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THE PROCESS OF LEARNER CENTERED INSTRUCTION IN ADULT CLIENTELE

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree in Masters in Career, Technical and Leadership Education
in the College of Agriculture at the University of Kentucky

By
Shannon Farrell
Lexington, Kentucky

Director: Dr. Maurer, Professor of University of Kentucky
2013

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ABSTRACT OF THESIS

THE PROCESS OF LEARNER CENTERED INSTRUCTION IN ADULT CLIENTELE

Using learner centered instruction (LCI), a group of beef farmers were guided to design a farm in a layout that would most effectively offer continual learning opportunities for the beef practitioners themselves. Learner centered instruction was used as the primary teaching method for the project's completion. When using LCI, coupled with the correct facilitation of programs, student empowerment, and subject interest, positive experiences are more likely to result.

KEYWORDS: Learner, Centered, Farmers, Adults, Extension

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Chapter 1

Introduction

Kentucky Cooperative Extension Service is a comprehensive outreach and engagement program at the University of Kentucky. Its mission, simply stated, is to make a difference in the lives of Kentucky citizens through research-based education (<http://ces.ca.uky.edu/ces/>). Extension agents have tremendous flexibility in designing and facilitating educational programs. The goal of any educator is to provide educational opportunities that are experiential in the right ways (Dewey, 1938) because “quality learning is learning that engages students” (Scherer, 1998). When educational content is received by the student in a positively experiential way, then future experiences can follow (Dewey, 1938). When subsequent experiences build from the previous one, educational inputs become learned (Dewey, 1938). This is the developmental process of learning. Rather than hearing and “learning” something from a one-time experience, students can build off their previous knowledge level and develop a true understanding of the concept. Understanding the concept from multiple learning sessions allows the student opportunity to see the concept used in multiple contexts or presented in various ways. This diversity can enhance the ability of the student to push beyond the paradigm of the students’ first perceived purpose of the concept and grasp the concept’s applicability in real world settings. Interestingly enough, Dewey (1938) developed his ideas on experience and education shortly after the father of cooperative extension, Seaman Knapp, wrote these famous words: “What a man hears, he may doubt; what he sees, he may possibly doubt; but what he does himself, he cannot

doubt.” Dewey (1938) and Joplin (1981) both believe that true learning occurs through the reflection and application of the experience (Torock, 2009).

Extension programs should be formatted in such a way that positive experiences are achieved by clientele and built upon through successive teachable moments. For example, we see this type of ideal teaching with many Future Farmers of America (FFA) programs through FFA farms and greenhouses. These teaching practices are also offered through hands-on activities in 4-H to comply with 4-H’s motto of “Learn by Doing”. Yet, despite the capabilities that extension agents have, too often traditional, less effective, teaching methods are used. Why are these hands-on experiences developed for learning not used in every educational setting? When research tells us that “people learn best when engrossed in the topic, motivated to seek out new knowledge and skills because they need them in order to solve the problem at hand” (Norman & Spohrer, 1996); shouldn’t we make every effort to create positive learning in all teaching realms? But how can learners experience information in such a way that the information becomes learned? It is assumed that when someone recognizes their own experience in the experiences of others or in acquired knowledge that personal meaning is created. (Gorrell J. , 1992). The questions previously stated, along with newly formulated ideas and hypotheses throughout the progression of this paper, will be addressed using some of the learner-centered psychological principles. These principles were developed by the American Psychological Association’s Board of Affairs (BEA). The committee’s goal was to provide a framework that would contribute to the educational reform and school redesign efforts (1997). Extension agents work with a

high percentage of clientele that are post-school age. However, these principles designed for schools are still highly applicable in adult education scenarios.

Background Information

Naturalist inquiry was used in identifying a study that could be utilized to demonstrate the effects of learner-centered instruction. Being a researcher, master's student, and employed professional, the idea of doing a project that simultaneously fulfilled the study needed to complete this research as well as offer professional development was appropriate. Therefore, brainstorming this possibility led to the idea of conducting a pilot project with a group of beef farmers to develop farm plans for the county's new Future Farmer's of America farm.

The following background information underlies the purpose of the observational study conducted, described in chapter 3. Land on the site of future Robertson County School was designated as the FFA farm. Recently, an agriculture barn was completed to stall livestock, working facilities, and provide a facility for FFA student education. Aside from high school education, the FFA advisor is offering the facility for use by other community groups and agricultural entities. For a county that is limited in resources, this barn and farm will serve as a multipurpose asset. Extension programs regarding agriculture education will be better delivered in the real life atmosphere provided by the FFA farm. Because the new school was under construction during the time that the Robertson County Beef Cattle Association was getting started, and the land on the construction site was not allocated in any certain design, the opportunity for professional development

presented itself. With permission from the FFA advisor for other groups to share in learning experiences at the farm facility, the idea was created to allow the beef practitioners to exercise LCI by designing the farm. By identifying what their needs were, the beef producers developed a layout of the farm that mapped what improvements would address those needs. Once the ideas were put on paper and into the computer, the FFA advisor received the farm plan designed by the farmers to use at his discretion.

Definition of Terms

Learner Centered Instruction is a teaching approach that is focused on the needs, skills, and interests of the learner. It is often accompanied by a problem-based approach, where the problems are picked to fit the interests and needs of the learner (Norman, D. Spohrer, J. 1996).

According to the American Psychological Association, 14 principles for learner-centered instruction should be considered holistically when redesigning and reforming a school using learner centered techniques. Those principles are categorized into four factors: 1 - cognitive and metacognitive, 2 - motivational and affective, 3 - developmental and social, and 4 - individual difference factors influencing learners and learning. (APA Work Group of the Board of Educational Affairs, 1997). In summary, learner-centered instruction is the 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). LCI focuses on how this

learning occurs and on teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners. This dual focus then derives educational decision making. Learner-centered education is a reflection in practice of the learner-centered psychological principles-the programs, practices, policies, and people that support learning for all (McCombs B. L., 2001).¹

Metacognitive – “thinking about thinking” or the higher order strategies that can enhance student learning and personal responsibility for learning (APA Work Group of the Board of Educational Affairs, 1997).

Self-Efficacy is a self-judgment of one’s ability to perform a task in a specific domain (Bandura, 1982).

Empowerment is increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual’s orientation to his or her work role: meaning, competence, self-determination, and impact (Spreitzer G. , 1995). Empowerment is defined by Conger & Kanungo (1988) as the motivational concept of self-efficacy. (Spreitzer G. , 1995)

Intrinsic motivation is the doing of an activity for its inherent satisfactions rather than for some separable consequences (Ryan & Deci, 2000). Intrinsic motivation is catalyzed (rather than caused) when individuals are in conditions that are conducive for its

¹ *Note: Learner-centered and student-centered are used synonymously in this paper.*¹

expression (Ryan & Deci, 2000). It describes the natural inclination of assimilation, mastery, spontaneous interest, and exploration that is so essential to cognitive and social development and that represents a principal source of enjoyment and vitality throughout life (Ryan & Deci, Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being, 2000).

Extrinsic motivation is the performance of an activity in order to attain some separable outcome (Ryan & Deci, Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being, 2000).

Paradigm is a worldview, a way of thinking about and making sense of the complexities of the real world. Paradigms are deeply embedded in the socialization of adherents and practitioners. Strengths of paradigms are that they make actions relatively easy. The weaknesses of paradigms are that the very reason for action is hidden in the unquestioned assumptions of the paradigm (Patton, 2002).

Phenomenology – What is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people? (Patton, 2002).

“Phenomenology asks for the very nature of a phenomenon, for that which makes a some-‘thing’ what it is and without which it could not be what it is” (Van Manen, 1990).

Heuristic Inquiry – is a form of phenomenological inquiry that brings to the fore the personal experience and insights of the researcher. The reports of heuristic researchers are filled with the discoveries, personal insights, and reflections of the researchers. It is

the combination of personal experience and intensity that yields an understanding of the essence of the phenomenon (Patton, 2002). “Heuristics is concerned with meanings, not measurements; with essence, not appearance; with quality, not quantity; with experience, not behavior” (Douglass, 1985).

Statement of the Problem

Challenges are presented in all educational aspects. Some obstacles in teaching and learning co-exist among different types of groups, while others are specific to a certain group. For the purposes of this paper, the focus will deal with learning in adult farmers. Challenges presented in learned education of farmers include: low participation in agriculture meetings, not retaining useful information due to the form in which the material was presented, and an inability to make learned information applicable on the farm. No matter the problem outlined, the bottom line is that farmers are not learning in the most effective manner possible evident from resulting challenges. Transitioning from traditional teaching methods to learner-centered instruction can positively alter the efficiency of disseminating information, and in turn create the desired educational scenarios.

Purpose of the Study

Implementing LCI can only be successfully done when several functions operate both independently and simultaneously. In order for adult agriculturists to increase their desire for learning, retention of information, and ability to make learned information applicable to their farming operations, agriculture educators need to understand the

importance of learner-centeredness. First, a willing and conscious effort must be made by the facilitator or educator to move from any traditional form of teaching to learner-centered at every applicable opportunity. Second, certain levels of motivation and empowerment must be instilled in students, while students begin to take responsibility in their own learning. Third, students must use inquiry, leadership, and self-assessments to push their learning capabilities to new heights. And finally, students must challenge the facilitator or educator to push beyond the course objectives or goals envisioned by the educator and really expand the scope of learning for everyone.

The goal of using LCI is that “the successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge” (APA Work Group of the Board of Educational Affairs, 1997). Results from the study will hopefully shed light on the design needed for farmers to participate in and embrace LCI. Furthermore, study findings will hopefully offer instructional insight for agriculture extension agents transitioning to LCI within their educational programs to provide the learned experience outcome for their farmers. Rather than being paid to teach, educators should view their salary as payment for aiding farmers in learning. This perspective would keep educators keen on using LCI and focused on learner needs, not on teaching according to their own objectives or what educators deem important.

To put these ideas into practice, the Robertson County Beef Cattle Association was observed in their leadership capacities of taking ownership on a farm project assigned to them. The level of empowerment used in guiding the group was carefully noted, as well

as the amount of empowerment farmers instill in one another. These interactions and qualities will offer solutions to farmer learning challenges.

Research Questions

To summarize the need for this study, find answers for the problem, and give validity to the purpose, the following questions will be researched in the proceeding literature review and observational study conducted with the Robertson County Beef Cattle Association.

- 1.) Is learner-centered instruction an effective teaching method for adult farmers?

Most literature regarding LCI is applied to school aged learners; however, it is important to find out if this teaching approach is effective with adult farmers to validate the method's effectiveness across a broader population.

- 2.) How can farmers, given a project, learn through LCI? The paradigmatic perspective of LCI is that the learner would be a student taking an active role in his or her learning based on classroom related topics. Yet, the observational study will have adult learners complete an assigned task in non-formal education to illustrate LCI.

- 3.) What considerations are needed by the facilitator/educator in transitioning to LCI? Because this study aims to be a reference piece for extension educators, it would only be appropriate to include these considerations in the results. The considerations will surface during the literature review and in studying the cattlemen's group.

Limitations of the Study

While the 14 learner-centered psychological factors will be summarized in the literature review, only a portion of them are reflected upon in great detail and used as a guiding framework for the study. Only the principles that directly relate to literature review concepts will be used accordingly. This strategy allows for a more focused study.

Because the observational study took place over three separate meetings, not all participants were present each time. Therefore, the impact that learner-centered instruction made on the group as a whole would potentially offer a less measurable outcome than if all members were present for the duration of each meeting.

Basic Assumptions

Since the group used in the observational study are beef practitioners, their ideas for development of the FFA farm were geared to the production and research of beef cattle. Even still, many of them have other farm enterprises and interests that allowed them to involve other agricultural ideas into their design.

While minimal instruction was given to the beef group on designing the FFA farm to get as many of their original ideas as possible, a verbal outline was necessary in directing the farmers on their assigned task. The educator still holds responsibility when using learner-centered instruction. Although, the idea is for learners to identify their needs and use inquiry to further investigate addressing those needs, the educator must facilitate to those needs to offer guidance and direction. The educator must make

available the resources that students need to further their education and should be motivators to empower student involvement and take charge of their own learning.

For the mere reason that not every member of the Robertson County Beef Cattle Association (RCBCA) attends all meetings and programs, not all members of the association were involved in the study. All contacts of the Robertson County Cooperative Extension Office beef mailing list received invitations to attend the beef meetings. Because this project met on several occasions, attendance was not identical from meeting to meeting. To accommodate new attendants, a synopsis of the assigned project was explained before giving first-time participants the opportunity to complete the consent form. Not all participants of the RCBCA were paid members of the association. Still, as beef practitioners from within the county, their participation was encouraged and supported.

Need for the Study

Cooperative Extension is a link between land grant university research and community clientele. Extension agents can be thought of as ambassadors for university research. Yet, little benefit is gained if dissemination of information is not done effectively. Extension agents have capabilities in educating and facilitation that many other educators do not. For instance, most school aged learners are confined to classrooms where they are immobilized from hands on learning (assigned to a chair), expected to understand a teacher lectured lesson, asked to regurgitate that information on a test, and expected to make future applications.

Fortunately, programs provided through extension have a flexibility that should be capitalized on by all extension agents in educating clientele. Although, cooperative extension resources do provide pre-planned activities and curricula that are used statewide; the presentation format and curriculum pieces chosen should be selected based on needs that are assessed by clientele. This will assure extension educators that programming efforts are meeting the needs of the people they serve and further validate extension's needed presence in communities as supported by the county's tax payers.

Specifically, the observational study gave beef producers the chance to design the FFA farm in a way that would be conducive to their learning. This allowed the beef practitioners to identify what they saw as future programming needs. Presentation of that information will be tailored to fit the design that the clientele themselves constructed.

Ultimately, the goal of this study is to have producers use learner-centered education to increase the effectiveness of student learning experience. This study can be used by other extension agents as an instrument for facilitating educational designs within their own counties using their own clientele. The sequence of events used in the observational study is not exclusive to farm design. Instead, the format outlined in this paper can be applied to any group seeking information on any topic and in any environmental realm. The results will be a tool for extension educators transitioning from traditional teaching methods to learner-centered instruction with clientele groups.

The transition will naturally shed light on client needs and client desired program direction.

Mastering the ability to facilitate education through learner-centered instruction will justify the significance of extension's role. When information can be effectively disseminated, extension agents will better meet the needs of clientele. Then, if clientele needs are met because their educational opportunity became a positive learning experience, the desired impact was accomplished.

Chapter 2

Literature Review

A committee of the American Psychological Association developed a fourteen principle framework to address education redesign. These principles put the primary focus on the learner by “emphasizing the active and reflective nature of learning and learners” (APA Work Group of the Board of Educational Affairs, 1997). While most of the factors are internal to the learner, external environmental and contextual factors are still considered for their interaction with the internal factors. Divided into four sections, the APA’s learner-centered principles are grouped into the following titles:

- cognitive and metacognitive factors
- motivational and affective factors
- developmental and social factors
- individual difference factors

Below lists the fourteen principles as they are categorized into the four groups. (APA Work Group of the Board of Educational Affairs, 1997).

Cognitive and Metacognitive Factors

- 1.) The nature of the learning process
- 2.) Goals of the learning process
- 3.) Construction of knowledge
- 4.) Strategic thinking
- 5.) Thinking about thinking

6.) Context of learning

Motivational and Affective factors

7.) Motivational and emotional influences on learning

8.) Intrinsic motivation to learn

9.) Effects of motivation on effort

Developmental influences on learning

10.) Developmental influences on learning

11.) Social influences on learning

Individual differences factors

12.) Individual differences in learning

13.) Learning and diversity

14.) Standards and assessment

The American Psychological Association work group focuses on the type of learners that are active, goal directed, self-regulating, and assume personal responsibility for their own learning.

1.) The Nature of the Learning Process

The nature of the learning process gives a title to the idea that learning happens from the accumulation of knowledge during an intentional learning environment where the learner constructs meaning from information and experience.

2.) Goals of the Learning Process

The ability to create meaning from information and experiences that build over time leads to fulfilling the goals of the learning process. Those goals are not confined to just educational, but extend also to personal aspirations and interests.

3.) Construction of Knowledge

Knowledge construction is a result of new information being linked to existing knowledge and experiences. The link may be developed by adding to the existing knowledge, modifying it, or reorganizing it. The form of link development is dependent on the situation, learner, and subject area. However, when the learner is unable to create a link from new knowledge to existing knowledge, the new information remains an isolated piece of information. The new knowledge is then used, applied, and regurgitated much less effectively than when the knowledge is constructed with meaning to prior knowledge. (APA Work Group of the Board of Educational Affairs, 1997).

4.) Strategic Thinking

Successful learners master the ability to think strategically in learning, reasoning, problem solving, and concept learning. Utilization of different strategies help learners reach their goals and apply their knowledge. Facilitators can assist learners in developing, applying, and assessing their strategic learning skills.

5.) Thinking about Thinking

Thinking about thinking is an adequate definition for the term metacognitive. This is achieved by successful learners that have the ability to reflect on how they think and learn. They are able to set reasonable goals for themselves and can re-adjust when goal-reaching obstacles arise. Facilitators need to help learners develop their metacognitive skills to maximize learning. (APA Work Group of the Board of Educational Affairs, 1997).

6.) Context of Learning

The context of learning is another aspect that dictates the level of learning. Educators should remain interactive with the learners. Facilitators should use technology, instructional practices, and create the environment needed by the learner audience to create motivation for learning, orientation toward learning, and ways of thinking. (APA Work Group of the Board of Educational Affairs, 1997).

7.) Motivational and Emotional Influences on Learning

Motivation and emotion have tremendous influences on learning. A learner's thoughts, beliefs, goals, and expectations for success or failure can determine the degree of learning. Positive beliefs about oneself to learn and curiosity are characteristics of motivation. Negative emotions (that can be educational or personal) lead to poor performance in learning situations.

