

Design and Validation of Beginning Level Tennessee 4-H Leadership Curriculum

A Thesis Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

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May 2018

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Dedication

Behind every student is a support group of family and friends that push them to be successful. This Thesis is dedicated to that particular group of individuals, including my parents, Ross and Jeannie Swart and grandparents, Thelma Burnette and James I. Swart, for never letting me give up on my dreams and always pushing me to be better, try more, and never stop reaching for what I desire; and to Alexis Hall, for always pushing me to ask why, never settling for less, and for reminding me Google has the answer 98% of the time.

Acknowledgements

To each of my committee members, Dr. Carrie Stephens and Dr. Gary Skolits, I wish to express my sincere appreciation for the support you have shown during the research and writing portions of my career as a master's student.

To the 4-H agents who aided in pilot testing the curriculum, I could not have completed my thesis without the time and effort that was put forth by each of you to distribute and collect materials.

To Lori Gallimore, for introducing me to the wonders of InDesign, and free downloadable fonts. Thank you for always being available for those "So, Lori, how do I do *this* in InDesign" questions and helping with the design and layout of the curriculum.

To my major professor, Dr. Jennifer Richards, words cannot express the thanks I have for you in guiding me through the past two years, both professionally and personally. You always pushed me to achieve more, to try new things (even if they are scary and uncomfortable), and to never settle for less. Never again will I forget that there is more to data than just the P and the D. You instilled in me the mindset that the easy and convenient way is never good enough for me, no matter how much that drove both of us up the wall. My goal is to one day be half the researcher, mentor, educator, and friend that you are, and to finally reach the point of being able to take a day off, or wear jeans to a conference, though we both know the first of those will never happen.

Abstract

Tennessee 4-H Youth Development (TN 4-H) is one of the largest youth development programs in the state, serving over 130,916 youth in 2016. Leadership is one of the 28 project areas included in the TN 4-H program. In 2016, TN 4-H began the process of restructuring and redesigning the way project areas were conceived. TN 4-H Leadership project outcomes and indicators were developed and approved for use by extension agents, regional program leaders, and state 4-H staff. These outcomes guided the development of the TN 4-H Beginning Leadership curriculum to replace older project materials published in 2002 and 2005.

The objective of this study was to establish the validity of the new beginning level Leadership curriculum for the TN 4-H Program. The study was designed as a developmental evaluation that aimed to address three evaluation questions. Data was collected from multiple sources, including a focus group, statistical data from a pre-post test, work samples from students completing the curriculum, and expert reviews of both learning outcomes and the curriculum. Results indicate that key stakeholders indicated that the curriculum would be easy to implement in county programs and that they perceived that students would have an increase in knowledge and skills and changes in dispositions after completing the curriculum. Experts in the fields of youth development, adolescent education, and leadership indicated that the curriculum models best practices in education and youth development, and provides research-based education on leadership concepts. Statistical data indicated that the curriculum was effective at educating students on terms and skills related to leadership. Review of work samples supported these findings, but also showed that students had mastered concepts that were not reflected in statistical significance from the pre-post test. The evaluation resulted in the identification of portions of the

curriculum and instruments that need to be revised, along with providing recommendations for the validation of project curriculum for TN 4-H in the future.

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Chapter 1

Introduction

Introduction

Tennessee 4-H Youth Development (TN 4-H) is one of the largest youth development programs in the state, serving over 130,916 youth in 2016 (UT Extension, 2016). Leadership is one of the 28 project areas included in the TN 4-H program (“4-H Projects”, 2015). Students who select the leadership project area complete activities that equip them with the skills to be an effective leader in a variety of settings. They also develop skills related to communication and service in their community. Approximately 5.8% of enrolled students (7,631) in 2016 of TN 4-H members selected the Leadership project area as their area of focus (UT Extension, 2016).

