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>65.</td>
<td>I want to do well in this course so the instructor will think I am smart.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Almost Never</td>
<td>Sometimes</td>
<td>Often</td>
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</tr>
<tr>
<td>66.</td>
<td>I feel most successful in this course when I get a good grade without working too hard.</td>
<td></td>
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</tr>
<tr>
<td>67.</td>
<td>I enjoy learning material in this course which is unfamiliar to me.</td>
<td></td>
<td></td>
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<tr>
<td>68.</td>
<td>When I make mistakes in this course I try to figure out why.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.</td>
<td>If I need help to do an assignment in this course, I skip it.</td>
<td></td>
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</tr>
<tr>
<td>70.</td>
<td>I find myself losing interest when complex material is presented in this course.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.</td>
<td>I spend some time thinking about how to do an assignment before I begin it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72.</td>
<td>When I don’t understand an assignment I just write down the first thing that comes to mind.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Appendix B
Demographic Questionnaire

Demographic Questionnaire Form

In this section of this study, you will be asked to provide demographic information. Please read each question carefully and either fill in the bubble or circle the appropriate response.

1. Gender: (Please check the one option that best describes you)
   1. O Male
   2. O Female

2. What is your age:
   1. O 18 – 25
   2. O 26 – 35
   3. O 36 – 45
   4. O 46 +

3. Ethnicity: How do you describe yourself? (Please check the one option that best describes you)
   1. O African American
   2. O Asian or Asian American
   3. O Hispanic or Latino
   4. O Native American
   5. O White, non-Hispanic or Latino
   6. O Other

4. What is your annual Family income?
   1. O 0 – 20,000
   2. O 20,001 – 40,000
   3. O 40,001 – 60,000
   4. O 60,001 – 80,000
5. How many college credits have you earned?
   1. O 0 – 30 Credits – Freshman
   2. O 31 – 60 Credits – Sophomore
   3. O 61 – 90 Credits – Junior
   4. O 91 – 124 Credits – Senior
   5. O 125 Credits and Above – Post BA/BS

6. What is your cumulative GPA?
   1. O 2.0 – 2.49
   2. O 2.5 – 2.99
   3. O 3.0 – 3.49
   4. O 3.5 +

7. What is your college major?
   O Elementary Education
   O Secondary Education (If so, please select the endorsement(s) that you are pursuing)
      O Bilingual Endorsement
      O Communicative Arts
      O Earth Science
      O Fine Arts Theatre
      O French
      O German
      O Life Science
      O Mathematics
      O Spanish
      O Physical Science with Chemistry
O Physical Science with Physics
O Social Studies
O TESOL

O Special Education
O Early Childhood Multicultural Education
O Art Education
O Health, Exercise, Sport Science (HESS)
O Other (Please identify) _________________________________________

8. Have you been accepted into a teacher preparation program?
   1. O Yes
   2. O No
Appendix C

Student Perceptions Questionnaire

This questionnaire is designed to tap your knowledge of learner centered teaching practices. In the space provided below please provide answers to the three following questions. **When answering these questions refer to one College of Education course you are currently taking.**

1. Describe classroom practices that you believe reflect learner-centered instruction. **Please provide specific examples.**

2. Do you consider your classes to be learner-centered? Why, or why not? In what ways? **Please provide specific examples.**

3. How could your classes be made more learner-centered? **Please provide specific examples.**
Appendix D

Informed Consent Form

UNIVERSITY OF NEW MEXICO
INFORMED CONSENT COVER LETTER FOR ANONYMOUS SURVEYS

STUDY TITLE
COLLEGE STUDENTS’ PERCEPTIONS OF LEARNER-CENTEREDNESS IN THEIR UNDERGRADUATE COURSES

You are being asked to participate in a research study that is being conducted by Jerome B. Gomez who is the Principal Investigator, and Terri Flowerday Ph.D. from the College of Education – Educational Psychology.

You are being asked to participate in this study because you are an undergraduate college student, and you are taking an educational psychology class. Two hundred and fifty (250) students will take part in this study at the University of New Mexico on the main campus at Albuquerque, New Mexico.

Your participation will involve filling out a demographic questionnaire, another questionnaire that will ask you to rate yourself on a scale with regard to statements such as “an important reason for why I do my work in this class is because I want to get better at it”, and an open ended student perceptions questionnaire. The questionnaires should take about 60 minutes to complete.

There are no names or identifying information associated with these questionnaires. There are no known risks in this study, but some individuals may experience discomfort when answering questions. All data will be kept for 3 years in a locked file cabinet in Terri Flowerday’s office at Simpson Hall, room 113, and then destroyed. Your involvement in the study is voluntary, and you may choose not to participate. You can refuse to answer any of the questions at any time. If you choose not to participate in this study, your teacher will be able to provide alternative methods of fulfilling your class research requirement.

The findings from this project will provide information on learner-centered perceptions to better serve future instructors in designing learner-centered pedagogy. If published, results will be presented in summary form only.

If you have any questions, concerns or complaints at any time about this research project, please contact Jerome B. Gomez or his associate Terri Flowerday. They will be glad to answer and address them at (505) 983-1945, or 505-277-3208. If you have questions regarding your legal rights as a research participant, you may call the UNM Human Research Protections Office at (505) 272-1129.
By returning this survey, you will be agreeing to participate in the above described research study.

Thank you for your consideration.

Sincerely,

Researcher’s Name
Jerome B. Gomez
Researcher’s Title
Ph.D. Candidate
Appendix E
Debriefing Form

Please complete the following form and then return it to your instructor to receive credit for participating in this research.

Your name _______________________________________

Credit for Ed Psy Course: 310 303

Your Instructor’s Name: _______________________________________

Experimenter’s Name: Jerome B Gomez

Experimenter’s Signature _______________________________________

Please answer the following questions, to the best of your ability.

1. Briefly describe the experiment?

2. What do you believe the purpose of this study was?
3. What are the instructional implications of this research?
Appendix F

Large Scale Transcript Matrix

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Describe classroom practices that you believe reflect learner-centered instruction.</strong> Please provide specific examples.</td>
<td><strong>Do you consider your classes to be learner-centered?</strong> Why, or why not? In what ways? Please provide specific examples.</td>
<td><strong>How could your classes be made more learner-centered?</strong> Please provide specific examples.</td>
</tr>
<tr>
<td>3-1A “Discussions”</td>
<td>3-2A “we partake in discussion groups.”</td>
<td>3-3A “If some of my classes were discussion-based.”</td>
</tr>
<tr>
<td>3-1B “the small or large group, are beneficial.”</td>
<td>3-2B “We work on activities as groups.”</td>
<td>3-3B “And allowed the students to pick what was taught the class would be more learner-centered.”</td>
</tr>
<tr>
<td>3-1C “and focus on students themselves.”</td>
<td>3-2C “and the learning is really ours.”</td>
<td></td>
</tr>
<tr>
<td>3-1D “rather than lectures where students are disengaged.”</td>
<td>3-2D “We also get to choose the material we focus on.”</td>
<td></td>
</tr>
<tr>
<td>3-1E “which gives us ownership of our learning.”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For a full copy of the 53-page Large Scale Matrix contact Jerome Gomez at j.gomez33@comcast.net