8.) Intrinsic Motivation to Learn

Intrinsic motivation is a deep personal motivation that stems from a learner's interest. Learners become intrinsically motivated to learn when they feel the subject matter is relevant to their needs and hold personal meaning; is appropriate in complexity and difficulty, and when they feel good about their success level.

9.) Effects of Motivation on Effort

As a direct result of high intrinsic motivation, come the effects of motivation on effort. In order to receive effort from the learner in an educational setting, educational methods should be targeted to "increase learners' perceptions that a task is interesting and personally relevant." (APA Work Group of the Board of Educational Affairs, 1997).

10.) Developmental Influences on Learning

Learning is influenced by developmental factors. Each individual is unique in the way they learn. No matter the development pattern, when material is presented in an enjoyable and interesting way, optimal learning occurs. Learning is most effective when intellectual, emotional, and social aspects are considered by the facilitator.

11.) Social Influences on Learning

Social influences such as social interactions, interpersonal relations, and communication with others, can dramatically affect performance on educational tasks. Flexible thinking is enhanced from social diversity and added perspectives. Quality relationships increase characteristics that increase learning. Some of those characteristics are stability, trust,

caring, learner's sense of belonging, self-respect, and self-acceptance. (APA Work Group of the Board of Educational Affairs, 1997).

12.) Individual Differences in Learning

Learners have individual differences in how they learn. These differences are a combination of genetics, experiences, personal preferences, and social influences.

Therefore, it is important that educators consider the uniqueness that comes with each learner and adapt instructional methods accordingly.

13.) Learning and Diversity

Furthermore, considerations for diversity are necessary to maximize learning. When educators teach according to the needs that diversity of individuals require, learners will have higher levels of motivation and achievement.

14.) Standards and Assessment

Standards and assessments are the final piece of the puzzle in achieving high learning outcomes. Standards and goals should be set appropriately high to encourage learners on their path of their learning goals. Ongoing assessments should be made periodically throughout the educational program. These assessments offer continued evaluation to the learner and educator on the effectiveness of the program. Standardized assessment (outcomes), performance assessment (attainment of the outcomes), and self-assessment (evaluation of self) can all be factored into the educational evaluation. (APA Work Group of the Board of Educational Affairs, 1997).

The specific principles of the fourteen learner-centered psychological principles that relate to concepts found in additional literature about LCI and influencing factors will be referred to in the remaining literature review. Likewise, some literature review pieces will be reviewed because of their relation to a particular learner-centered psychological principle. But it is important to note that not all fourteen principles will be used in this pilot study. Explanations of the fourteen principles were outlined previously simply to offer a holistic understanding of learner-centered instruction as viewed by the American Psychological Association. To keep a stronger focus for the purposes of this research paper, only those factors from the APA's 14 learner-centered psychological principles relating to following literature review articles will serve as the conceptual framework for this study.

Learner-Centered Instruction

Learner-centered instruction is a teaching idea that developed as a solution to many traditional teaching challenges. According to McCombs and Whisler (1997), "learner-centered learning is the 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)." Traditional teaching can be coined teacher-centered learning and is defined as the transmission of information from a knowledge expert (teacher) to a relatively passive recipient

(student/learner) or consumer (In Time, 1999-2001). Education can be a challenging field for both the educator and the learner. However, these challenges cannot be overlooked and must be dealt with for the mere reason that education is a foundational component to human development. In an ideal learning environment, and one that LCI can aid in accomplishing, the educator disseminates information synced with the unique learning components of learners where the learner is mentally and physically prepared to receive the information. The terms student-centered learning and learner-centeredness both describe a learning model that aligns the learner in the center of the learning process. As seen in literature pertaining to LCI, learners take an active role in their own learning and assume much of the teaching responsibility that teachers possess in traditional teaching methods. This is because learners dictate what subject matter needs to be learned and how it should be learned causing them to be more intrinsically than extrinsically motivated. Because students create the learning environment that best suits them, learning becomes individualized instead of standardized. Educators that can foster learner-centeredness prepare the learner for more effective education.

Several scholars have depicted the theory of learner-centered in varying models. No matter the detail of the model, the learner is always positioned at the center of the diagram with all other agents affecting the learner in surrounding proximity. Below is a learner-centered model that was created by Barr and Tagg (1995).

Figure 2.1 The Learner Centered Model



Barr and Tagg describe their learning model that “frames learning holistically, recognizing that the chief agent in the process is the learner. Thus, students must be active discoverers and constructors of their own knowledge” (1995). In the book, *Freedom to Learn*, (Roger, 1969), Roger said that learners should be trusted to develop their own potential and encouraged to choose the way and direction of their learning. Therefore, learner-centered principles include allowing learners to have meaningful control over what and how things are learned and how the outcome is measured (Reynolds, 2000). According to author Jim Reynolds, the first listed principle in APA’s learner-centered psychological principles is the foundational principle for putting theory into practice (Reynolds, 2000). Reynolds includes the idea that learners need to take responsibility for their own learning.

Many of the APA’s learner-centered principles support Reynolds’ previous belief that the three critical ingredients in the learning process are: what is learned, how it is learned, and how the learning outcome is measured (Reynolds, 2000). The learner’s

control over what is learned can be supported by APA's principles: nature of the learning process, goals of the learning process, and motivational and emotional influences on learning. The first two principles indicate personal interest as a key element in identifying the concepts to be learned. Motivation and emotion are clearly stated by the APA work group to influence what is learned.

Reynolds' idea that learners need control over how things are learned are addressed by the following APA principles: construction of knowledge, strategic thinking, thinking about thinking, intrinsic motivation to learn and effects of motivation on effort.

Research shows that learners control how they learn when they can build links between new information and existing information (construction of knowledge); approach learning strategically through reasoning, problem solving and concept learning (strategic thinking); set reasonable goals for themselves based on their reflections of how they learn (thinking about thinking); can exercise personal control through curiosity, flexibility and insightful thinking, and creativity (intrinsic motivation to learn); and put forth satisfactory effort and commitment to comprehension and understanding (effects of motivation on learning).

Reynolds' final point to learner-centered on allowing the learner to decide how the final outcome is measured can be supported by APA's principle of standards and assessments. Self assessments can allow learners to gauge their learning progress and enhance their motivation for self-directed learning. When learners possess high

motivation to self direct their learning, they will set standards and goals for themselves in learning and determine how to measure outcomes of learning objectives.

Transformation

There has been much debate about school reform and education redesign. Arguments exists that educational goals are not where they need to be. For instance, some believe that focus on technical issues such as high academic standards, increased student achievement, alignment of curricula and assessment all result in too much emphasis on testing and teacher responsibility for student achievement (McCombs B. L., 2001).

These “imbalances” need to be transformed into individual focus and learner needs to eliminate drop outs, learning disconnect and the thought that school is irrelevant (McCombs B. L., 2001). Supported by Herb Kohl in an interview (Scherer, 1998), curriculum should be shaped by what teachers know and what students are interested in. Interest-based learning is beneficial in self-regulated learning and increases the outcome of learning quality (Baumert & Koller, 1998; Hidi S. , 1990 & 2001; Krapp, Hidi, & Renninger, 1992; Renninger, 1998 & 2000; Schiefele, 2001; Schiefele & Wild, 2000). Relevance to personal interest is one of the factors that the APA workgroup found to be a stimulant in creating intrinsic motivation to learn. (APA Work Group of the Board of Educational Affairs, 1997). Each student holds a unique view of the world and learns accordingly. Shifting the teaching focus from what the teacher deems important or using standardized curricula to assessing needs and interests of students is learner-centered instruction. This form of teaching is being looked at more and more for

efficiency of education. Beneficial to both parties, learner-centered refers to learning new beliefs and visions of practice that are responsive to and respectful of the diverse needs of students and teachers as learners (Darling-Hammond, 1996; Sparks & Hirsh, 1997).

Paradigm shifts are likely necessary for transformation. In respect to education, paradigm shifts must happen for an educational reform to take place. Transforming from traditional teacher-student roles to student-centered instructions is not always a smooth ride. Instead, hostility or repulsiveness may surface at first due to the objection of students' losing step by step instruction from a teacher (Felder & Brent, 1996). Open ended questions are difficult for some students to grasp for the first time; therefore, examples will need to be provided. It is very important that a teacher who is adapting to a student-centered instructional teaching method is prepared for negativity. However, being equipped with positive responses will prevent the teacher from getting discouraged (Felder & Brent, 1996).

Because some traditional educators may question the need to transition to student-centered learning (SCL), Bob Bender from the University of Missouri recorded a personal journal (2003) that gave results on using SCL in online class scenarios that led to the five questions listed below:

1. For which courses are student-centered experiences appropriate? Are they appropriate for all courses?
2. How can we assure that the workload is balanced for students and instructors?

3. Can we develop incentives for both students and instructors that acknowledge the commitment necessary for student-centered learning to succeed?
4. What are the appropriate technologies to support student-centered learning?
5. With the use of technology, what is the relation between in-class and online activities?

The above 5 questions can be directly tied to the guiding principles in the APA's learner-centered psychological principles. The second question of Bender's first SCL transition point asks if SCL is appropriate for all courses. According to the APA's principle, goals of the learning process, the successful learner will learn new knowledge by creating links between existing knowledge and finding meaning in new material. There should be goals in every learning experience. With each learning opportunity, the educator possesses hope that students will learn and make meaningful connections, while the learner strives too for learning outcomes. Therefore, the question asked by Bender can be answered positively with support from APA's second cognitive and metacognitive factor.

To ensure a balanced workload between educators and students, consideration of the APA's learner-centered principles in their entirety would provide the desired objective. Holistic understanding of the learner-centered psychological principles would result in the incentive necessary for learners and educators to provide the commitment needed for successful LCI. In response to the technologies consideration questions proposed by Bender, comes the APA's 'context of learning' principle. Teachers possess a majority of

the control with this factor. Technologies can be a highly effective learning tool. However, appropriate levels of technology utilization and use should match the audience skills' level.

One of the first requirements for leaders who are learning to lead learner-centered, inquiry-based activities is to possess a tolerance for a certain level of chaos (Bourdeau, 2004). More importantly, a mere change in teaching perspective can be the solution for teachers to push through the barriers. For example, research on learning shows that not only *can* students learn, but students *do* learn. Using the “do learn” model respects and accommodates student diversity by assuming that learning and motivation will be natural and that students can be trusted to guide their own learning process (McCombs B. L., 2001). Clear evidence has shown that the “do learn” systems offer superior results over the “can learn” (McCombs & Whisler, 1997). Using the 14 principles for learner-centered psychology is also supported by McCombs (2001) as a great framework for educators transforming to learner-centered instruction.

PCC Instructional Computing Facilitator, Greg Kaminski, put together a collaborative piece of resources for educators wanting to transition to LCI. A complete list of his sources can be found in the appendix. The need for this list was developed in response to Kaminski's question, “How would you feel about letting students have input into the course syllabus, topics of discussion during class time, which assignments students will complete, and deadlines for those assignments?” (Kaminski, 2010). These questions are at the fulcrum of decisions for educators who decide to use LCI. Kaminski describes it

best when he says, “the balance of power shifts somewhat as the instructor role moves from the expert delivering the content toward facilitation of the student learning process” (2010).

Adult Education

Based on the literature review for this study, limited information was found relating LCI to adult education. Nonetheless, the importance in reaching adult learners with relevant information that fit their needs in the most effective manner is important. The purpose of this pilot study directly regards the education of adult learners. As argued by many, adult education is a must. Florida State University professor, Wayne Schroeder concludes that “we must change (learn) continuously so that consistency, adjustment, and thus happiness might become realities” (1966). The fact that adults are never too old to learn is indicated in studies that show humans are able to learn effectively throughout life (Schroeder, 1966). There are many reasons that explain why adults appear to learn at slower rates: physical declination, self-underestimation, conflict of behavior patterns, role conflict, status protection, disuse of learning skills, and motivation (Schroeder, 1966). Despite these “barriers”, if embraced properly by adult educators the situation “could very likely result in highly enriched continued learning experiences” (Schroeder, 1966).

The U.S. Department of Justice published a publication titled “Designing Learner Centered Instruction”. The readings are specific to adult education and begin by listing

numerous principles that must be considered by educators before training adults

(Gurnell & LeMaster):

- Entry level knowledge and understanding of participants must be considered upon designing a program. *Addressed in APA's principles: 'developmental influences on learning', 'learning and diversity'.*
- Adults can accept, remember, and regurgitate information if they can integrate it with what they already know. *Supported by APA's principle: 'construction of knowledge'.*
- Most adults prefer active to passive learning, coupled with mind stimulating challenges. *Included in APA's principles: 'strategic thinking', 'thinking about thinking'.*
- For adults to understand how well they are doing and what they are supposed to accomplish in a learning situation, checks for understanding, opportunities for practice, and feedback are all necessary. *Supported by APA's principle: 'standards and assessments'.*
- Lessons need to be flexible to the differences in adult experience, ability, background, and preferred styles of learning. *Explained in APA's principles: 'individual differences in learning', 'learning and diversity'.*
- To maximize what adults learn, practice and transfer activities should be incorporated into the training. *Idea developed in APA's principle: 'effects of motivation on effort'.*

The content contributors of the U.S. Department of Justice developed a seven step process for designing learner-centered instruction that is particularly for training with adults (Gurnell & LeMaster).

1. Determine the target audience for the training: who will be invited, required, allowed to attend?
2. Determine the outcome or goal for the training. What will happen as a result of the target group successfully completing the training?
3. Conduct a task analysis. What tasks would a person have to do in order to accomplish the outcome or goal, and what knowledge and skills would they need in order to perform each task?
4. Develop realistic and measurable performance objectives.
5. Develop a five stage lesson plan that guides learners through the learning cycle:
 - a. Anticipatory set
 - b. Instructional input
 - c. Guided practice
 - d. Independent practice
 - e. Closure and evaluation
6. Design instructional strategies that engage participants actively and help them reach or accomplish the desired performance objectives.
7. Design training aids that clarify learning points, assist participants in remembering information presented and comply with copyright law.

Key points from the seven steps include: active interaction between educators and learners, identified goals, assessments throughout, and instruction when necessary. When the prior seven step process is considered holistically, positive learning success of adults reaches a higher probability. An andragogy study could provide another literature set that could apply in further studies.

Cognitions

Cognitive and metacognitive factors comprise the first six principles in the learner-centered psychological principles. “The bridging of cognitive and affective learning occurs when the learner discovers personal meaning associated with the information acquired” (Combs, 1982). According to Combs, the relationship between learning and personal meaning is the “the most crucial and the most neglected aspect of teaching” (1982). Research shows many connections between personal meaning and learning (Gorrell J. , 1992). For example, construction of new concepts from one’s own experiences indicates improved retention and information comprehension. (Gorrell & Downing, 1988; Gorrell, Tricou, & Graham, 1991). It is assumed that specific emotional experiences impact development of motivation, the emergence and stabilization of certain topics or objects of learning, and general motivation based on interest (Krapp, 2005). One’s generation of their own associations or responses has been found to increase retention and retrieval of information by providing multiple ways of accessing information. Furthermore, additional associations are more likely to occur for later learning (Anderson, 1985; Gayne, 1985; Gorrell & Downing, 1988; Hyde & Jenkins,

1973). Variable contexts during the acquisition phase of meaningful concepts will result in the learner being able to recognize broad applications to the concept (DiVesta & Peverly, 1984). This skill will more likely enhance the ability of students to make learned material applicable in real world situations.

Further cognitions study leads to the phenomena of metacognitions. Metacognitive experiences are an aspect of metacognition that serves two functions. One is subconscious that gives rise to feelings and the other is conscious that makes use of metacognitions and existing knowledge (Krapp, 2005). Metacognition is a form of self assessment. It asks one to reflect on their thoughts and learnings.

Motivations

When doing extensive research on education, motivational factors occur in literature as frequently as any other factor, indicating motivation is as highly important in development and learning opportunities as other factors. For example, intrinsic motivation is a phenomenon that gives rise to personal gratification for pursuing or continuing an idea or task. "This natural motivational tendency is a critical element in cognitive, social, and physical development because it is through acting on one's inherent interests that one grows in knowledge and skills" (Ryan & Deci, 2000). Intrinsic and extrinsic motivation has a strong impact on successful learner-centered instruction.

Motivational and affective factors include principles 7-9 on the list of APA's learner-centered psychological principles. Learner's self concept can be strongly related to experience and success. Good experiences and high success leads to real changes in

self-concept and performance. The latter is a result of the learner discovering meaning. This, in turn, leads to an increase in self efficacy (Gorrell J. , 1992). There are four sources of self efficacy according to Bandura (1977, 1986). A person's performance in carrying out tasks, learning new procedures, understanding new material, and solving problems are affected by the four sources: one's own accomplishments, observing the accomplishments of others, listening to comments of others, and attending to one's own level of physiological arousal (Gorrell J. , 1992). Orey (2001) also supports Bandura's (1997) four sources of self-efficacy and suggestions on how to improve self-efficacy through mastery experiences, vicarious experiences, verbal persuasion, and physiological state. Mastery experiences are defined by one's own personal success or failure experience. Studying and imitating someone else based on their experience is vicarious. Verbal persuasion and being in a good mental state can dramatically improve one's ability to complete a task. The basic needs theory puts these ideas of self efficacy into two need realms: biological needs and psychological needs. Once biological needs are satisfied they are usually satisfied for a while, whereas psychological needs must be consistently fulfilled (Krapp, 2005). Thus, educators need to be mindful of the fact that consistent psychological stimulants must last the duration of an educational time for maximum learning results.

Vicky Lara from El Paso Community College describes requirements for student-centered teaching as reaching the educational goals of student self-direction and personal efficacy. She (Lara, 2007) goes on to mention that teachers must create certain opportunities that allow students to do the following:

- Have opportunities to set and re-set their own goals
- Set goals, define strategies and identify indicators of success
- Think about their own performance
- Develop meta cognitive behaviors
- Become better at asking questions (of themselves too)
- Control text, i.e., through mapping
- Coordinate “long-range curricular planning”
- Develop personal efficacy

“When learner-centered is defined from a research perspective that includes the knowledge base on both learning and learners, it also clarifies what is needed to create positive learning contexts and communities” (McCombs B. L., 2001). This thought is relevant to the observational study done in Robertson County that will be detailed later in chapter 3. The learning objects that were given to the farmers involved in the study would hopefully spill over into other future learning contexts (FFA and 4-H) and for the community (other agriculture groups – adult and youth).