Statement of the Problem

Prior to 2016, TN 4-H used a variety of project activities to guide 4-H members through mastery of skills and gain of knowledge related to their specific project area. Within the leadership project area, curriculum was composed of activity sheets that were developed in 2002 and 2005 (Finley, 2002, Belew, 2005a & Belew, 2005b). These activity sheets were designed to stand-alone, did not build on one another toward tasks that required higher order thinking skills, and were not aligned to a cohesive set of project area outcomes and indicators.

To address this issue, project area outcomes for the leadership project were developed and approved for use by extension agents, regional program leaders, and members of the state 4-H staff. The outcomes guided students toward a progression of mastery from lower level skills and knowledge to higher levels of critical thinking and problem solving related leadership. These outcomes served as the foundation for the development of the TN 4-H Beginning Leadership

curriculum to give 4-H members a pathway through which to acquire the knowledge, skills, and dispositions identified for the leadership project area.

Purpose of the Study

The purpose of this study was to develop and evaluate a curriculum designed to guide TN 4-H members to mastery of the beginner level Leadership Project Outcomes (Swart, Gallimore & Richards, 2017).

Importance of the Study

As this is the first new set of curriculum developed under the new framework, it presents several important factors to be evaluated. First, the new curriculum served as the first example of new project curriculum that 4-H agents across the state have seen. Because of this, it was important that agents have a voice in the process to ensure buy in. This study also provided proof of concept into the appropriateness of self-paced, self-directed curricula for use in the TN 4-H program, particularly with younger 4-H members. The results of this study will inform the development and use of future curricula.

Context of the Study

In 2015, TN 4-H hired a full-time Curriculum Specialist. This was the first position of its kind for the program. The Curriculum Specialist began with a systematic review of all 4-H programming and curriculum and found that the majority of the 4-H curriculum was outdated and not supported by a comprehensive framework that guided youth development. After reviewing materials, the Curriculum Specialist began reorganizing and restructuring curriculum for the program. The Curriculum Specialist for TN 4-H set the following design parameters to which curriculum developed for the current project was required to adhere: 1) the curriculum must be subdivided into a series of discrete activities that build on one another in complexity; 2) the

activities must be age and developmentally appropriate such that they could be completed in a self-paced, self-directed manner by 4-H members ages 9-14; 3) each discrete activity must use research-based content; and 4) the design of each of the activities should reflect a modified version of Gagne's Nine Events of Effective Instruction (Gagne & Briggs, 1979).

Assumptions

The following assumptions were made in regards to the study and its participants:

- Agents selected to participate in the pilot testing will follow all directions provided by the researcher and will not deviate from those directions.
- Agents selected 4-H member participants who are typical of the target population.
- All participants will be given the same amount of time to complete the project curriculum before having the post-test administered to them.
- The instruments used in this study are valid and reliable..
- Participants' will provide honest responses to questions.
- The role of the researcher will not bias the analysis of responses collected in the qualitative portion of the study.

Limitations

One large limitation of the evaluation was the time frame that was used. Ideally, students would have two years to complete the project curriculum; however, in this case, students completed the project curriculum in a shortened amount of time. This limitation could result in the non-completion of the entire curriculum, not acquiring all content, or not retaining content over the shortened time frame. Another possible limitation was that the curriculum is designed to be self-directed. However, there were no procedures in place to prevent an agent in aiding a student in the completion of the activities. Another limitation of the evaluation was that the results of pilot

testing are not generalizable to the general population. Since this study took place in a truncated time-frame, students had to be highly motivated to complete the curriculum, which can not be projected to the general population. The focus group portion of the study also presents a limitation. Since the researcher conducted the focus group discussion, participants may or may not have presented their honest opinion of the curriculum. Another limitation associated with the focus group was that responses from participants were not directly recorded, but were instead transcribed in note form, and then conclusions were drawn from generalized comments.