Research shows motivation is the underlying factor for many achievements and successes. “Motivation concerns energy, direction, persistence, and equifinality – all aspects of activation and intention” (Ryan & Deci, 2000). The two types of motivation; intrinsic and extrinsic; are both highly important for development and educational practices. The natural tendency of humans, even as infants, to seek challenges, explore one’s capabilities, and learn is an internal force that drives ones ambition. Intrinsic

motivation leads to high quality learning and creativity (Ryan & Deci, 2000). As defined by Csikszentmihalyi and Rathunde (1993) and Ryan (1995), this type of motivation “describes the natural inclination of assimilation, mastery, spontaneous interest, and exploration that is so essential to cognitive and social development and that represents a principal source of enjoyment and vitality throughout life” (Ryan & Deci, 2000).

Extrinsic motivation describes the performance of an activity in order to attain some separable outcome (Ryan & Deci, 2000). Extrinsic rewards can undermine intrinsic motivation (Ryan & Deci, 2000). This is because the two motivations are achieved for opposite motives. Extrinsic motivation is becoming motivated to perform a task for an external reward, while intrinsic motivation is the outcome of an individual’s desire to perform a task for personal benefit.

Empowerment

Empowerment is a phenomenon that defines the internal processes within an individual to strengthen one’s self efficacy. Although, some studies have been conducted, empowerment is a relatively under-researched area due to the challenge of being able to measure the concept. Empowerment is defined by Conger & Kanungo (1988) as the motivational concept of self-efficacy. (Spreitzer G. , 1995). Yet, this definition is arguably too vague according to Thomas and Velthouse (1990), who state that empowerment is increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual’s orientation to his or her work role: meaning,

competence, self-determination, and impact (Spreitzer G. , 1995). In the latter definition, competence is equated with Conger and Kanungo's definition of self-efficacy.

Two essential pieces of information are given by Lawler (1992) that are critical for empowerment. Those suggestions are: 1) information about an organization's mission and 2) information about performance. Because some people do not fully understand the benefits of performing a task, reward systems are necessary for empowerment (Spreitzer G. , 1995).

A list of participatory factors has been derived from research investigating why adults choose whether or not to partake in educational opportunities. One of the studies concluded that some adults possess a high motivation to learn (Norland, 1992). It is also found the conditions of workplace environment (which can be related to educational environments as well) are highly contributory to empowerment. Blau (1987) and Mowday and Sutton (1993) said that viewing environments in terms of their "constraints and opportunities for individual cognitions and behaviors" is an example of how environment contributes to empowerment (Spreitzer G. , 1996). Furthermore, empowerment should offer opportunities rather than constraints on individual mind set and behavior (Torbert, 1991). Additional support proceeds and more opportunities naturally occur with high involvement (Lawler, 1992) and commitment (Walton, 1985; Spreitzer G. , 1996). High involvement promotes trust, sense of control, ego involvement, and identification; all motivational factors (Locke & Schweiger, 1979). "For individuals to feel empowered, they must perceive a role environment as liberating

rather than constraining” (Deci, Connell, & Ryan, 1989). Deci, Connell, and Ryan’s idea ties together the importance of satisfactory biological needs with psychological needs.

One of the most effective ways to empower students is to let them decide their own goals. “It sets into motion that vehicle for “intrinsic motivation” that really lets the experience belong to the learner” (Wilson, 1995). Students will pick goals and objectives that offer meaning. For undergraduate and graduate students, five domains of practice indicate importance for motivation and achievement: establishing positive interpersonal relationships, facilitating the learning process, adapting to student learning needs, encouraging personal challenge and responsibility for learning, and providing for social learning needs (McCombs B. 1998; McCombs & Lauer, 1997; McCombs & Quiat, 1999).

Another way to empower students is to let them choose what activity they want to partake in. Choices allow students the chance to make decisions on what and how they learn. There is usually more than one way to learn, and letting the student pick the way gives them the power to learn in the way that is more suited to them (Wilson, 1995).

The teacher sharing their vulnerabilities and learning with the students is the third key to empowering learners during experiential learning. A teacher who can invest time in learning with students does not forfeit leadership and authority, but witnesses “a group discovering something for themselves, and feeling their own sense of purpose and importance.” (Wilson, 1995).

Self Assessment

Self assessment is the 14th principle listed under APA's learner-centered psychological principles. Self Assessment and reflection are solutions for teachers in determining how to better relate to their students. Self assessment of ongoing learning, change, and improvement can result when learners perceive the effectiveness of programs to meet their individual cognitive, social, and emotional needs (McCombs B. L., 2001).

Facilitators and educators need to adapt new teaching methods when low self assessments show from students. Continuous self assessment is one result from intrinsic motivation. Many times it results in the change needed to achieve success or increased enjoyment in a task or learning opportunity.

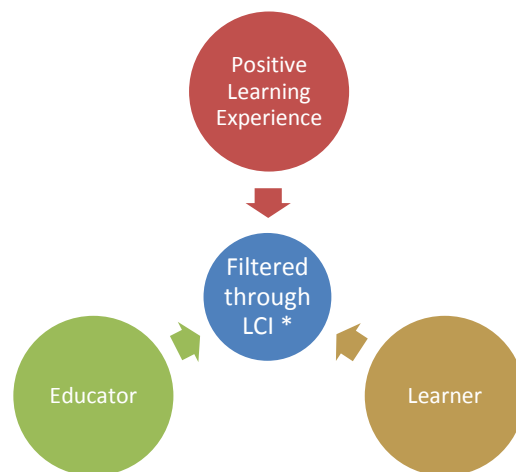
McCombs (2001) concluded that transforming our K-20 educational system by considering the needs and perspectives of the people in the system, including students, teachers, administrators, parents, and community members, is one of the most powerful ways to enhance learning, motivation, and achievement.

Literature Review Summary

Based on literature, learner-centered instruction is a teaching strategy that converts traditional teaching methods into more applied styles where the student takes responsibility in his/her own education. There are motivational and empowerment techniques that must be used by the teacher to foster ample levels of motivation and self-efficacy within the student. Studies show that when a learner becomes empowered, many necessary factors follow: increased self-efficacy, determination,

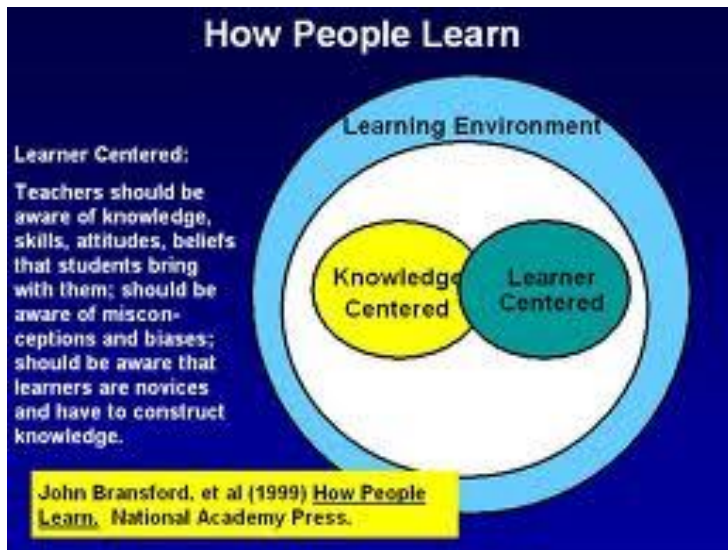
student inquiry, subject interest, self assessment, and metacognitions. The previous mentioned factors can lead to the desired learning experience by the educator and for the learner. When education becomes experienced, learning occurs. A detailed network analysis, derived from the literature review, is listed in the appendix. The network analysis places the APA's 14 learner-centered psychological principles as the structural component of the network. Further structural components of the network are connections found in other literature readings. Relational ties were pulled directly from the readings and lists the references where the relationships were found. The network analysis was constructed to illustrate the APA's principles as the contextual framework for the study, and give validity to the remaining literature researched by showing the support of the readings to the APA's principles. Below is a chart, simplified from the network analysis depicted in appendix B that shows independent variables involved in the observational study.

Figure 2.2: Simple Network Analysis



* LCI = Learner-Centered Instruction

Figure 2.3: How People Learn



Contextual Framework

Although, an in depth study on andragogy could provide useful in future studies, a quick search on “learner-centered instruction” will show that minimal work has been done relating the concept to adult education. Still, with an extensive literature review, a framework can be derived to guide the observational study and further research for applying learner-centered instruction with adult clientele. The American Psychological Association’s 14 principles defining learner-centered instruction were used as a contextual framework. Motivational theories will be implemented during the study and student inquiry and self assessment will drive the process.

Hypotheses

Based on the literature review and contextual framework hypotheses can be derived.

Below is the list of hypotheses that will be tested during the study:

- 1.) Learner-centered instruction is an effective method of learning for adult farmers.
- 2.) Significant roles must be played by the facilitator/educator in implementing LCI.

Chapter 3
Methodology

Research Design

The pilot project was conducted to explore the hypotheses previously concluded on learner-centered instruction. A survey assessment was administered to survey participants at the end of the study. For results compiled from the assessment, both quantitative and qualitative data were collected. Quantitative comparisons are used on the questions that request the participant to answer according to the provided Likert scale. The open ended questions are analyzed qualitatively. Qualitative research is the predominant research style used for this study. The topic explored for this research and the method used were chosen to capture the passion, intensity, and intimacy of the effects. As identified by Patton (2002), “qualitative designs are naturalistic to the extent that the research takes place in real-world settings and the researcher does not attempt to manipulate the phenomenon of interest (e.g., a group, event, program, community, relationship, or interaction).” Moreover, because learner-centered instruction is an understudied learning concept in adults and cannot offer a concise template that alludes to its effectiveness, qualitative design was used to collect and analyze non-quantifiable information. The end goal of using qualitative research methods in studying LCI with adults is to deliver practical and pragmatic results that can be replicated by other extension agents in program planning and design.

There are three kinds of qualitative data: interviews, observations, and documents. (Patton, 2002). Each form of qualitative data seeks to find themes, patterns, concepts,

insights, and understandings. (Patton, 2002). Interviews use open ended questions to acquire detailed responses “about people’s experiences, perceptions, opinions, feelings, and knowledge.” (Patton, 2002). Observations include fieldwork descriptions of activities, behaviors, actions, conversations, interpersonal interactions, organizational or community processes, and any other aspect of observable human experience (Patton, 2002). These observations are recorded in field notes that are “rich, detailed descriptions, including the context within which the observations were made.” (Patton, 2002). Documents can be photographs, written field notes, interview notes, post program records, etc. Documents are written materials and other documents that “consist of excerpts from documents captured in a way that records and preserves context.” (Patton, 2002). Each session of the observational study was filmed. Videography recorded the observational data for doing post program observations and notes.

Within the realm of qualitative inquiry, the theme most fitting to the observational study was emergent design flexibility. While the idea of learner-centered seems to follow a more naturalistic approach, in letting processes unfold naturally, the fact that the farmers are given guidelines to follow and continuous input from the researcher leads to a better applied description of emergent design flexibility. According to Patton (2002) this design strategy offers openness to inquiry adaption when understanding deepens and/or the situations change. The researcher avoids getting locked into rigid situations that eliminate responsiveness and pursues new paths of discovery upon their emergence.

Because the researcher will participate in the observation from time to time because of the facilitator role that is simultaneously held by the researcher, this observational study will involve participatory observation. Because the researcher did participate in the study, observer biases are probable. While this could skew results from being exactly replicated in future studies, it also allows the researcher to have further insight needed in qualitative studies.

Observational Study Details

In the fall of 2011, all producers on the Robertson County beef mailing list were mailed a postcard from the Robertson County extension office. The card invited beef practitioners within the county, many of who are members of the Robertson County Beef Cattle Association, to attend the September cattlemen's meeting at the Future Farmers of America (FFA) barn, which was recently built on the county's new school site. Specifically, this location was chosen by the facilitator in order for study participants to visibly observe the layout of the farm that surrounds the barn. Visual observations allow for quicker idea emergence and practical planning from participants in developing their farm design. Physically being at the location of interest would allow most any questions about the farm to be resolved immediately.

The meeting served as the September meeting for the Robertson County Beef Association. Prior to the meeting, it had determined that the common theme (developing a farm design) for the series of meetings would need to be thoroughly explained to participants at the start of the first meeting. The researcher (also county

agriculture extension agent and University of Kentucky graduate student) explained that for completion of her master's project, she was planning to study the interactions and actions of study participants in completion of a project that would result from learner centered instruction techniques. If successful, the finished project itself would become a model for hosting future cattlemen's meetings on topics and trainings that are learner-centered. Producers were given study consent forms to read and sign before additional information was revealed. A copy of the consent form can be found in Appendix D.

Further background information shared from the facilitator to the beef producers continued next. The project was to involve study participants in the development of a farm design for the new FFA farm and barn. During this time, the county school system had recently hosted a ground breaking ceremony for the new school. In purchasing the land for the school, administration purchased an additional 16-18 acres, dependent on the total acres needed for the new school, which was designated to the FFA advisor to use in his teachings. Other than having been allotted the land, the FFA advisor possessed no template that mapped how he planned to design the farm. When asked by the researcher to use the beef producers in developing plans for the farm, the advisor granted permission. See Appendix C for permission letter. The farmers were instructed to create a design that would be ideal for future learning opportunities. The farm would have to be adaptable to a variety of agriculture ideas. Beef cattle producers would work together to develop their ideal learning environment at the FFA farm. The farm design needed to be formatted in a way conducive to future educational

opportunities on issues and needs of the beef producers. The plans derived would serve as potential blueprints for the farm. Study participants would design the farm's infrastructure to utilize the land and barn in the most effective, educational way. Considerations should be made for agriculture diversity, adaptability, and annual learning opportunities. All these instructions were given to study participants at the beginning of the first meeting.

In terms of farm design ideas, only minimal instruction was given to the beef group. This was to offer only an outline and a few end goals that the group needed to get started. Further farm plan suggestions were not offered by the facilitator for the purpose of allocating originality from the beef group. Since the purpose of the plan was to represent the ideal learning environment for the farmers that would meet their educational objectives, the facilitator refrained from influencing the study participants' ideas by only using minimal examples and ideas.

In explaining why this particular group was chosen to participate in the study, producers were praised for their efforts in starting a strong Cattlemen's Association. The group had also been impressive in showing desire to see local producers succeed and beef quality enhance. The facilitator used compliments as an empowerment tool to intrinsically motivate the farmers to truly take authority on designing the farm to fit their ideal learning environment. The background details, introduction, and empowerment strategies were all jotted down as notes for the facilitator in advance of

the meeting. In preparing for the study, the researcher strategically used her notes for the outline that she followed during the introduction of the meeting.

Following the written agenda that the researcher had developed, she next informed the study participants of the timeline of events involved in completion of the project. First, the group would finalize their farm plans. Next, they would explain how their design would be conducive to future learning opportunities. Then, beef producers would be asked how their farm layout, designed for education, could be used to teach agriculture students. They were encouraged to develop a plan that could contribute to the education of 4-H and FFA members. The farm plan would then be given to the FFA advisor for possible future use. Farmer contributions to the education of young people will hopefully be utilized in future educational opportunities. While the facilitator commentated from her written notes, no additional notes were taken by her. In playing a dual role, researcher and facilitator, different responsibilities occur accordingly. For instance, while playing researcher, notes are taken and observations are analyzed. When acting as the facilitator, responsibilities of addressing the group and educating during appropriate times are done. To avoid the lapse of detailed information collected, the entire first meeting was filmed. Viewing of the meeting took place after the meeting.

The goal of sharing the previous timeline of events with the group was to give them their end goal without showing them how to achieve it. Learner-centered instruction leaves the learning responsibility to the learner. It is up to the student to determine

how they best learn and the role of the educator to facilitate that learning. The facilitator revealed to the learners that their project's end products were a completed FFA farm design that would be conducive to participants' future learning and that of 4-H and FFA members, ways that participants could help youth learn utilizing the FFA farm those participants themselves designed, and a "blue print" for the FFA advisor. However, the actual learning objectives that lead to those outcomes were determined by the study participants. Therefore, the facilitator did not decide for the farmers what their future learning objectives should be. Instead the facilitator offered a wide open opportunity for the participants to identify what they needed to learn and how they would best learn it.

In the beginning, the facilitator did nearly all the commentating. Producers listened and were reserved in sharing their ideas. However, when the focus was handed over to the learners, inquiry and comments began. At this point, it was interesting to observe the reactions of the farmers. Questions about what resources the farm had to offer and specifics on how the barn was constructed were asked. After sitting in the barn, tossing around ideas for nearly an hour, one of the producers suggested stepping outside to take a visual look at the farm and surroundings. More questions were asked on where farm perimeters lie. Suggestions were made and conversations began on how the farm could be designed. The group made their way back to the meeting table in the barn to begin mapping some ideas. In order to develop the most efficient farm design, one beef producer requested visiting some established research farms such as the University of Kentucky farm. Finalized plans were put on hold, pending the tour of UK beef unit.

A couple of weeks later, a tour was scheduled at the University of Kentucky beef unit for the beef producers to see the layout of a multi-million dollar operation. While their farm plan would involve a much less elaborate structure due to financial and size restrictions, the university's farm would offer an idealistic layout. However, the day picked for the tour turned out to be a good day for doing farm work and the attendance for the tour was low enough that the trip was cancelled. However, the facilitator did not let the requests of the study participants go unanswered. Instead, the researcher decided to offer a virtual tour to study participants. The researcher rescheduled a one-on-one tour of the beef unit with the University of Kentucky beef unit manager. The tour was filmed and shown at the next beef meeting.