Study Methodology

The evaluation employed a Developmental Evaluation approach (Patton, 2010). A mixed-methods design was employed that integrates selective quantitative and qualitative data collection techniques appropriate for the evaluation questions. The rationale for using a mixed-methods design emerged from the evaluation requirement to simultaneously address project results, what happened, and the project context. The guiding evaluation questions were:

- What perceptions do key stakeholders have of the TN 4-H Beginning Leadership curriculum related to its appeal and the potential for impact on student learning?
- To what extent does the TN 4-H Beginning Leadership curriculum impact students' knowledge, skills, and dispositions related to leadership competencies as defined by project area outcomes?
- To what extent are the curriculum and associated activities research-based, grounded in best-practices of education, and of sound quality?

Definition of Terms

Below are definitions of common terms that will be presented throughout this proposal.

Extension Agent- For the purpose of this proposal, the term extension agent will refer to any university employee based in one of Tennessee's 95 counties that provide programming to youth and adults in the areas of 4-H, Agriculture and Natural Resources (ANR), or Family and Consumer Sciences (FCS).

State 4-H Staff- This phrase refers to the state Extension Specialists who give guidance to the TN 4-H program on the state level.

Regional 4-H Staff- This refers to the program leaders for ANR and FCS, regional directors, and regional 4-H specialists who work in each of Tennessee's three Extension regions: Western, Central, and Eastern.

Project Area Specialist- A person employed by UT Extension who gives guidance to one of the 27 project areas within the TN 4-H program.

Project Areas- In Tennessee, these are 27 different specializations in which a 4-H member can choose to focus their work in the program. Each specialization represents a different project area within the program (4-H Projects, 2015).

Beginning level project work- 4-H club work in Tennessee is separated into three different levels: beginning, intermediate, and advanced. Beginning refers to the work a 4-H member would complete while in grades four and five.

Dispositions- Dispositions, in the context of learner outcomes deal with attitudes and habits of mind that students adopt after taking part in a learning event.

Organization of the Study

This thesis contains five chapters. Chapter one, the introduction, includes the following: background information, a statement of the problem, purpose, importance, and context of the study, evaluation questions, assumptions, limitations, an overview of the methodology, and definitions of common terms. Chapter two includes a review of the current literature on youth development and curriculum development. The review of literature on youth development includes: information on the 4-H program nationwide and in the state of Tennessee, leadership development in youth, and leadership development from the 4-H program. Literature reviewed in the area of curriculum development includes: Ralph Tyler's curriculum model, Hilda Taba's curriculum model, the Backward Design model, the Jennifer Richards curriculum model, learning styles and instructional methods, and developmental evaluation. Chapter three describes the methods and methodology of the study and includes participants, instruments, data collection and methods of data analysis. Chapter four includes a results and discussion related to each of the evaluation questions. Chapter 5 provides reflection, conclusions, and implications drawn from the evaluation.

Chapter 2

Literature Review

Introduction

This chapter will serve as review of literature that will cover topics related to 4-H, curriculum development, and leadership education for youth, and developmental evaluation. Following an introduction to 4-H and the Tennessee 4-H Youth Development program, information on the need for leadership development of youth, why adolescence is the best time to teach youth these skills, and how 4-H approaches leadership education will be presented. Several major curriculum development models will be described and the model used in the current study will be detailed. A study on various instructional methods will be presented, followed by an in-depth look at self-paced education practices. This chapter will conclude with a look at developmental evaluation and its function with this project.

4-H

4-H is recognized as one of the largest youth development organizations in the world. 4-H programs, which are housed in the United States Department of Agriculture, in the United States are delivered by the Cooperative Extension System, which is composed of over 100 public land grant universities. 4-H focuses on providing youth with the opportunity to take part in experiential learning opportunities in a variety of subject areas, including STEM, agriculture, health, and citizenship (“What is 4-H”, n.d.).

Guidance to the 4-H program nationwide comes from a partnership of public universities, federal and local government agencies, foundations, and professional associations (“4-H Leadership”, n.d.). National 4-H Council, a private sector, non-profit partner of the National 4-H Headquarters, provides funding support to the organization. National 4-H Headquarters is housed

within the National Institute of Food and Agriculture (NIFA), a part of the United States Department of Agriculture (USDA) (“4-H Leadership”, n.d.).

Tennessee 4-H

Tennessee 4-H Youth Development officially began in 1910 as a corn club for boys and a canning club for girls and has since grown into one of the largest school-based 4-H programs in the country. Tennessee 4-H is administered through a partnership between The University of Tennessee Institute of Agriculture’s Extension and Tennessee State University Extension (“About 4-H”, 2015).

4-H programming is currently present in all 95 Tennessee counties and provides programming through in-school club meetings, community clubs, project groups, after-school programs, camps, and other activities on the county, regional, and state levels that impacts over 130,000 youth each year (“About 4-H”, 2015; UT Extension, 2016). These 4-H members are divided into four groups: Explorer (4th grade), Junior (5th and 6th grade), Junior High (7th and 8th grade), and Senior, (9th through 12th grade) (“Tennessee 4-H Enrollment Form”, 2016). During their time in the program, 4-H members are exposed to a range of learning experiences spanning a variety of topics in the areas of Family and Consumer Sciences, Agriculture and Natural Resources, STEM, and Life Skill development in diverse settings.

Tennessee 4-H has an array of awards and recognitions that are available for members to earn. One major part of this recognition program is project area competitions. 4-H members work to complete project portfolios that highlight their work within one of the 27 project areas in the program. Members prepare and submit portfolios that are judged by county agents and subject matter specialists. With the exception of the Citizenship and Leadership projects, all project competition takes place at State 4-H Round Up each year in July. At this event, 4-H members take

part in an interview, and that score, combined with the score of their portfolio, designates the state winner in each project area. 4-H members in 9th and 10th grade compete for the Horizon Award and a \$500 college scholarship while 11th and 12th graders compete for a silver bowl, a college scholarship ranging from \$500-\$1500 and a trip to National 4-H Congress. Competition for the Leadership and Citizenship projects takes place at State 4-H Congress in the spring (“Recognition Handbook”, 2015).

Leadership Development in Youth

Hancock, Dyk, and Jones describe leadership as a set of skills and attitudes that can be learned and practiced (2012). Brungardt goes on to say that experiences play a critical role in leadership development, it is also equally important to have specialized leadership education and training (1996). Fertman and van Linden explain leaders as “...individuals (both adults and adolescents) who think for themselves, communicate their thoughts and feelings to others, and help others understand and act on their own beliefs. They influence others in an ethical and socially responsible way” (1999, p. 10). These statements lead us to believe that adolescence is an opportune time for youth to develop skills and mindsets to make them leaders when they mature to adults.

Leadership development in youth takes many forms. Studies have shown that taking part in organized sports often presents an effective pathway to develop these skills (Gould & Voelker, 2010; Gould & Carson, 2008; Perkins & Noam, 2007). These studies describe that leadership development for youth in sports takes place primarily through experiences; students are presented with opportunities to practice leadership skills.

Many youth development organizations offer opportunities for members to develop leadership skills through program involvement (Miller, Stripling, Stephens, & Loveday, 2016;

Wingenback & Kahler, 1997). These programs teach important life skills to youth, with a major focus placed on leadership, primarily through experiences. A study of approximately 120 community based organizations (CBOs) observed the impact on leadership development in youth. The study found that being involved in CBOs increased youth's leadership skills. Observations and interviews were used to gather this data, and multiple examples provided reinforced the idea that leadership skills are primarily gained through experience. The article goes on to say that the efforts exerted by cbos are not loosely organized, which would allow students to float in and out without being committed, but instead they are programs that aim to deepen competence in leadership and require that the students be actively involved in the organization (McLaughlin, 2000).