Study participants reconvened in a classroom at the vocational school for their December Cattlemen's meeting. The video of the tour was shown and paused at scenes where the facilitator wanted to elaborate. At the conclusion of the virtual tour, aerial photos of the FFA farm were provided. Providing individual copies of farm aerial photos was a direct response to participants' requests during the first meeting. The map of the farm was projected on the white board so that initial sketches could be made with a dry erase marker. The land map was provided to the researcher via e-mail from the county PVA. Each producer that was present during this meeting received a printed map of the FFA farm on regular printer paper. The beef practitioners were encouraged to develop farm plans using their ideas coupled with ideas from the University of Kentucky beef unit. They were given the freedom to work individually or collaboratively during the start of sketching their ideal learning facility for the FFA farm. Ultimately, they had to

submit one final farm blueprint. The group briefly worked on their farm plan individually before collecting their ideas. It was apparent from the observations of the second meeting, that producers preferred working in groups to working individually. They did take a few minutes to work silently on individual maps. However, it wasn't long before someone would strike up a conversation regarding the farm or ask a question about one's plan to another producer. Once the conversations started, the individual plans began to condense down to few group plans. There were two dominant leaders in the group. One was vocal in sharing ideas about how to layout the farm and in asking detailed questions about the design. He did an excellent job in building participation among the other meeting attendees. Unfortunately, that leader had to leave the meeting for another commitment amidst the talk. The second leader actually put pencil to paper and sketched what was being said. After doing a rough draft, he asked for a clean map to do a final draft on. Once the designs of the producers had been recopied onto the clean map, the facilitator then filmed him explaining the farm layout. Collected by the researcher, the final hand-drawn map was scanned on a computer version of the map using photo shop. A copy of the farm plan can be found in Appendix G.

Before leaving that night, producers were directed into discussion, led by the researcher, of how their completed farm design and years of experience in farming could be filtered into a useable resource for FFA and 4-H agriculture students. The producers were able to discuss some problems that exist for young people and agree that the design they offer in their farm plan would be accommodating to youth with

livestock projects. It would also serve as an ideal teaching resource for the FFA advisor on many teachable subjects. The group expressed their desire to help in future youth projects at the farm to share their expertise and expand the scope of opportunities that youth would be equipped with at the farm. During this discussion, the facilitator began recording responses to use for later analysis.

A Cattlemen's Association meeting was held in February that wrapped up the study. Members of the group who had been involved in the previous portions of the study were asked to complete an assessment survey. For the participating members that were not in attendance during the third meeting, a copy of the survey was sent to them and returned upon completion. Thus, their survey answers were included in the final survey analysis. The survey was used to collect the thoughts of learner-centered instruction by adult learners and offer feedback towards the project in general. Metacognitions were used in writing answers to the open ended questions. A copy of the survey can be found in Appendix F.

Postcards, minutes, and agendas that were sent to beef producers and used at the meetings are attached in Appendix E.

Subject Selection

As listed by the American Psychological Association work group, learner-centered instruction principles focus on the type of learners that are active, goal directed, self-regulating, and assume personal responsibility for their own learning. Robertson County Beef Cattle Association members were selected for this study because of their

fulfillment to those characteristics. The group was a newly formed association. Members are ambitious and focused on learning more about the beef industry. They truly want to see improved performance of beef operations within the county. In designing a plan for the FFA farm, this type of passion was needed to do a thorough job on the design. With the potential of the farm design to become a future reality, the group assigned the task would need to offer the utmost sincerity and professionalism in developing a plan that was worth replicating to life. Though careful consideration was given to the cattlemen's group, they deservedly surfaced as prime candidates for the study to provide the insight and work ethic desired throughout completion of the assigned task.

Although the group holistically provides these certain desirable characteristics, as with the nature of any group, individuals that comprise the beef association offer unique individual characteristics. Some are more authoritative, leadership oriented, vocal, opinionated, and openly result-driven. Others are more reserved, thinkers, slower to act, negotiable, and experienced. The variety found in this group (also found in most any subject population) is what makes using LCI challenging as well as invigorating. LCI focuses on the direct needs of the learner. Those needs differ based on characteristics that define the individual. Because LCI creates individualized curriculum, it can become challenging for the facilitator to foster to the needs of each person in the group. However, when done effectively, LCI is an invigorating learning style for the educator to facilitate because results of this learning style reach higher standards and for a larger proportion of the group.

The challenge itself lies with the difficulty found in the facilitator to relinquish his/her traditional styles of teaching, feeling a loss of instructional control, and adhering to less organized styles of learning. For the facilitator to adjust his/her paradigmatic view of teaching to accommodate the differences in LCI from traditional education, the facilitator must possess complete understanding of LCI. In understanding the complexities and simplicities of LCI, coupled with willingness to provide the educational environment, resources, and freedom that accompanies LCI, instructors will provide an environment conducive to LCI.

Instrumentation

Independent variables in this study are the roles and intentions of the beef producers and facilitator/educator. The dependent variable was the learner-centered instruction process. To determine if LCI, in this case study, was successful or not, characteristics of study participants and their interaction patterns, environmental factors, and facilitator inputs were observed. These observations measure if their effect enhanced or hindered LCI. What would determine that LCI had indeed been successful in the case study?

Most obviously would be a completed farm design plan made for the Robertson County FFA farm. Less obvious but more importantly, LCI successes emerge from much deeper outcomes than simply measurable results of the final 'materialistic' project. This does not, however, negate the fact that the quality of the materialistic project is an excellent indication of what internal processes were or were not used during the LCI scenario. A finished farm plan would be the concrete result of farmers taking learning into their

own hands by creating the farm blueprints to fit their ideal learning environment for future learning opportunities. By being involved in unfolding one farm design, the beef practitioners may work together to determine what learning situations they require for continuing education in their field of work. They must consult the facilitator when needed on structural components of the design and practicability of what can be built in their given situation, and for what purpose. It would take continual motivation from the facilitator that what they are doing will become a more meaningful learning experience than traditional methods of learning. Beef participants' willingness to "go above and beyond" the task set before them would indicate the success of the learner-centered method. Facilitators play a major role in constructing the environment that learners will be exposed to and for implanting a "can do" attitude for the learners.

These ideas discussed for instrumentation were necessary components throughout the study. The facilitator did use motivation as often as possible to assure study participants that they were on the right track. She also clarified questions and reiterated what LCI was when confusion came about. The group stayed on task and did produce a finished FFA farm plan.

Data Collection

In determining what common theme needed to be constant from meeting to meeting, the "big picture" item was chosen. Developing a FFA farm plan was the common theme. Specific to each meeting, was a different phase of the farm planning sequence (1st- introduction and discussion, 2nd- actual farm plan development, 3rd – assessment), yet

the farm's "blue print" was the ultimate end product. Video-recording was taken during all beef meetings to capture relevant data needed for the study. Detailed reflections and notes were recorded following the meetings. Codes observed during analysis of the video tapes were motivation, student inquiry, and assessment. Data collected on motivation included phrases spoke by the facilitator to beef producers, self-empowerment that was evident by one speaking and contributing to the group, and the group leaders' ability to involve others in the project. As members of the group became involved, they began asking questions to the facilitator for clarification and to other members for discussion. All these points were recorded on film for observations that will be discussed in chapter 4. The seven study participants were given an assessment survey to gather reflections on personal involvement in the study and thoughts on learner-centered instruction. The survey was designed to give further insight about the groups' justification for their farm plans and how the plans would maximize learning opportunity. The survey administered to study participants can be found in Appendix E. The answers compiled from the survey are additional assessments used in the results. Assessment is coded in two different ways. The first is the assessment given by study participants. This was done by both observational assessments during meetings and results from the survey.

Data Analysis

In studying the data collected, several analysis strategies for qualitative inquiry were used. Because specific observations build to general patterns (Patton, 2002), inductive

analysis and creative synthesis created a lens through which the research was filtered. This holistic perspective is unique in that it gives importance to every piece of the puzzle. Many of the relationships and conclusions drawn from the research will come to light because of considerations found from holistic perspective. Analysis of LCI in this scenario will be observations and reflections derived from voice and perspective. When using voice and perspective in qualitative research, “a well-trained, experienced, and astute observer adds value and credibility to the inquiry.” (Patton, 2002). “Reflexivity reminds the qualitative inquirer to be attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one’s own perspective and voice as well as the perspective and voices of those one interviews and those to whom one reports.” (Patton, 2002). Patton (2002) further describes the purpose of voice as “a credible, authoritative, authentic, and trustworthy voice engages the reader through rich description, thoughtful sequencing, appropriate use of quotes, and contextual clarity so that the reader joins the inquirer in the search for meaning.”

Prior to the first meeting when the purpose of the study would be explained to beef practitioners, notes were taken by the researcher. The notes were comprised of key elements to be explained to the potential study participants. Points highlighted on the notes were: reason for conducting study, selection of participants for study, definitions of learner-centered instruction, and what to expect from study. The first session with the beef producers was filmed from start to finish by an outside party. Because the researcher was a participatory observer during this meeting, minimal notes were recorded during the meeting itself. Notes that were taken by the researcher included

responsibilities given from study participants to the facilitator for furthering the mission of the study.

The recording captured detailed observations of what occurred during the meeting. The film was reviewed during data analysis. During the analysis of the first meeting film, careful attention was given for reactions of study participants. Particular quotes, questions, and behaviors of study participants were recorded and reported in the results. Learner-centered instruction was a new concept to the study participants. It was interesting to watch their reaction towards learning about the concept and directly applying it when starting the FFA farm plan project that same evening.

The film of the UK beef farm was reviewed and edited prior to the second meeting. The film was shown at the second meeting, allowing study participants to formulate ideas on their farm plan. Once participants were ready to start their farm plan design, the researcher began filming their interactions and work on the plans. Like the first meeting, this film was analyzed for details during data analysis. Themes developed from this portion of the film included how study participants interacted together and relied on one another to complete the farm plan. Immediate results of learner-centered instruction were evident during the latter part of the second meeting.

During the third meeting, no video recordings were made. Notes were jotted down by the facilitator during the discussion of the farm plan in old business. A survey was taken by study participants to gauge their involvement in the project and thoughts on learner-centered instruction. After the meeting, the facilitator compiled the survey results.

First, each question was compared between individuals. Then conclusions were made between corresponding answers. There was one individual whose answers were slightly less favorable than the others. However, conclusions were drawn to explain this difference. Further analysis was given to generalize answer patterns, for example, if this group answered with 'X' on this answer, then the group likely answered with 'Y' on a different answer because of 'Z'.

Despite the film analysis and notes that were taken during meetings, majority of the observations came from reflections on the study. Due to the variability, flexibility, and uniqueness of learner-centered instruction in every situation, a high level of variability exists in results. General results and common themes can be formulated; however, awareness must also exist that results from learner-centered scenarios and the way in which the results are interpreted differ across situations, groups of learners, and facilitators.

Time Table

The observational study began with a postcard letter sent to the Robertson County beef cattle producer mailing list a week in advance of the meeting. The postcard invited the producer to attend the next scheduled cattlemen's meeting on September 19, 2011.

Topics outlined for the meeting were: Farm Design and Master's Project. The meeting was then conducted on the night of September 19. Explanation of the Master's Project and thesis research was given by the facilitator and letters of consent were distributed and signed. Based on beef practitioners input for further meetings, the second meeting

was scheduled for Wednesday, October 26th for a University of Kentucky beef farm tour. Because unforeseen obstacles prevented beef members from actually visiting the university farm, the tour was rescheduled for a one-on-one tour between the researcher and farm manager. The tour was filmed by a relative of the researcher. An additional meeting was held on December 8 to show the video of the farm tour. Following the video, each meeting attendee was provided an aerial map of the FFA farm. Study participants worked collaboratively to complete the farm design and think about how their design and knowledge could be used to offer teachable moments to youth. To complete the study with the beef producers, a final meeting was held on February 16, where a survey was administered. By taking the survey, participants reflected on their project involvement and offered their perspectives on learner centered instruction. Five of the seven total participants were present at the final meeting and completed their assessments that evening. The other two were sent the survey to complete. Both were returned.

Chapter 4

Results

In researching a topic such as learner-centered instruction and using qualitative methods the findings are unique to the particular situation. To elaborate, consider the topic of learner-centered instruction. Any participant in LCI, learner or educator, will develop skills and ideas specific to that individual. When being educated through learner-centered instruction, responsibility shifts from the teacher to the student. The student merits higher responsibility in determining what their learning objectives should be and in using inquiry to emerge them into a richer context of learning. Learning affects every student differently. The questions they have about a topic, prior information they can build from, level of interest on a particular topic, applicability of that topic to their lives, perceptions on received information of that topic, and much more all contribute to a unique ability to learn, retain, and regurgitate information. Thus, no two people will be affected exactly the same way given the same information. This is what makes LCI such a great tool in teaching, because it offers individualized learning. And when learning is so individualized, no traditional form of teaching could offer concise attention, which allows each learner to extract meaning in their own way as effectively as offered with LCI.

Each teacher or facilitator has their own preconceived ideas of educational settings. Whether it be paradigms of how subjects are selected and taught, traditions on how those subjects are to be delivered, personal interest or disinterest on certain topics, skill of disseminating information, and comfort level on subject knowledge, each educator

will fulfill their role as teacher and facilitator unique to their own style, preferences, and methods that have developed from the cumulative past experiences gained by each individual. Because of the uniqueness held by each educator, the way in which they involve themselves in the facilitator role of LCI is also unique. Therefore, the experiences they provide to the learners will differ among teachers. The students become so actively involved in their learning that they raise the bar for teachers to provide more information or more conducive environments that will allow deeper meaning of information to be explored by the learner. Because learner-centered offers this flexibility in curriculum structure, the teacher will often find students pushing beyond the scope of the topic or knowledge level of the teacher. The exciting thing about LCI is that the roles of the student and teacher, can at times, become reversed. When student inquiry surpasses the level of understanding that a teacher has on a topic or forces further exploration than initially required by the teacher, then the teacher too becomes a learner. This is because the teacher must respond to the students' questions by either learning more about a topic to disseminate that information to the students, or because the teacher learns how to address the need for further information. The latter is often the result of learners taking on educating roles. An effective way to address a situation where the student inquires more about a given topic than the teacher knows or is prepared to discuss, would be for the teacher to empower the student to do the research necessary to answer the question and further share their findings with the others involved in that educational situation.

This discussion describes how unique each LCI situation is for both educators and learners. Thus, the way a researcher would report on LCI becomes just as unique. The observations taken on LCI would reflect their personal perception of interactions, findings, and interpretations. Analyses of those observations are influenced by the understanding of LCI and experiences of the researcher.

Finally, consider the versatility of qualitative research. “The challenge of qualitative analysis lies in making sense of massive amounts of data” (Patton, 2002). Patterns and themes from observations and written field notes must be deciphered. The lens in which the collected data is filtered and organized becomes exclusive to the researcher’s ideas, preferences, and interpretation. No matter the format used, “analysts have an obligation to monitor and report their own analytical procedures and processes as fully and truthfully as possible” (Patton, 2002). One major determinant of analysis is purpose. Data will be analyzed according to the researchers’ expectations prior to the study on what should be concluded and “how it will be presented” (Patton, 2002). This idea will guide the purpose of the research. Nonetheless, room for research adjustments should be allowed to accommodate any unforeseen findings and their effect on the results of the study or purpose for the research.

Combine the variability that LCI itself provides for learners and educators with the interpretation differences that exist in qualitative research into a thesis and the product yielded is an exclusively detailed, distinctly analyzed, researcher-specific, recollection

document. However, the planning and preparation for implementing LCI can be described and used as guidelines for other LCI situations.

Notes from Observational Study

During the first observational study meeting with the Robertson County Beef Cattle Association, a brief outline of the research project was given to the farmers by the facilitator. The outline verbally stated to study participants was being followed from a written outline prepared by the facilitator prior to the meeting. Only a brief synopsis of the meetings' purpose, including that beef association members were being asked by their agent (meeting facilitator/master's student) to take part in a 3 session study for observations regarding learner-centered instruction to develop FFA farm plans, was told prior to signing consent forms. Details of the project were only revealed after the signing of consent forms. Consent forms were distributed to meeting attendees and reviewed by participants. After they were signed and collected, a thorough description of background information, purpose of the study, and subject selection were discussed by the researcher. Participants listened intently with no verbal comments during the lecture. The researcher gave reasons for selecting the Cattlemen's group as her subject selection. Reasons included their desire to begin a strong county Cattlemen's Association, advance the quality of beef in their own herds, and better beef production in the county. The group's enthusiasm and passion were underlying reasons for their selection. Not only did the producers deserve to know the reasons why they were

chosen, but these reasons also worked well for the facilitator to use as means of motivating and empowering her study participants.

There were six members present during the first meeting. The diversity in personality and contributing skills between the members led to a highly effective group to work with. Although all in attendance were men, the spectrum of qualities possessed by each individual resulted in a well-rounded group to be studied. One individual could be described as: authoritative, leadership-oriented, ambitious, inquiring-minded, aggressive learning style. The second individual could be described as: leadership-oriented, opinionated, and purpose-driven. The third individual could be described as: excitable, practical, behind-the-scenes, motivator. The fourth individual could be described as: passive-learner, follower, quiet. The fifth individual could be described as: insightful, dependable, and curious. The sixth individual could be described as experienced, interpretative, and knowledgeable. Of course, many of the listed traits are applicable to more than just the individual described. Likewise, there are many good qualities of each individual not mentioned.

However, it was of high importance for the facilitator to consider all personality differences in striving to motivate the group to enthusiastically take an active role in the proposed study. In describing the purpose of the study, while simultaneously empowering the beef practitioners on their upcoming role, the researcher explained that the study evolved from a previous class assignment. In the class, the educator had challenged students to create a professional development project that would utilize new

teaching methods. The project would need to relate to the student's professional career. As a student of that class, the researcher recited to the beef group that the professional development project chosen was one that involved a newly formed, enthusiastic group of beef practitioners. Interestingly enough, the proposed idea that asked beef producers to help develop the FFA farm on the new school grounds became a fitting observational study for the researcher's thesis on studying learner-centered instruction in adult clientele.