A 2005 study finds that given advances in learning models and changes in how youth perceive learning lends itself to an experience-based approach to teaching leadership (Thomas & Cheese, 2005). McCall reinforced this by saying that gains in leadership from formal education programs is minor when compared to what is learned from experience (2004). He goes on to say that experiences allow individuals to try new things, make mistakes, learn from those mistakes, and take away more than just sitting and listening and reading could ever give (McCall, 2004). In another article, McCall says that leadership learning experiences are developmental because they force learning, they vary in what is taught, and opportunities to learn leadership skills often present themselves at times where it is not always convenient to learn, making the experiences more powerful (2008).

Hall & Broyles (2016) conducted a study of Tennessee Extension Agents on their perceived levels of importance, knowledge and training needs for leadership skills. In total, 28 4-H agents responded to the survey. The study, which asked participants to rank the importance of 47 items

related to leadership, found that all agents surveyed indicated that all 47 items were important for youth to possess (Hall & Broyles, 2016). The findings from this study express the need for an effective leadership curriculum for 4-H youth.

A study completed in 2009 surveyed 284 urban youth enrolled in an agricultural program about their perceptions of the importance of leadership. In that study, youth ranked the importance of leadership skills in six areas, including their school, community, and future career. The study found that 62.5 percent of the students perceived leadership skills to be highly important in future careers and 45.6 percent indicated that leadership skills were of high importance in organization. The study also examined where youth had the greatest opportunity to learn necessary leadership skills. Sixty-six percent indicated that involvement in organizations afforded them the greatest opportunity to gain these skills (Anderson & Kim, 2009). This study shows that youth are aware that leadership skills are essential for success in careers and that they value leadership education through experiences in organizations.

Studies have shown that leadership is one of the most important skills employers look for in new hires regardless of the field of work (Mitchell, Skinner, & White, 2010; Rosenberg, Heimlerm & Morote, 2012). These studies examined what skills were looked for in the fields on business, engineering, customer service, education, and management, and leadership emerged as critical for each of the fields.

Teaching life skills, such as leadership, has shown to have significant impacts in both the short and long term. These impacts are seen in improvements in interpersonal skills (Smith, Swicher, Hopkins, & Elek, 2004), improving social development (Roodbari, Sahdipoor & Ghale, 2013), and communications (Parajapti, Sharma & Sharma, 2017). Each of these skills is related to leadership and can easily be incorporated into a leadership curriculum, further preparing youth

for success in the workforce. These studies also show that adolescents are receptive in learning these skills and show long term retention of these skills.

By presenting opportunities for youth to learn life skills, such as leadership, they are being better prepared for entry into and success in the workforce. Workforce Preparation is one the key programming areas in the 4-H program, but educational materials to teach many of these skills, leadership in particular, are not readily available. The development of an effective leadership curriculum helps bridge this gap.

4-H Leadership Education

A lack of published research exists outlining the importance and impact of leadership education as a part of the 4-H program. A 1995 study on the perceptions of senior 4-H youth on their development of leadership skills through 4-H found that members gained the most in terms of leadership from holding offices, teaching younger members, and fairs (Seever & Dormody, 1995). This further supports previous evidence found that leads us to believe that leadership skills are largely taught by experiences as opposed to instruction. This fact helped guide the development of the TN 4-H Beginning Leadership curriculum. This curriculum is designed to provide basic instruction to 4-H members on leadership concepts, empower them to develop leadership skills, and then allow them to take part in various experiences where they learn these concepts in a hands-on and engaging fashion.

Curriculum Development Models

Hilda Taba (1962) makes an interesting and important statement regarding curriculum development:

To make proper use of emerging resources, a theory of curriculum development is needed.