The farmers were then given a broad scenario on what they were challenged to do. Beef producers would work together to identify what their needs as a beef practitioners were, and plan a farm design to accommodate educating themselves on those needs. While the researcher would assist them in whatever ways needed and direct the group to finalize a "blue print" for the farm, the researcher would also study the interactions of the group. The researcher studied social patterns, monitored the amount of empowerment needed to drive the group, and the amount of empowerment used within the group.

After explaining the background information needed for the beef producers to take the lead on the project, it was observed that producers appeared indecisive on their first course of action. Even the leaders of the group remained quiet. Therefore, the facilitator, understanding the need to increase environmental comfort, began making statements and asking questions that were conducive to conversation. This broke the stern atmosphere that some might have felt as a result of being asked to do something

that they had not initially volunteered for. Information about the project was presented in a way that became inviting for the producers to take part in. When learners feel compelled to become engaged in a learning situation, the responsibility of learning turns into a desire that they are honored to partake in. It was noticeable when this feeling swept through the group, because conversation about the project started. Almost immediately, student inquiry began. Although each individual had, at this point, developed an inquiring-mind on the project, the two leader-oriented men of the group vocally addressed their questions.

One stated the question, “there’s not actually a layout in order that we have to follow as far as a plan?” This was a great initial question that demonstrated the perplexity of the individual in not being given step by step instructions. Although, these farmers have been out of high school and college for many years; the traditional ideas of teaching are what come naturally to them in educational settings. The lack of structural instruction was not observed to have been offensive to any member of the group. Rather, with the beef group, the only road block seemed to be the lack of familiarity with the concept of learner-centered instruction.

After re-emphasizing that the project was to be completely dictated by the group themselves, the two leaders of the group quickly began addressing what the needs of the beef association were. Other members began contributing insightful comments. The leader-oriented, ambitious member of the group snatched a pad of paper and pen to write down ideas and plans discussed by the group. This individual demonstrated

understanding of the project quickest of any in the group. Although he was not familiar with the term learner-centered prior to this meeting, he definitely showed the most comfort and confidence in adjusting to this learning method. He asked the pivotal question, “Wouldn’t one of the first things to do be to come up with some of the things we think are important to learn and see if we can’t build or see if we have the facility and land to do that?” Initial needs that were agreed upon by the group were beef and forage. Expanded discussions led to the idea that the farm should not be exclusive to the direct needs of the beef cattle association, but also include other forms of agriculture diversification. Therefore, the idea of developing a plan that allowed for hogs, sheep, goats, dairy, and test plots were agreed upon. Part of the expansion of allowable enterprises in the farm design came directly from one of the leaders. He would say, “What else do we want on the farm?” and “All we have right now is beef cattle and forage test plots.” His leadership and direction was highly effective in broadening the scope of the farm plan.

One individual mentioned that with the FFA farm being limited in size and not ideal for producing crops, that restrictions would follow in designing the farm. However, other members of the group pointed out that the layout of the FFA farm was no different than the land every farmer in Robertson County had to manage. Therefore, the FFA farm itself could be a strikingly similar replica, in miniature size, of the farming situations held by county landowners.

The planned reason for hosting the beef meeting at the FFA barn was to allow for immediate visual observations of the barn and land that the farm design was being created from. Thus, it seemed natural to the facilitator that the group would offer to view the layout of the land before making farm plans. Yet, the meeting progressed in rich conversation for nearly an hour before a member of the group requested to step outside to visually observe the layout of the land. This demonstrated the paradigm that stems from traditional teaching methods, where students remain in classroom style settings during educational meetings. The natural idea of walking outside and viewing the farm came after a period of time. This brings out the realization that natural processes unfold when using LCI.

For centuries, education has been dealt with through traditional means: teacher verses student, where the teacher teaches the student. Since this is the foundational way that education was evolved, the inputs and results that accompany traditional education have become the norm. In doing so, paradigms have developed that limit perspective. Often times these boundaries neglect more effective ways of educating. So, interrogative statements arise. Why aren't the most effective teaching methods used? Why are students who desire to learn, sheltered in the paradigms that prohibit pushing learning boundaries? One possible answer lies with the mere reason that traditional teacher/student roles have concealed these greater possibilities. When the teacher is uncomfortable with any other way of teaching and the student doesn't know any other way of learning, they fail to realize that a problem even exists. Perhaps one or both parties are aware of teaching and learning challenges, but without knowledge of

learner-centeredness, they are unaware of an effective solution. Yet, the use of LCI exposes the reality that LCI educates in the most natural stream-lined process. This idea was seen in the delay of the beef producers going outside and away from the meeting room table. Because they were unfamiliar with LCI, it took a while being immersed in it for the first time, before they realized the freedom they had in accomplishing their goals. Thus, they broke away from the traditional, four-walled institutional setting, and went to the practical location needed to complete the project.

The experience differences between the producers could be seen during their debates on how to design the farm. Half of the group present had attended the beef trip taken earlier that year. One shared with the group the fact that resonated most with him from that trip. Others then began to offer insight on that particular topic as well as other management practices based on their past experiences and knowledge. This demonstrates the natural phenomenon that learners will learn by expanding to their existing learning base and past experiences. They must create a tie, whether relational, experiential, or emotional, to the new information in order to retain that information.

Concluding the first meeting, expected outcomes of LCI had resulted. For instance, the initial passiveness gave way to students taking ownership on their learning and giving up reliance on the teacher to teach. However, after facilitator involvement was given with the idea and purpose of learner-centeredness explained, the study group began possessing responsibility in their role. They became self-sustaining in developing their ideas, consulting the facilitator only as needed. Moreover, the beef practitioners

charged the facilitator with preparations needed for the following meeting: topography maps of the FFA farm and a scheduled tour of the University of Kentucky beef unit. These requests demonstrated the commitment instilled within the group as a whole and in the individuals to complete their project.

Although the day scheduled for the UK farm tour did not work for the beef association, the filmed tour taken by the facilitator and shown to the group at the next county meeting effectively demonstrated the functionality of a well-designed farm. The beef producers were not aware that a separate tour had been scheduled and taken by the facilitator with the UK beef unit manager. Upon arriving at the school (location of the second meeting), many asked what was on the agenda for the night. When told that a tour of the farm had been taken despite the fact that the beef producers were unable to attend, they were very pleased and excited to watch the filmed tour of the UK farm. For them, being able to see a “top-notch” farm that was built without financial restrictions outlines the ideal farm to create a design from.

After the virtual tour, a topography map of the FFA farm was projected onto the classroom white board. The boundaries of the farm were outlined with a dry erase marker. Then the copies of the requested map were distributed to each member attending the meeting. The beef practitioners were given the option of working individually on their farm designs, in groups, or as a group. The end product required one finalized blue print of their farm design. Initially, members worked solo on mapping out plans for the farm. Producers, who appeared to work well on their own, developed

more detailed plans quicker than those who appeared to more effectively work in groups. Shortly, after taking time to individually conceive ideas, participants began conversing. The conversations elaborated into entire group conversations with each individual throwing out ideas. One member wrote the most thorough ideas onto his map. He sat across the table from the vocal leader of the group. The vocal leader would address the group on ideas for the farm, other members would offer input, and the writer would convert those ideas onto his map. Eventually, the writer of the group was appointed the leader. He was given the responsibility of copying the combined ideas down onto the finalized map. Some of the other beef producers had designs on their individual maps. Those producers gave their map to the writer to collect more ideas from.

Because the beef practitioners have such close relationships to one another, the writer actually finished two similar, but slightly different farm maps. This was probably to avoid any offense that might have been taken by beef producers had their ideas been rejected from the final plan. However, the group decided that the facilitator could choose which farm design to use as a final copy.

The farmers were then asked to complete part two of their assignment by discussing how their farm design and future experiences learned from the farm could be used to help educate 4-H and FFA members. While an intricate plan was expected to be delivered from the producers on this matter, the realization was made, following the unexpected comments of the farmers that simple answers come from the simplistic

benefits of LCI. The farmers developed holding pens for use by 4-H and FFA members, assume that the FFA advisor will be able to use the design and ideas demonstrated during beef cattlemen's meetings in his classes, and would be happy for FFA students to use the facility for their own hands-on learning opportunities. How are these simple answers a result of LCI? Learner-centered concepts, while complex in their variability, applicability, and paradigmatic perspectives, are very simple in that the natural progression of learning can occur from the learner-conducive environment it creates. Therefore, when the learning phenomenon unfolds naturally, its mechanical complexity diminishes.

At the third and final meeting, producers who had been involved in either of the prior two meetings, were asked to complete a five question survey on their involvement. Results of the survey are shown later. However, it was interesting to observe the producers engage in conversation about the farm plan. The survey itself was not a team effort and would be kept anonymous. However, beef producers asked about the status of the completed farm plan that was constructed electronically by the facilitator. A member of the association that had not attended the prior two meetings was very interested in seeing the finalized farm map and asked questions accordingly. The beef producers addressed her questions and offered insights from the previous two meetings. More emphasis was shown on the importance of having a facility to address the Beef Association's and FFA's learning needs.

Research Questions and Hypotheses

Research Question #1 and Hypothesis #1

Research Question #1: Is learner-centered instruction an effective teaching method for adult farmers?

Based on the participants' involvement (conversations, map planning, producing a finished product) it is evident that LCI is effective in adult farmers. Any time students, no matter the age or type, engage in a learning opportunity, the opportunity for achieving learning objectives is enhanced. The ideas of mentally engaging students lead to emotionally bound learning. When these ties develop into passions, the learner is no longer forced to learn, they desire to. When the introduction was given to the producers on what their assignment would be, the facilitator worked to include motivating statements in with the instructions. Her intentions were to begin mentally and emotionally engaging the participants for when her commentating was done and the project details were turned over to the group. Because producers began taking ownership of the project shortly after the facilitator concluded, it can be assumed that motivating techniques contributed. Yet, the true effects of LCI showed as producers became more involved in their discussions and working on the project. This evidence proves that if set up correctly, students will thrive with LCI because they will have been equipped to take responsibility of their own learning.

Based on the final, open-ended question listed on the assessment survey, came many supporting responses to this research question. The survey question was:

Please provide your thoughts about learner-centered instruction – where meetings are directed by you the learner and not the facilitator or teacher. In the project that you completed on the FFA farm design, you were challenged to identify the needs of the farm and your needs as a beef producer. Those needs were then put on paper by designing the farm to address those needs and to be equipped in such a way that future and continual learning for the Robertson County Beef Cattle Producers can take place at that location. Is this an effective strategy for you to learn?

Responses gathered from the beef producers are numbered below with researcher conclusions following each response in italics:

1. “I prefer meetings that are interactive and allow discussion and learning from others.”

This comment alludes to one of the great benefits offered in learner-centered instruction – that it causes learners to be interactive. Getting learners involved is a result of generated interest from a subject. When learners are interested in their educational subjects, they will become interactive as they take on responsibility for their learning. This particular individual enjoys discussion and understands that discussion is a way of becoming interactive. The beef producer went on to say that they learned from others. In the context that “learning from others” was written, it can be assumed that this individual felt becoming interactive in this project was a direct result of an effective discussion, evident by the fact that they learned from others.

2. “The instruction on the project was effective, you could benefit from these instructions.”

Because this statement is rather vague, it can be concluded, that the individual understands the concept of LCI enough to know that they felt the facilitator instructional input was satisfactory to effectively complete the assignment given to the beef producers. But this individual didn't feel comfortable enough with the idea of LCI to elaborate on its concepts, outside its use on the FFA farm project.

3. “This was a very good strategy. It lets you focus on our operations and determine what we need to do to make us more cost effective.”

The source of this response finds favor in learner-centered methods because of its applicable approach to the needs of the beef producers. This perspective coincides with one of the great benefits of LCI – that learner needs are identified and learned with this teaching technique, allowing for applicability in every learner situation.

4. “With the learner-centered instruction, it allows you to get to the core of any situation. On any design it's more challenging to find the right direction. I think that learner-centered instruction promotes a lot of interaction and participation.”

Again, this response reiterates the idea that learner-centeredness identifies the needs of the learning situation and addresses how those needs can best be met. “Getting to the core of any situation” shows the learner understands LCI in two different contexts. The first is that LCI doesn't just stop with identifying needs

and addressing how to meet those needs. It progresses further to actually addressing those needs. The second is that the learner indicates their understanding that LCI is applicable in any learning situation. This individual, based on their personal experience using LCI in this project, has also determined that LCI is comprised of high interaction and participation levels.

5. "Yes."

While this answer is not insightful with thought-provoking details, ultimately, the goal of this project and using LCI was to find out if LCI is an effective way for adult farmers to learn. "Yes", is a solid, positive answer for that question. It can also be assumed that details to answer the first portions of the open-ended question were not elaborated on, simply because the individual felt, "yes", satisfactorily summarized their view of LCI. Because this survey was given to two individuals that had attended in one or both of the previous meetings, and were returned at a separate time from the other five that had been involved and were at the final meeting to complete the assessment, it is known that this response was one of the two not at the final meeting. Perhaps, the lack of detail could have resulted from not being involved in the conversations that started again on the farm project among the group while completing the assessments.

6. "I believe that a more in depth study be organized to further develop sound ideas and will insure a top notch set up. A lot will be totally functional. The way I see it, constructive input from experienced farmer/producers will be beneficial."

This producer did exactly what LCI asks of learners – to further inquire on their learning tasks, to challenge the facilitator, to push until their educational needs are met. This response indicates that the producer felt the use of LCI was an effective learning strategy for the project because of their word choice. “Further develop sound ideas” – indicates that sound ideas were developed, and “insure a top notch set up” – indicates that a top notch set up was mapped, and “a lot will be totally functional” – indicates the farm design’s practicability. Indeed the experienced input from farmers in designing the farm has value. The final sentence stated by this individual is a way of summarizing how the beef group can be instrumental in using the plan they developed to help 4-H and FFA members. Simply stated, their experience in developing the farm plan will be a help to youth in the county by having designed a real-world farming environment for youth to use.

There was one respondent that did not answer with insightful comments, stating:

7. “I don’t know about the property to have much input.”

This response came from one of the five beef producers that were at the final meeting, where all the surveys were collected at once. Therefore, it cannot be stated for certain, but is highly probable that this individual was the farmer that did not attend the first meeting. Because of that, visual observations of the farm would have been missed and possibly caused the farmer to feel insecure in

answering the assessment questions, even after having been a part of the farm design with the beef group at the second meeting with the topography maps.

The all-inclusive answer to the question of LCI effectiveness in adult farmers is yes.

Thus, the hypothesis below is confirmed.

Hypothesis #1: Learner-centered instruction is an effective method of learning for adult farmers.

The same answers can apply here that were used in answering research question 1.

Evidence given by study participants indicates a positive response to LCI. Producers worked well together in identifying needs and developing a farm plan for their ideal learning environment. They took learning matters into their own hands and developed what could meet their areas of interest and learning needs.

A great example of showing the impact of learner-centered education in adult farmers is given in the case study done in three counties with pesticide applicators recertification training (Simeral & Hogan, 2001). Extension agents in the counties used hands-on techniques and group interactions to allow the farmers more engagement in their learning. Farmers were split into groups and given farm scenarios where they would have to develop pesticide and herbicide solutions. Agent reports showed increased involvement among farmers, eagerness to defend ideas with other groups, more frequent questions, and more in depth exploration of on-farm pesticide use than was witnessed in traditional lectured recertification.

When learners are involved in developing, implementing, and evaluating learning experiences, critical reflection between educators and learners can stimulate and programs can be realigned as necessary (Franz N. , 2007).

Answers from the fourth question on the assessment survey indicated strong evidence that LCI is an effective learning style. The question asked, would you say that you felt more or less inclined to participate in this style of meeting: learner-centered, vs. the traditional teacher center? An overwhelming 100 percent of the respondents circled yes to this question.

Even the responder that indicated not knowing enough about the farm to have much input on the open-ended question agreed that LCI induced more willingness to participate than traditional teaching methods. Notice the question specifically asked “would you say that you felt more or less inclined to participate” verses stating “does LCI offer a more participatory environment?” Anyone could agree that LCI allows for increased learner participation. However, not everyone may feel more inclined to participate or have a willingness to do so. Yet, the entire population of study participants marked “more” in having that desire to participate with LCI as compared with their past experiences of traditional teaching methods.

One of the ultimate goals of LCI is that it is effective, in that participants learn. During the trial run of using LCI with the beef association in a non-formal setting, the combined results that answer the research question and hypothesis previously discussed allude to what the participants themselves learned. As with any new scenario, precautions are

taken, questions are asked, and leaders of the group will be the first to start working their way towards end goals. In analyzing the video observations and reflecting back on the observational study itself, concluding comments can be made regarding what the participants learned. Participants used inquiry to self-guide through insecurities on what their assigned project was. By asking questions to the facilitator, working together on development of the project by creating a social realm conducive to discussions on the project, and by incorporating their own individual ideas about the project to the group, beef practitioners learned using LCI without realizing the learning that occurred.

The learning phenomena created with LCI is that learning happens inconspicuously, utilizing natural processes (inquiry, self-doubt, more inquiry, and purpose) to learn and reap results. In this particular study, participants used their project to allow for community involvement. They determined that LCI is a programmatic necessity.

Traditional teaching methods can be helpful in learning if the topics of discussion are directly applicable and interesting to the producer. However, LCI allows nearly every topic to become of interest to the learner because of its flexibility in how the material is learned. The initial topic is relayed by the facilitator. However, the topic direction is dictated by student inquiry and the responsibility of learning is that of the learner.

When learning and responsibility is in the hands of the learner, a zeal for reaching desired outcomes is released. In a social setting, this type of enthusiasm is contagious.

Although, not every member of the group will experience understanding of the project and acceptance of the learning responsibility at the same time; passion for learning and completing the project spreads from those who reach that understanding and

acceptance in LCI first to those who lag behind. “Late bloomers” can internalize these emotions to motivate themselves. This process will help lead to the fruition of their understanding and acceptance.

Research Question #2

Research Question #2: How can farmers, given a project learn, through LCI?

The question derived from the discrepancies that might arise at whether or not LCI is an appropriate teaching method on a project rather than a learning concept.

Observational data prove that there are numerous ways farmers might become involved in a LCI project. The nature of LCI results in unpredictable outcomes for the learners, but will be the outcomes needed by the group of learners. In this particular study, members became involved in requesting more of the facilitator. She was asked to provide topography maps for the second meeting and to set up a farm tour of the University of Kentucky beef unit. Beef producers discussed their needs of this future farm as a group with utmost professionalism, bridging from past experiences, lack of experience, and incorporating needs of others. These discussions were led by the group’s leaders and built upon by all members of the group.

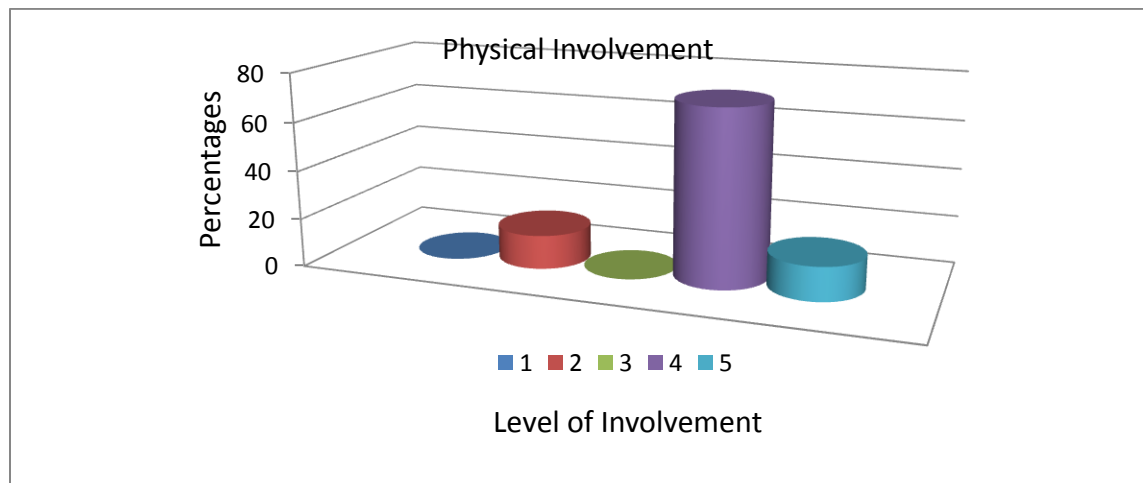
Three questions were asked on the survey to gauge study participants’ physical, mental, and emotional involvement in the study. The first question asked:

How would you rank your level of physical involvement on the project? This would include actual participation in designing the farm plan, discussions during meetings, any

involvement outside of meetings. Please rank on a scale of 1-5 with 1 being little to no involvement and 5 being as involved as you could possibly be.

One participant ranked their self at a two comprising 14 % of the total responses, five participants ranked themselves with a four making 72% of the total responses and one participant ranked them self at a five comprising 14% of the responses. The graph below shows these relationships.

Table 4.1 Physical Involvement



With five individuals measuring their physical involvement at a four, they would most likely agree that they offered a high level interaction, but see in some way where they could have been more involved. Interestingly enough, one of those five respondents was the individual that indicated on their open-ended response that a more in-depth study would be needed. Perhaps several, if not all, of these five producers are already thinking of ways they could have been more involved. However, LCI is a learning process for all steps along the way. Most students won't be perfect at utilizing learner-

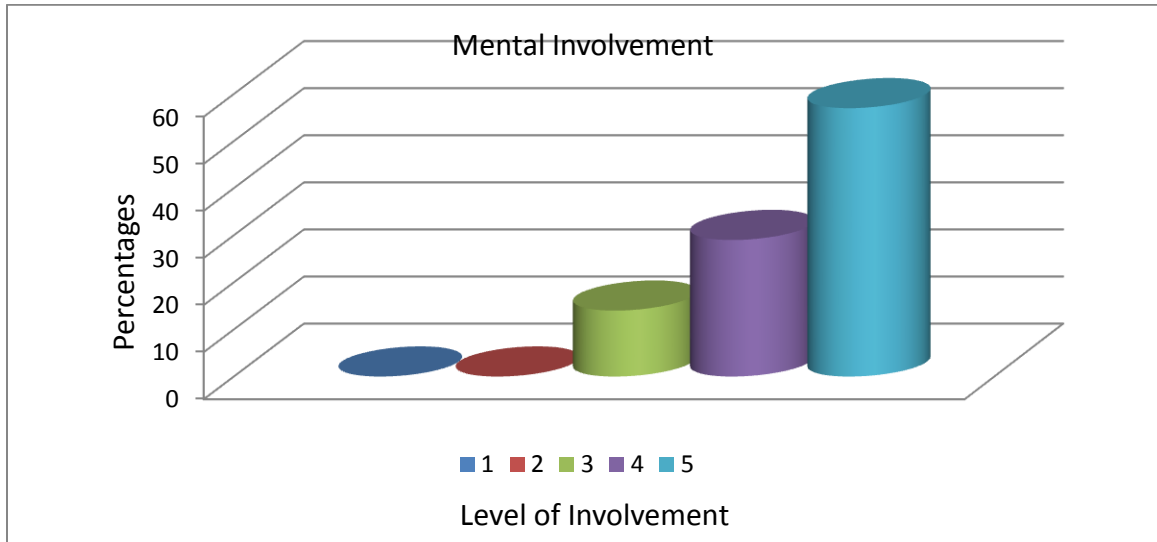
centeredness the first time the method is introduced to them. That is where the importance of self-assessments and metacognitions surface. Thinking about the experience and what has been learned will advance the learners' understanding of LCI and bring awareness to learning opportunities that were not even realized.

The next survey question was designed to gauge farmer's mental involvement during the study. The question was:

How would you rank your level of mental involvement in the project? This would include attentiveness and focused thoughts during meetings. Please rank on a scale of 1-5 with 1 being little to no mental involvement and 5 being completely absorbed in thinking about the project during the meetings.

Zero percent of those surveyed reported a one or two for this question. One person (14%) reported a three. Two participants (29%) circled four, and four people (57%) circled five. Review the chart below for a visual depiction of the mental involvement results.

Table 4.2 Mental Involvement



Six out of the seven respondents ranked their mental involvement as high or very high.

This strong commitment to the project and learning experience most likely evolved from the effectiveness that LCI had on learners. Being mentally engaged in a project can lead to high levels of learning, however, physical involvement is also needed to enhance learning and in completion of projects and emotional involvement is needed for learning to become retained information.

The next survey question requested participants to rank themselves based on their emotional involvement. The question read:

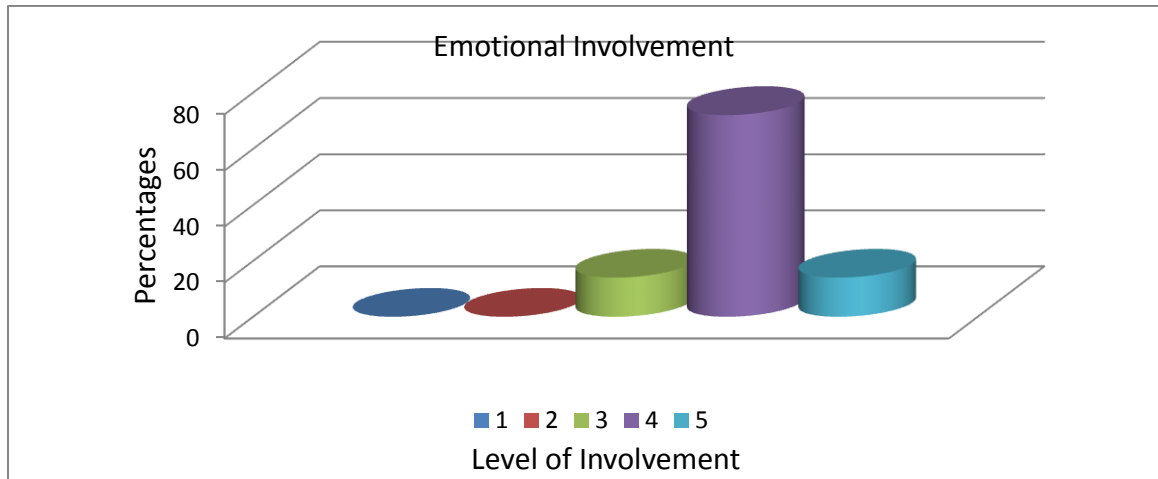
How would you rank your level of emotional involvement in the project? This would include how emotionally eager you were to participate and contribute to the planning.

Please rank on a scale of 1-5 with 1 being little to no emotional involvement and 5 being completely emotionally tied to the project during the meetings.

No study participant ranked them self with a one or two. One person ranked them self with a three, comprising 14% of the total responses. Five participants circled four, being 72% of the responses, and one person (14%) chose five as their level of involvement.

Below is a visual for analyzing the results from this question.

Table 4.3 Emotional Involvement



The lowest ranking in the three categories on involvement was marked by the same individual who was also the producer that stated he didn't know much about the property. One of the participants ranked himself as a five in level of involvement. This individual gave the response on LCI as "The instructions on the project were effective. You could benefit from these instructions."

As can be seen with the graphs, the emotional involvement rankings match closely with that of physical involvement. All five participants that marked themselves as a four in level of physical involvement also marked themselves as a four in emotional involvement. Perhaps, it can be concluded that emotional involvement and physical

involvement are more closely related than either factor is with mental involvement. The scope of this survey did not address whether high physical involvement leads to high emotional involvement or vice versa. However, based on visual observations from the observational study, it could be concluded that mental involvement began when producers were informed of their assignment; emotional involvement followed when study participants were empowered to develop the farm plan based on their needs, and physical involvement concluded with action to address their needs.

Research Question #3 and Hypothesis #2

Significant roles must be played by the facilitator/educator in implementing LCI (hypothesis #2) and what considerations are needed by the facilitator/educator in transitioning to LCI (research question #1) are answered based on the experiences of the facilitator during the project. Much preparation is needed in advance of facilitating a LCI program. Although, students will take the learning in the direction they need it to go, the facilitator must have the environment conducive to learner needs and comfort. The facilitator needs to be prepared for a certain level of chaos and unpredictability, possibly even opposition to the new learning style. Facilitators need to understand the importance of motivation, empowerment, and emotionally engaging students. Instructions and comments need to be tailored to incorporate those concepts. Reiteration throughout the program or series of programs needs to be made regarding the common themes of interest deemed by the student. This helps learners stay focused on their learning objectives. Periodic assessments need to take place.

Assessments during a learning scenario will do a couple of things. First, it will allow the facilitator to know how well the learning is engaging students. Second, it will serve as a self-evaluation for students to hold themselves accountable in their learning process. Extensive evaluations at the conclusion of a learning situation allow the students and educators to capitalize on the entire situation. It provides feedback for future learning opportunities and may even lead to continued learning on the learning concept that was assessed.

Support for hypothesis #2 (Significant roles must be played by the facilitator/educator in implementing LCI.) and answers to research question #3 (What considerations are needed by the facilitator/educator in transitioning to LCI?) are extensively outlined in the literature. The primary course of action recommended by Bourdeau (2004) for educators leading “learner-center, inquiry-based” activities is to develop a tolerance for a certain level of chaos. There could be a certain amount of resistance from learners in being asked to participate in a learner-centered approach of education. Educators need to be mentally equipped to handle the non-traditional format and challenging student issues. A common complaint that might be received from clientele is “why aren’t you teaching me, that’s what you’re paid to do?” An excellent response would be, “no I am not paid to teach, I am paid to teach you to learn.” Fortunately, little to no resistance was observed from the beef practitioners in the study.

According to Franz (2007) staff (referring to extension personnel) should provide opportunities for learners to more fully guide their own learning to better meet the

learner's needs. In paradigmatic realms of traditional teaching, it can be just as hard for the educator to let go of their teaching role as it is for the learner to pick up the responsibility of fostering their own education. Yet, these "upsets" of traditional education are the magic of learner-centered instruction. Educators and facilitators must be willing to let learners guide their own education and in doing so will enhance the quality of educational programs received by the learner. To create a more participatory environment, adult educators should provide structured reflection time with learners and serve as a learning helper instead of an expert (Franz, 2007).

Time and time again, the importance for reflection and self-assessment is emphasized to ensure high quality education. It is a responsibility of the educator to direct experiential activities to guide learners in thinking and discussing their assumptions and explore alternatives (Franz N. , 2007). It is dependent upon extension educators to ensure opportunities for reflection not just within program evaluation, but as an essential part of the learning process (Torock, 2009). Torock argues that participants need to be required to recall prior knowledge, introduce new knowledge, and make connections between the two for individual internalization. She goes on to emphasize that extension agents struggle with reflection because agents are rewarded for their programming efforts and not their time spent in reflection. The bigger picture would be the indirect or long term benefits of time spent in quality reflection. For facilitators, it would lead to accurate assessments of the programs, necessary program change, and production of more relevant educational opportunities for future programs. If agents practice facilitating reflection from their program participants, they would benefit from

the needs established and program direction given by the clientele whom agents work to serve.

Developing a strong student/teacher relationship is also shown to be highly effective for learning. Extension agents should work to enhance their working relationships with clientele in order to reap more desirable results with programming. When individuals gain experience with the teacher, commitment to the teacher becomes highly important (Norland, 1992). Reaching this goal can lead to student's desire to learn, succeed, and supporting the teacher's programs not only for their own satisfaction, but for the satisfaction of the teacher.

Additonal Observational Details

Although the study did not have any female participants, there were two women present during the beef meeting when the survey was administered. Although they could not participate in the survey, one of the women helped her husband (who was not present during the first meeting) in filling out his survey and the other was very interested in discussing the project. The latter inquired about the farm plan, asked to see the design that the farmers came up with, and engaged in detailed discussions about the farm with the beef practitioners who had been a part of the project. In one particular conversation, the lady asked how water would be accessible from paddock to paddock and a study participant explained that water lines would be run. One member of the group was quoted saying, "One thing about it – there was seven different ideas and when we got done there was one."

Chapter 5

Conclusions and Applications

Learner-centered instruction was chosen as the topic for study because of its relevance to the professional life of the researcher. As an extension agent, it is my job to disseminate meaningful information to the clientele of the county. Despite the amount of information disseminated, the quantity of programs used, or the effort put forth by the facilitator, relevant, meaningful information will not be effectively learned by the clientele unless done through effective instruction techniques. A new concept introduced to me during a master's course was the idea of learner-centered instruction. Not only was I learning about the concept, I became engaged to learn the concept, envisioning how I could use learner-centeredness in every aspect of teaching that I do through extension. Many of the programming ideas and goals I had for the county clientele I serve began to take on a new approach once I established this new form of teaching. An interesting fact is that many of extension's programs, curricula, and activities are somewhat learner-centered in their design. However, without the facilitator having a conscious awareness of how to use LCI or the intent to allow learners to take responsibility in their own learning, the results will pale in comparison to a program facilitator that intentionally distributes information through LCI. Because of this growing knowledge, I realized that I needed to begin an immediate transformation in my teaching style to observe the transformation of clientele learning styles and as a result witness outcomes.

The lingering question that stayed with me throughout learning about LCI was how do I, as an extension agent, implement LCI? What are the steps involved in the transition from traditional teaching methods to that of more effective means? The journey in developing a useable outline led to the observational study that I piloted in the county where I work. Specifically, my need came in reaching adult clientele in the community. Although I work with youth through 4-H programs and had not knowingly implemented LCI, 4-H itself is set up to allow learning through engaging means. Thus, many of the programs that I offered were presented with a learner-centered focus, even though I was not aware of the concept. My challenge existed with the adult clientele that I serve in my role as an agriculture agent. Most previous forms of agriculture education presented were through power point and guest speakers. These more traditional forms of teaching are limited in their ability to engage learners. Thus, not only did my mental intentions need to change, but also, the style of presenting information. So, as a solution, came my project proposal of allowing a group of beef farmers that I work with serve as the test subjects to my pilot project of initiating LCI with adult clientele. At the first meeting, I informed beef members of the study I was doing. They received explanations on why I was doing the study, why they were chosen, what LCI was, and what their project would be. I explained that as a result of a master's class I had taken, my professor charged me to develop a professional improvement project that would be implemented in my profession. With this assignment emerging concurrently with my need for a tangible study on my thesis, I decided to use my professional improvement project as my thesis study. The study would be a participatory observational study. I

would still participate as the facilitator/extension agent to the meeting, but would dually serve an observer to the project. In efforts to empower the beef practitioners on their project to come, I explained that they were chosen to participate because of their enthusiasm in developing the county's beef association into an active, functioning group. I told them that in developing their project, they needed to focus on identifying their specific needs; however, they still considered the needs of others as they planned. I revealed the concept of LCI to them. I defined LCI as a teaching method and learning style that gave responsibility of learning to the learner and designates the educator as the facilitator of that learning. This then allows learners to learn what is relevant to them because they set the learning objectives for themselves, and the facilitator only aids in accomplishing them.

I then charged the group with what their assignment would be: to develop farm plans for the new FFA farm. I told them logistics of the plan included around 18 acres that had no development other than the new FFA barn. This allowed them to develop farm plans however they saw fit. They were to identify their learning needs as beef producers and design the farm in a way that would allow for future learning opportunity in meeting those needs. The initial explanation took nearly 20 minutes. As I explained, the beef members listened. Following my introduction wrap up, I turned over this wide open assignment to the group. At first, members were hesitant in taking control of their learning scenario. The first verbal comments came from the group's two dominant leaders. Yet, even the leaders' comments came as questions. These questions were basically asking for clarification on what they needed to do. I realized immediately the

importance in improving the comfort of the situation for the producers in order to maximize their results on the task. Therefore, I not only answered their questions, I would encourage them on their abilities to design this “ideal” learning farm.