Such a theory should not only define the problem with which curriculum development must

deal, but also elaborate the system of concepts which must be used to assess the relevance of these data to education. (p. 6)

Curriculum is defined in a variety of ways. Peter Oliva highlights several definitions, including, “Curriculum is content” or “Curriculum is a set of experiences undergone by learners in school” (Oliva, 2001, p. 3). As we see from this, curriculum has a wide definition; therefore, we must have a well-defined way of approaching the development of curriculum. Several well-known models exist that have been used to guide curriculum development. Two of the most commonly used models are those developed by Ralph Tyler and Hilda Taba. This section will highlight each of these curriculum development models, as well as provide information on the hybrid model developed by Dr. Jennifer Richards that guided the development of the TN 4-H Beginning Leadership curriculum.

The Tyler Model

The Tyler model is one of the most well-known curriculum development models in use today. In his book, *Basic Principles of Curriculum and Instruction*, Tyler outlines his curriculum development process.

The first step in developing curriculum according to Tyler, lies in the identification of general objectives in each of three areas: the learners, life outside the school, and the subject matter, giving the curriculum developer tentative general objectives from which to work (1949). These general objectives filter through two screens, the educational and social philosophy of the school, and the psychology of learning. Items that pass through each of the screens are defined as educational objectives (Tyler, 1949).

Tyler’s model continues to describe three additional steps in the curriculum development process. Those steps are selection, organization, and evaluation of learning experiences (1949).

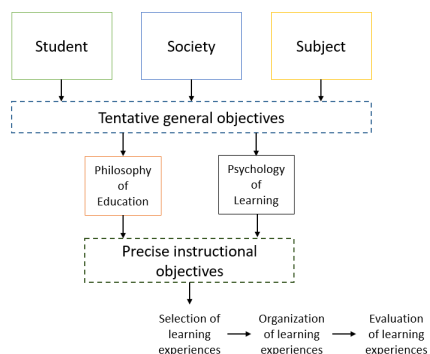


Figure 1 Tyler's Curriculum Development Model, Expanded

These steps are further defined as the choosing of what educational experiences to present to the students, how those experiences are sequenced, and how educators assess student learning. Figure 1 shows an expanded version of the Tyler Curriculum Development Model.

The Taba Model

Hilda Taba established another commonly used curriculum development model. Differing from Tyler, Taba believed that curriculum should be designed by the teacher, instead of by an administrator and simply handed back to the teacher (Oliva, 2001). Taba also believed that it was important to start with the specifics of an instructional event and use those to build to a more general approach. This differs from the normal approach of starting with a general idea and building more specific details as the design progresses (Oliva, 2001).

Taba defined five steps as part of her curriculum development model. The first step is *Producing Pilot Units*, seen in figure 2. This step is seen as a way to link theory to practice in the classroom. This step is composed of eight separate steps that are to be followed in sequence. The first step under producing pilot units is to diagnose the needs of the students (Taba, 1962). This step is similar to Tyler's first step where general learning objectives are defined. The second step