Before long, the two dominant leaders of the group began taking charge of the situation. They took turns asking questions to the group, gathering points for discussion, and leading discussions. One of the men began taking notes and mapping out ideas that were needed to develop the farm plans. He asked the group to identify what needs they as beef practitioners had. After enough time had passed for others in the group to develop ideas, they too contributed to the conversations. Building on past experiences is a popular concept for adult audiences. Some needs were identified as a result of a producer discussing past experiences while other needs were first identified, leading to a discussion of past experiences. As the facilitator, I answered any questions that were asked, further gave insight on situations being discussed to help direct focuses or expand ideas, and encouraged participants to develop farm plans that were conducive to their learning styles and goals. However, after my initial explanation of the project purpose, LCI, and participant objectives, my job developed into that of an observer. Particularly with this project where my only criterion was for producers to develop the farm according to how they would best learn in future learning opportunities, learners were forced to take control on the outcomes. Not all situations would give learners such broad freedoms; still, using learner-centeredness in all situations engages learners to maximize learning.

During the first meeting, positive results and progress towards the final farm blue prints were made. Members began assigning me with tasks they needed in order to complete the assignment. Thus, my role as a facilitator to LCI awakened. I was asked to obtain a topography map of the farm and to set up a farm tour at the University of Kentucky beef unit farm. If study participants were to develop an ideal farm in the 18 acres they were allotted for future learning, they figured they should base their design from a top notch facility.

When study members reconvened for the second meeting (after having to cancel the farm tour of the University of Kentucky beef unit), members were excited to learn that I had still taken the farm tour and filmed it for their viewing. Before showing the video, I took on the facilitator role assumed during the first meeting. Because there was a new farmer at this meeting that had missed the instruction and explanation of the first, I restated the purpose of the assignment and what the assignment was. Thus, I verbalized the common theme of the meeting sessions: developing a FFA farm design through the use of learner-centered instruction. This was the second session and members began taking on new roles. Specifically, leaders were ready to pick up where the previous meeting left off. They helped explain to the new member what the previous meeting entailed. Even some of the more reserved personalities were comfortable enough to chime in thoughts on the previous meeting to the new member. Aside from learners' involvement, it was still my role as the facilitator to direct the focus of the second meeting which was to leave with a hard copy blue print of the FFA farm. Yet, my leadership role primarily took place at the start of the meeting. Occasionally, I

was consulted for answers or ideas, but majority of my time during the second meeting was either providing the comfortable environment by operating the technology for the video and keeping snacks available or observing the group for my study.

During the third and final meeting regarding this project, two new members were present that had not attended the previous two meetings. Again, returning study participants built conclusions from the project in addition to my summaries. They also inquired on the status of the computer copy of their blue prints and initiated discussion about the project with each other and the new members. I relied on this enthusiasm to finish my requests in asking study participants to complete a survey on LCI.

Following the completion of the meeting series, I reviewed the tapes to find relationships between comments, actions, and outcomes to literature review findings. Because literature review findings about LCI emphasized the importance of motivating learners by tapping into their emotions, engaging learners through the emotional cognitions and encouraging student inquiry and assessment, I specifically observed the video tapes for the following codes: motivation, student inquiry, and assessment. I reviewed each comment made by study participants and self-analyzed my explanations to the group to determine the level of motivation, student inquiry, and assessment used during the project.

Motivation was most prominently observed during my introduction and explanations of the project to the group. During my opening lecture, I complimented the group on specific reasons why they were chosen to serve as my study subjects. As the facilitator, it is my role to offer a certain level of motivation and I used complimenting as a way of

building up self-esteem with the participants. If participants feel good about their contributing assets that selected them for study, then their self-efficacy to carry through with the assignment that I gave would strengthen. Increased self-efficacy would positively affect empowerment and lead to intrinsic motivation to complete the task at hand. The desire to not disappoint their facilitator due to the positive agent/clientele relationship held would also factor in to a desire to respond satisfactorily.

Questions and many of the comments made by study participants could be categorized as student inquiry. Questions of clarity and further explanation could be viewed as signs of unfamiliarity with learners being in charge of their own learning. However, questions of interest and questions posed to others in the group show student inquiry and a desire to learn. These inquiries lead to learning objectives that are more likely to be met when learners hold responsibility in learning concepts that they have identified as concepts of interest because of their questions of inquiry.

Although assessment is one code that I wish I had better developed throughout the project, it was still a code that I analyzed in reviewing video clips. During the first meeting, study participants did a nice job of assessing their needs that needed to be considered in the farm plan. Most discussion generated among participants during this meeting dealt with assessing needs. The second meeting allowed for more meaningful assessment of how their developed farm plan would meet their needs as beef practitioners and that of 4-H and FFA youth in the county. This assessment occurred naturally as producers put pencil to paper in designing the farm and determining what the farm's structure needed to consist of and why. At the third and final meeting, as

study participants spent time in answering the survey, they took time to reflect on what they had learned using LCI. Because no interview questions were asked, it is hard to gauge in depth cognitions from the beef producers, however, results from the survey did lead to relevant findings as discussed in chapter 4.

Using LCI during the pilot project with the beef producers taught me how important my role is as a facilitator. It would seem that to give learners the responsibility of their own learning, and turning the role of educator into that of the facilitator would result in a release of responsibility held by the educator. On the contrary, the role of facilitator is quite complex. Or at least it should be if effectively using LCI. The importance of engaging learners is critical. Telling a student they are in charge of their learning will not make the student learn. They must want to learn. Therefore, the facilitator must do or comply in whatever way necessary to foster this desire. The list would include:

environmental comfort, thorough communication and clear expectations with learners on their responsibilities, continuous motivation to empower learners to take ownership in their learning, constant guidance to help focus learners or expand their ideas, acceptance of tasks given by learners to aid in learning, and providing assessment and evaluation opportunities during and following learning objectives.

A conclusion from the observational data is that participants learned to respond to LCI in a positive manner. The effectiveness of learning with such a technique allows learners to engage their ideas with their actions. They became emotionally involved because they were mentally involved which resulted in physical involvement. By physical involvement, I mean verbally engaging in discussion, interactions with other

group members, and writing and mapping out the farm design. Working together as a group of beef practitioners striving for a common goal allowed each member to learn what others in the group identified as production needs. They worked together to determine how those needs could best be met through learning scenarios in the design of their farm. They learned to include diverse ideas of agriculture into an all-inclusive farm plan because they saw the need to develop the farm as a multi-purpose resource for the community. Although I facilitated the discussion on how their farm plan could benefit 4-H and FFA members, the study participants discovered that many of the needs they had as agriculture practitioners were similar to needs of youth in the county, particularly those youth who will pursue future agriculture endeavors.

From the findings and results learned using LCI in adult clientele, I have since learned many do's and don'ts for using LCI in extension settings. Quite some time has elapsed between the pilot project that was conducted for this study and revisions made on conclusions for this thesis. In that time span I have had the opportunity to plan many other programs with varying audiences using learner-centeredness. The added experience gained as facilitator for those programs along with reflections on the pilot project have revealed findings worthy of sharing.

I have become more critical of my ability, responsibility, and effectiveness as a facilitator of LCI. The role requires constant adaptability to situations. This versatility is necessary to accommodate the reflexive nature of learner-centeredness. Facilitators must be mentally and physically equipped to handle the spontaneous needs and inquiries from

learners. In becoming more mentally critical of my abilities, I have begun assessing my programs more thoroughly.

Like the saying, “if I only knew then what I know now”, if I had the pilot project to do over, I would do a few things differently to have resulted in a more elaborate farm plan. Preparations that could have been done were more time in developing a guideline for farmers to follow in developing their farm plan, more follow up communication between myself and the producers from start to finish on the project, and the use of Heuristic inquiry (deep thoughts about self-involvement in the project) with a couple of the producers. Another change would have been more thorough explanation of the common theme at the beginning of each session. Although I summarized the groups’ project and LCI concept at the start of the second and third meetings, I did not give enough explanation for the members who missed the initial session. Therefore, they probably did not truly have an understanding on the purpose of the project and were likely limited in their involvement of the project. Thus, the new producers would not have as much of an impactful experience with LCI. Even for the returners, a thoroughly repeated explanation would have been beneficial and would likely have led to a more mentally engaging environment for study participants.

Despite that factors that I would have done differently, as the saying goes, “you learn from your mistakes”. I have developed these criticisms because there was a need to improve. This awareness has allowed me the opportunity to build on my skills as a facilitator to LCI in my latter programs.

As a response to my findings from experiences in facilitating LCI, I have developed a fact sheet titled: steps for applying learner-centered instruction – guide for facilitators/educators. The bulleted list can be found in Appendix H. Initial considerations to be made in preparing for a learner-centered program include audience characteristics and meeting occurrence. Audience characteristics include age, diversity, minority, and gender. Meeting occurrence includes a one-time program vs. a series of sessions. Facilitators can dictate the amount of structure and focus provided during an educational opportunity based on time restraints to accomplish the educational goals. During multiple sessions, more freedom to explore options can be granted. Because of limited time in a one-time meeting, the facilitator may need to be better equipped to provide all learning objectives prior to the meeting.

Summary

The traditional forms of teaching have caused us to unknowingly accept the paradigms associated with the standardized learning methods. In doing so, we have become so narrow-minded that we are blinding ourselves from the possibilities of learner-centeredness.

It is virtually impossible for one educator to adhere to the infinite amount of learning needs with a targeted audience. But, what the instructor can feasibly do is simply facilitate the learning, which can effectively be done by becoming a master at using learner-centered instruction. Components involved in mastering LCI facilitation are learning how to respond to student inquiry, becoming equipped for the bumpy road, and making every single learning opportunity a positive learning experience. Although

much research is currently being done to construct a reform in school education, these educational ideas stem back many centuries. English philosopher, John Locke, asked the question, “whence has it all the materials of reason and knowledge?” in the seventeenth century to which he answered, “... in one word, from experience. In that all our knowledge is founded, and from that it ultimately derives itself: experience must teach me what reason cannot” (Locke in Woozely 1964: 89, 339) (Andresen, Boud, & Cohen).

Applying John Locke’s reason from centuries ago to today’s learning objectives goes to show just how meaningful education is. The topic of learning deserves continual research. Support of this is evident in that ideas regarding the importance of learning have remained so strongly dominant amongst issues of the times. In discussing the observational study that was done for this thesis, district director David Adams commented that the FFA farm (with the developed plans) may be the vehicle that allows growth of the beef association to happen. He further added that people need buy-in. Once they receive buy-in, they become involved and growth is seen. The cycle continues as even more join the group because people like to be involved in good things. Truth to this statement can be found in results of the observational study. Giving the beef group the responsibility to learn about the project they were asked to complete in their own way maximized learning (and future learning) opportunities for the group. Because they designed the farm according to their standards and assessments, they were the active participants instead of passive learners. Because the beef practitioners set the stage on what needed to be constructed at the FFA farm to

meet their future learning needs, they learned from themselves what their needs were and how they would best learn about those identified needs.

Thus, opportunity exists for a farm learning environment designed by the beef producers, to be used by the beef producers, to be used to develop successful learning outcomes as the result.

Conclusions

Learner-centeredness is a must to reach maximal educational successes. Aside from one-on-one trainings, no other teaching method can so strongly offer curriculum on an individual basis like learner-centered instruction. This is because LCI operates directly from student inquiry and gives learners responsibility for their learning. For not only does everyone learn at their own pace, in their own way, and most effectively with their own learning style, but they need to be able to learn by teaching themselves.

Educators should never under estimate the importance of emotion with learning.

Whether it is humor, frustration, excitement, or motivational objectives, individuals will desire to learn and retain more information if it can be tied with their intrapersonal thoughts and feelings.

“No matter the state, no matter the program area, Cooperative Extension vows to educate through experience” (Torock, 2009). Confidence, focus, limitless boundaries, open mindedness, trial and error, guidance, reflection, creativity, support, conversation, and practice will all be needed and used by educators transitioning to learner-centered teaching.

The importance of reflection is also critical. When a group reflects, metacognitions, emotional, social, and intrapersonal perspectives result. Thus, facilitators should allow time for reflection, assessment, and evaluation before, during, and after educational programs. The beauty in using LCI is that no step-by-step agenda is needed. On the contrary, setting a stringent outline for an educational program where LCI is intended to be used only sets the facilitator up for frustrations when student inquiry and unforeseen learner needs begin to trail the program off the “rigid” agenda. Allowing flexibility to the program and time for reflection will keep the program on its most important agenda, that of meeting learner’s needs.

LCI’s Role in Extension

The use of learner-centered instruction in extension programming could mean the difference in securing the role of extension in communities. Amidst a struggling economy, budget constraints, and financial problems, a closer eye is being kept on use of dollars and budget spending than ever. Extension programs are largely funded by tax payer dollars. Extension employees are paid jointly between the state’s land grant university and the county in which the employee serves. When pennies and nickels are being squeezed by every entity that operates on a budget, it is more important than ever that extension agents satisfy their role as educators in the community. When community folks are pleased with the work coming from their local extension office, their support of extension deepens. When positive feedback from local communities reaches the university, understanding deepens that extension is a vital part of our

education system. These confirmations demonstrate the value of agriculture and extension programs.

In efforts to prove our worth, extension agents need to embrace our role as facilitators of LCI. Applying ourselves as facilitators will allow us to introduce extension clientele to the new, effective method of information dissemination that occurs with LCI. To take it a step farther, extension agents need to train our volunteers to teach with learner-centeredness in mind. When given meaningful responsibility, groups will grow and agents will become the facilitator of the groups' program.

Wilson stated that one of the most effective ways to empower students is to let them decide their own goals. "It sets into motion that vehicle for "intrinsic motivation" that really lets the experience belong to the learner" (1995). In terms of educational programs, no one should be more involved in the programming than the clientele themselves. This will allow them to identify their needs to the agent and dictate how those needs are met. When an agent hands over the responsibility to volunteers, the agent must learn to adhere to the schedules of the volunteers. Still, it is the agents responsibility to follow up with volunteers on assignments. Allowing volunteers to work in their own time frames will increase productivity received from volunteers. Stated by Mr. Adams, "individual and program growth is directly related to personal responsibility because clientele are taking ownership".

Extension absolutely has to modify to the standard of today's society in order to survive and be relevant. Facilitating educational programs that are effective and leave clientele with a burning desire for more is a highly effective way for extension to hold strong

support in the counties, even in times of budget restraints. But it is going to take a paradigm shift of thinkers to make this happen! A great piece of advice that can be given to extension agents embracing the learner-centered instruction transition is to ask other agents to hold them accountable in their teaching and facilitation efforts.

Although agents are the facilitators of LCI, agents, too, are students by the mere nature of learner-centeredness. LCI causes the learner to assume the teaching role as they begin teaching themselves. As a result, facilitators are often handed the role of being the student as they witness the learners teach themselves and learn from the requests that are given to the facilitator by the learner to further learning. With the revolutionary roles of LCI, facilitators need constant accountability for “bringing their game” each time a program is delivered. While accountability to oneself is necessary, accountability to others often becomes more of a priority. Therefore, if agents will rely on other agents to hold them accountable in being an effective facilitator of LCI, then a high priority will be personally made by the agent to meet or surpass expectations.

It was concluded in the results from this one study that a stream of effective events in the process of learner-centeredness for the learner were: mental involvement, followed by emotional involvement, and resulting in physical involvement. If a facilitator could keep this sequence in mind when transitioning to learner-centeredness from traditional teaching, the most applicable method of teaching could be used accordingly.

Beyond the scope of this paper are several considerations for extension educators in facilitating programs. Programs should be designed to incorporate social involvement in educational experiences and structured to stimulate self-improvement outside simply

learning new information and topic related skills (Norland, 1992). Because learning is holistic, considerations for social and cultural construction would have to be included for a complete learning experience (Boud, Cohen, & Walker, 1993). Ability for extension agents to bring these aspects into a learner-centered environment will enhance the service of educating and changing the lives of clientele.

My Personal LCI Timeline

My journey of learner-centered instruction has been an interesting one. As a baby to LCI, I was first introduced to the concept in a master's course. My initial conclusion was that LCI was the use of hands-on approaches to learning. While this can be a method, it is far from the holistic definition that defines LCI. LCI is a paradigm breach that replaces traditional teaching styles with that of engaging learners. Learner-centeredness is achieved by using the most effective strategies needed to engage learners. The strategies and methods used may be dependent on situational limitations, nonetheless, still offer effectiveness in reaching learners.

Following my newborn weeks and months of LCI introductions, I began a journey to disseminate education in my profession like never done before. I used this pilot project, (observational study done with beef producers reported on in this study) to test this idea of learner-centeredness. With a positive response from participants and my desire to utilize this method more continuously, the mental and physical transformation of my teaching styles have been set in motion. My mind is constantly conforming to new ideas and possibilities that are revealed with learner-centered instruction. As new, exciting, and unpredictable responses emerge from groups that I facilitate, more credit is given

to LCI. Because this learning style and teaching method offer so much versatility in teaching with the ability to conform to any audience, it is not only the dominant style used in my programming to disseminate information, but is the sole method. Yet, to word the use of LCI in such a way as to say “the sole method” creates an inferior understanding of how diverse LCI is. “Sole” doesn’t accurately describe anything related to LCI other than the approach to learning situations that I use.

To map my current status on a LCI timeline, I would say that I am past toddler stage and perhaps beyond elementary level. I would think that teenager would accurately put an age on my maturity in LCI concepts and use. I am exploring the possibilities of LCI and planning for the future.