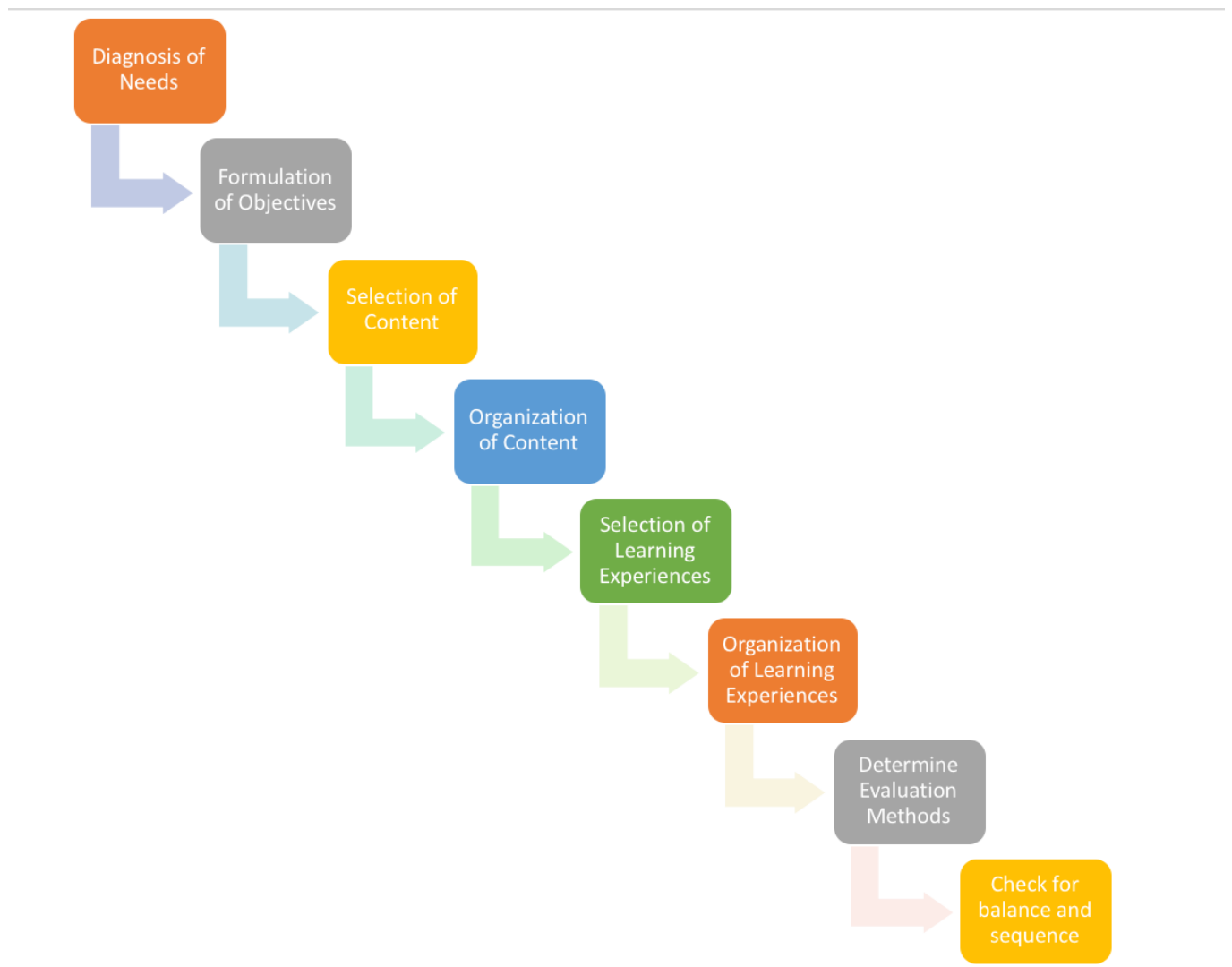


Figure 2 Taba Curriculum Development Model, Part 1

is the formulation of objectives. Here, definitive learning objectives are decided upon, and those ultimately guide the remaining steps.

Continuing on with the sub-steps under the first step of the Taba model, curriculum developers are instructed to select content. Taba points out that what is being taught should stem directly from the learning objectives. After the content is decided, the developer must decide on the organization of that content; ultimately, what content is presented at what levels and in what order. After the order is defined, developers are responsible for defining the learning experiences. This step places a focus on developing the methodologies that are followed to present the content (Taba, 1962).

Developers then must decide on the organization of the learning activities. In this, the packaging of certain activities are considered along with the sequence these activities are presented. The next step in this process is to define what will be evaluated, and how those evaluations will be structured. Ultimately, the developer is looking at the types of assessments to be used, and when those assessments will be administered. The final step to consider is to check for balance and sequence. With this, developers are looking for consistency among the various units that have been developed (Taba, 1962).

After completion of these eight steps, curriculum developers can move on to the second part of the Taba model, seen in figure 3. The first step in this part of the model involves the testing of the unit developed in the previous step. This step is used ultimately to test the validity of the curriculum developed. Following this, developers go through a process of revision and consolidation, taking note from what worked well and what did not during the validation stage.