After taking the course that introduced learner-centered instruction to me, reading more in depth on the topic, applying this concept in an observational study, and using learner-centered methods in various educational settings since the initial pilot project, it has become clear that teaching any other way is simply an inferior way of disseminating information. The findings from the observational study show that learner-centered techniques offer increased participation from students as they become more deeply involved in the situation both mentally and emotionally. Tapping into a learner’s thoughts and emotions is a sure way to reach them at an inward level bound to result in outward gain. Seen through improved work ethics, attentiveness, and inquiry, engaged students through learner-centeredness allow learners to catapult beyond any former traditional training received. Learners will gain understanding of concepts in more enriched forms because of their ability to tie the concept to an emotion that drives their

desire to learn more or push beyond the scope of the facilitator's purposes. Being involved in projects where the facilitator has released the outcomes to that of the student, not only put the responsibility of the project in students' hands, but also allowed the outcomes to be built based on student need and desire. It can be frightening for facilitators to relinquish their teaching power to students, yet can be overwhelmingly rewarding in witnessing the explosion of student involvement as a result.

My largest personal finding in researching learner-centered instruction was how much potential exists in this learning technique but ironically, how small of a percentage of that potential has actually been used in my programming. I have learned what I need to progress forward as an educator. Learner-centeredness is far more complex than one would realize at first being introduced. Learner-centered instruction is a vastly effective method for students and learners of all ages. I have also come to the realization that there is no streamline approach for a concept as complex as learner-centered instruction. Every learning situation, in its entirety, results in the impossibility to report on LCI for applied uses in a simple "canned" format. The facilitator (including the facilitator's ideas, thoughts, purposes, instruction methods, and experience level in using learner-centered instruction), the audience (including age level, past experiences, emotional and mental phenomena that are unique to each learner), and situation (including desired results, formal versus non-formal settings, educational goals, etc.) combine to create a distinctive scenario each and every time.

This truth, in and of itself, contradicts the traditional purposes of a thesis: conducting research and reporting results for repeatability towards future research. How can repeatability of a study be expected when one truly understands the inimitability of the concept at hand? Deeper exploration could derive from such a thought, instead, now would be the time to elaborate on what must still be done for thesis purposes. With the understanding that exact results of the study done in this thesis cannot possibly be identically replicated, further efforts should and could be made to generalize assumptions and categorize future implications. These can lead to repeatable planning and observation.

General Assumptions and Categorizing Future Implications

A natural flaw that we as humans possess is that we are limited in our perceptions. Yet, an added strength of LCI is the phenomenon that occurs when paradigms are reversed. I daresay even expert facilitators of LCI are constantly challenged and amazed. Despite having an understanding that unforeseen and unpredicted inquiries and discoveries are inevitable when control of learning is given to the learner, the surprising outcomes will leave the facilitator with the rewarding satisfaction that accompanies educational successes.

Facilitators must use their given scenario and resources to maximize their use of learner-centered techniques in educational settings. For example, in relevance to youth audiences, formal settings (classrooms in particular) would surface as the most common environment for education. In these scenarios, teachers might be limited in using hands-on approaches in educating because of the restrictions that come from teaching

in a “four-walled institution”. Therefore, their focus would need to depend heavily on mentally engaging students. This idea will vary according to age and intellect of audience. Younger or lower academic status students would likely require different learner-centered techniques from older or higher intellect students. In the same way school aged youth techniques might differ across age and intellect; learner-centered techniques can also differ in non-formal versus formal settings. Non-formal settings would likely have the least limitations in educating. When methods of teaching and learning are not hindered, advantage should be taken by facilitators in choosing the most effective methods each and every time. When methods of teaching and learning are limited (as would be more likely in formal settings), facilitators should still analyze all methods available in their given scenarios and select the most appropriate. Because, it is one thing when educators are ignorant on the concept of LCI, limiting their effectiveness as educators because they just don’t know any different; but once these concepts are learned, educators will have chosen ignorance if they neglect to change the way they allow information to be disseminated.

Appendices

Appendix A

The lists below were developed by Greg Kaminski and are resources for strategies on learner-centered instruction. (Kaminski, 2010)

A Vision of Students Today

This 5-minute video, [A Vision of Students Today](#), was created by Michael Wesch in collaboration with 200 students at Kansas State University, October 2007. It captures some of the most important characteristics of students today - how they learn, what they need to learn, their goals, etc. If you haven't seen it before, it's well worth the time.

Carnegie Mellon's Eberly Center

The Eberly Center has put together an outstanding set of resources for enhancing education. From the [Instructional Strategies](#) page you can explore strategies focusing on various methods, including lectures, discussions, case studies, writing, labs, group projects, public reviews.

Teaching Effectiveness Program, University of Oregon

The Teaching Effectiveness Program has developed an excellent set of resources for the Learner-Centered Classroom. In particular I recommend looking at Maryellen Weimer's sections "[Five Key Changes to Practice \[pdf\]](#)", "[33 Ways to Make Your Classroom More Learner Centered](#)", and "The Balance of Power" in Weimer's book [Learner-Centered Teaching: Five Key Changes to Practice](#). This book is available from the Rock Creek Library.

Faculty Focus

[Faculty Focus](#) is a free e-newsletter for faculty, academic deans, and department chairs on topics concerning the best practices on the academic issues at the forefront of higher education. Topic categories can be searched, e.g., a search for "learner centered" brings up a number of contributions from within the last year. You can also browse topic areas such as "Trends in Higher Education" where you can find an answer to the question "[Do College Students Spend Too Much Time on Facebook, YouTube and Other Social Networking Sites?](#) Or, consider the article "[More than 30% of Faculty Say They Tweet](#)". Does PCC fit that profile?

The Teaching Professor Blog

Looking for something that welcomes participation? Maryellen Weimer's blog, [The Teaching Professor](#), is just the thing. Maryellen Weimer is a Penn State Professor Emeritus of Teaching and Learning, and editor of The Teaching Professor newsletter. Dr. Weimer has consulted with over 400 colleges and universities on instructional issues, including delivering the keynote speech at Portland Community College's Anderson Conference a number of years ago. The blog is searchable, or you can browse by topic. For example take a look at the topic "[Teaching and Learning](#)" where you can read about "[The Learning Question](#)", and "[Learner Centered Evaluation](#)."

MERLOT Pedagogy Portal

The "[Teaching Strategies](#)" page of MERLOT is a collection of broader teaching resources. You'll find a category for learner-centered teaching and a lot more,

e.g., resources for Service Learning, Critical Thinking, and Learning Communities. If you haven't seen MERLOT, it's also worth spending some time there browsing the collection to find potential learning resources in your own discipline.

Google Scholar

Try your own search with [Google Scholar](#), and you'll find a number of academic resources on the topic, e.g., "[Navigating the Bumpy Road to Student-Centered Instruction](#)" by Richard Felder and Rebecca Brent, or "[From Teacher-Centered to Learner-Centered Curriculum](#)" by Kathy Brown. When using a computer on campus, you'll note that some of the results have a direct link to the full text article. This is a slick feature! Just click on the "Full Text @ PCC." link.

PCC Teaching & Learning Center

Check out your campus [Teaching Learning Center](#) (TLC) to see what teaching and learning resources are available. For example, at Sylvania you'll find current and archived issues of Dr. Maryellen Weimer's *The Teaching Professor*, where you'll find articles such as "Empowering students through choice" (March 2008) and "The power of putting students at the center of learning" (May 2005). Co-directors of the Sylvania TLC have also just started to offer instructor "consultation" hours during which time they are available to consult and brainstorm ideas together on various teaching topics, including learner-centered instruction. Just contact your local TLC to explore the possibilities.

Appendix C



Deming FFA

Shannon,

I, Frank Gifford (Deming High School Ag Teacher/FFA Advisor), hereby give my permission for Shannon Farrell (Robertson County ANR Agent) to do her project of “The Process of Learner Centered Instruction in Adult Clientele” at our FFA Farm.

Shannon has full permission to use the Livestock Facility as well as the adjacent land to conduct activities to aid in fulfilling her project.

Please contact me if you have any questions.

Thanks,

Frank Gifford

Appendix D

Consent to Participate in a Research Study

Process of Learner Centered Instruction with Adult Clientele

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

This research study analyzes the processes and relationships that develop with learner centered instruction. You are being invited to take part in this research study because you are a member of the Robertson County Beef Cattle Association, which has been selected by Shannon Farrell for her study. If you volunteer to take part in this study, you will be one of about 10 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is master's student, Shannon Farrell of University of Kentucky Department of Community and Leadership Development. She is being guided in this research by Dr. Richard Maurer. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

By doing this study, we hope to learn what factors influence learners when learner centered instruction is used in educational settings. This study will offer a unique perspective of education to beef cattle producers in Robertson County. Participating members will work together to create their ideal learning environment with a given facility that will promote continual education.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

Participation in this study is highly encouraged. However, if you are opposed to working with fellow beef practitioners to develop ideas that will create an ideal learning environment for future beef meetings, then perhaps consideration should be given towards your participation.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at the new FFA barn on highway 616. You will need to come to the barn three times during the study. Each of those visits will take about an hour and a half. Please note, that these meetings will take the place of our regular, fall, monthly beef cattle meetings. Other agenda topics and presentations will be involved in the meetings. The total amount of time you will be asked to volunteer for this study is 4.5 hours over the next 3 months.

WHAT WILL YOU BE ASKED TO DO?

You will be given the task of designing the FFA farm and barn according to a "blue print" that is conducive to continuous education. This study is observational. This means that Shannon will be observing the network of relationships and processes that develop during completion of the task. Video recordings and photographs may be taken to use during later observations. Following a finished blueprint; beef practitioners in the study will be asked to define ways in which

their developed agricultural facility can be used to educate 4-H and FFA livestock students. In what ways can beef practitioners contribute to educational needs?

This study should be complete over the course of three meetings. The first meeting, in September, will offer introductory information about the study. Instruction will be outlined for setting up the farm. Participants will complete a rough draft. The second meeting, in October, will incorporate any research and further thoughts into a completed design of the farm. An explanation to the farm's layout will be recorded. The third meeting, in November, will allow reflections for the project to be stated. Participating beef producers will also examine how they can utilize the farm design to educate young 4-H and FFA members. A final copy of the farm design will be given to the FFA advisor. At his discretion, ideas from the beef association will be incorporated into future farm advancements.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. However, it is anticipated that you will feel a sense of self-gratification and leadership, if choosing to participate. Your willingness to take part, moreover, may, in the future, help society as a whole better understand this research topic.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, you are doing so as a volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to take part in the study, you can still attend our beef cattle meetings as an observer, but no input into the design of the farm will be accepted during the time frame involving the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will not receive any rewards or payment for taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

“We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Data will be stored electronically on Shannon’s laptop located at the Robertson County Extension Office which is kept locked after hours. Paper records will be recorded on Shannon’s laptop and the hard copies destroyed or kept in a secured location. We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, school administration may request information about the project since we will be utilizing the school farm. Also, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky”

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Shannon Farrell at 859-588-9121. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

WHAT ELSE DO YOU NEED TO KNOW?

The University of Kentucky is providing material for this study.

Signature of person agreeing to take part in the study

Date

Printed name of person agreeing to take part in the study

Name of [authorized] person obtaining informed consent

9/9/11

Date

Appendix E

The following pages show the post cards sent to beef producers, and minutes and agendas used during the beef meetings. The post card below was the initial post card sent out regarding participation in a study.

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin.
UNIVERSITY OF KENTUCKY, KENTUCKY STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND KENTUCKY COUNTIES, COOPERATING

Robertson County

BEEF CATTLE ASSOCIATION MEETING

Monday, September 19th 6:00-7:30pm,
at the FFA Barn.

Items of business:

**FFA Farm Design*

**Master's Research Project*

Shannon Farrell,
CEA for AGNR/4-H

Robertson County Extension Office,



Disabilities accommodated
with prior notification.

No agenda was developed for the first meeting held on Monday, September 19, 2011. This was due to the fact that the beef meeting was a special called meeting for the purposes of getting consent forms filled out by beef producers, explaining what the project entailed, and brainstorming for the farm design.

Robertson County Beef Cattle Association
December 8, 2011

Call to Order

Previous Meeting Report

Treasurers Report

Items of Business

- UK Beef Tour - Virtual
- FFA Farm Design
- Ideas for youth teaching
- Beef Show
- Other



(For confidentiality, all names have been removed from the minutes that were read at the February, 2012 meeting and replaced with a blank underline.)

Robertson County Beef Cattle Association

Minutes from Thursday, December 8, 2011

Submitted by ANR/4-H Agent, _____

The Robertson County Beef Cattle Association meeting began at 7:00 pm, hosted at the Vocational Building. Refreshments were served to kick off the meeting. Members present were _____ (6 members and 1 agent) _____.

A virtual presentation was given on a tour of the University of Kentucky beef unit. Because the trip that had been planned with the beef group to the UK beef farm had been cancelled, (agent) decided to take a solo tour of the farm with farm manager _____. The tour was filmed by (agent's) cousin and shown to the Robertson County Beef Cattle Association on December 8th. Following the video tour of the farm, (agent) filmed beef members finalizing their plans for the FFA farm in Robertson County. Two plans were completed by beef members to be presented to the FFA advisor. Ideas were then given on how the group could assist in educating 4-H and FFA members.

The idea was then brought up about sponsoring a livestock show in the summer. Only a discussion was made.

The meeting adjourned at 8:15 pm.

Robertson County Beef Cattle Association
February 16, 2012

Call to Order

Previous Meeting Report
Treasurers Report

Old Business

- Beef Show – Pending information from 4-H/FFA Livestock Committee
- Evaluation Survey for FFA Farm Design

New Business

- Financial Report, Budget, Audit Committee
- Beef Trip
- Fundraiser
- New Membership Ideas
- Other



Appendix F

The survey below will be used as the assessment portion for Shannon Farrell's thesis. In answering the following questions, please reflect back on the couple of meetings that we had regarding design of the FFA farm.

- 1.) How would you rank your level of physical involvement on the project? This would include actual participation in designing the farm plan, discussions during meetings, any involvement outside of meetings. Please rank on a scale of 1-5 with 1 being little to no involvement and 5 being as involved as you could possibly be.

1 2 3 4 5

- 2.) How would you rank your level of mental involvement in the project? This would include your attentiveness and focused thoughts during meetings. Please rank on a scale of 1-5 with 1 being little to no mental involvement and 5 being completely absorbed in thinking about the project during the meetings.

1 2 3 4 5

- 3.) How would you rank your level of emotional involvement in the project? This would include how emotionally eager you were to participate and contribute to the planning. Please rank on a scale of 1-5 with 1 being little to no emotional involvement and 5 being completely emotionally tied to the project during the meetings.

1 2 3 4 5

- 4.) Would you say that you felt more or less inclined to participate in this style of meeting: learner-centered, vs. the traditional teacher centered? (Circle One)

More Less

Please provide your thoughts about learner-centered instruction – where meetings are directed by you the learner and not the facilitator or teacher. In the project that you completed on the FFA farm design, you were challenged to identify the needs of the farm and your needs as a beef producer. Those needs were then put on paper by designing the farm to address those needs and to be equipped in such a way that future and continual learning for the Robertson County Beef Cattle Producers can take place at that location. Is this an effective strategy for you to learn? Please continue your comments on the back. _____

Appendix H

Steps to applying Learner-Centered Instruction – Guide for facilitators/educators

- Consider audience type
- Consider meeting occurrences: one time educational session vs. multiple sessions

Common theme(s) must be made clear at the beginning of each session (for both returners and new members)

For adults:

1. Using LCI:

- a. Expect to start the conversation: explanation, goals, etc.
 - i. Set the stage – LCI is likely a new concept to adult audiences
 - ii. Motivate learners

Assume most learners are accustomed to traditional teaching methods. Therefore, allow time to set the stage by outlining goals and expectations to the audience. Motivation may be needed to boost learners' confidence to take responsibility of their own learning.

- b. Be prepared for the “bumpy road” – turn questions of doubt or negativity into answers of encouragement or positivity

Because many people are unfamiliar with the revolutionary style of learning found in LCI, they may become uncomfortable with the transition of their responsibility in learning and therefore be hesitant or offer opposition. Educators should be mentally equipped to handle these possible situations.

2. LCI in clientele

- a. Allow learners to build on past experiences

Learners allow themselves to become interactive when they can share past experiences that are relative to the learning situation. In doing so, they engage others in the group to join in. Learning is also more effectively done with new concepts when they can be built on from previous knowledge or experiences.

- b. Expect learners to hold you accountable in your role as facilitator
 - i. Allow them to identify what you can do for them

One of the great anomalies in LCI is that when learners are in charge of their own learning, they will request things of the facilitator/educator. These requests could lead to the educator learning right along with the learners. The requests do allow educators to know what needs and interests the learners have. Thus planning for future educational settings can be done as a direct response of learners.

- ii. Be reliable in adhering to their requests

It is highly important that facilitators/educators follow through with requests and gathering information for learners. This will allow learner/educator relationships to build and learning progress to be made.

3. Evaluation

- a. Take both mental notes and physical notes before, during, and after a program where LCI was used

Evaluation and assessment should take place both by the facilitator and by learners. Evaluations can be done in multiple ways. Regardless of the method(s) chosen, the information gathered by evaluations is instrumental in understanding learning levels and planning future learning opportunities.

- b. Evaluate both predicted and unexpected outcomes
 - i. If positive - make note to repeat preparations needed to obtain those results again
 - ii. If negative – brainstorm what could have been done differently to prevent future occurrences

4. Results

- a. Expect the facilitator role to be challenging

It is important to understand that just because the learning responsibility is given to the learners during LCI, the facilitator role is still demanding. Facilitators must provide the information or means to retrieve the information requested by learners. They must provide constant guidance to motivate learners and insure learning goals are met.

- b. Watch for emerging leaders among learners to encourage further leadership
 - i. Encourage at appropriate times: during program vs. individually

Since learners become their own teachers in LCI, naturally leaders will emerge in the group. Depending on the situation, the facilitator may be able to encourage the emerging leaders to take on larger leadership roles in front of the group. In some situations it may be more appropriate for facilitators to encourage leaders to develop their leadership abilities in more private settings, and then use the next time the group reconvenes.

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