This represents the third step of the Taba model (Taba, 1962).

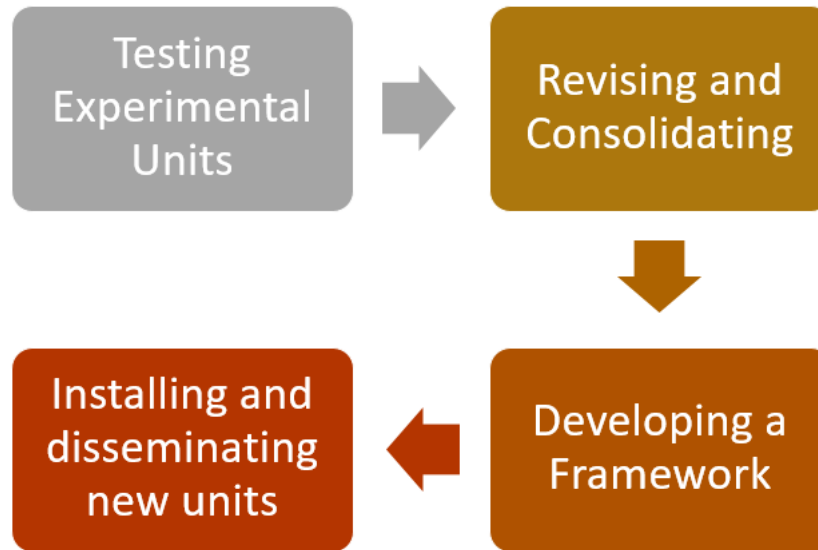


Figure 3 Taba Curriculum Development Model, Part 2

The final steps look at the curriculum as a whole. The fourth step of the Taba model involves developing a framework for the entire curriculum. This takes a broad look at all of the units that have been developed and how they fit together. The final step of the Taba model involves the installing and dissemination of the new units. Ultimately, this is the adoption of the curriculum by teachers (Taba, 1962).

Backwards Design

Grant Wiggins and Jay McTighe introduced the Backwards Design curriculum model in 2008. The backwards designing process was originally introduced by Ralph Tyler; Wiggins and McTighe then formalized this process in their model (Wiggins & McTighe, 2008).

The structure of this model can be seen in figure 4. The first step of the Backwards Design model focuses on identifying what students should know, understand, and be able to do.

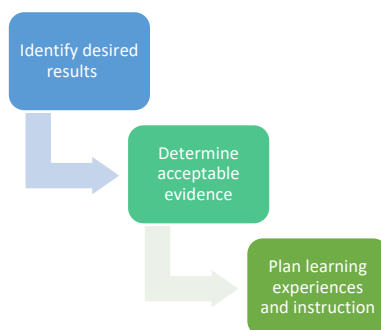


Figure 4 Backwards Design Model

This stage focuses on the development of learning outcomes, examining standards of education, and deciding what it that should be covered. This is usually accomplished by establishing priorities as they related to one of three priority areas: worth being familiar (biggest group), important to know and do, “enduring” understanding (smallest group). After grouping what should be taught, Wiggins and McTighe then suggest passing the items through four “filters” to help finalize learning outcomes (Wiggins & McTighe, 2008). These filters are shown in figure 5.

The second step of the Backwards Design process is determining acceptable evidence. This stage is heavily focused on assessing whether or not students have mastered the learning outcomes. This step is placed second because it encourages developers to think of assessments prior to identifying specific learning events to ensure they are assessing the actual goals of the curriculum (Wiggins & McTighe, 2008).

The final step in the Backwards design model is planning learning experiences and instruction. Building off the clearly defined outcomes and assessment methods from the previous steps, educators then plan their instruction. This instruction builds off several guiding questions: what enabling knowledge and skills will students need, what activities will equip students with these, what will need to be taught, how should it be taught, what resources are needed to

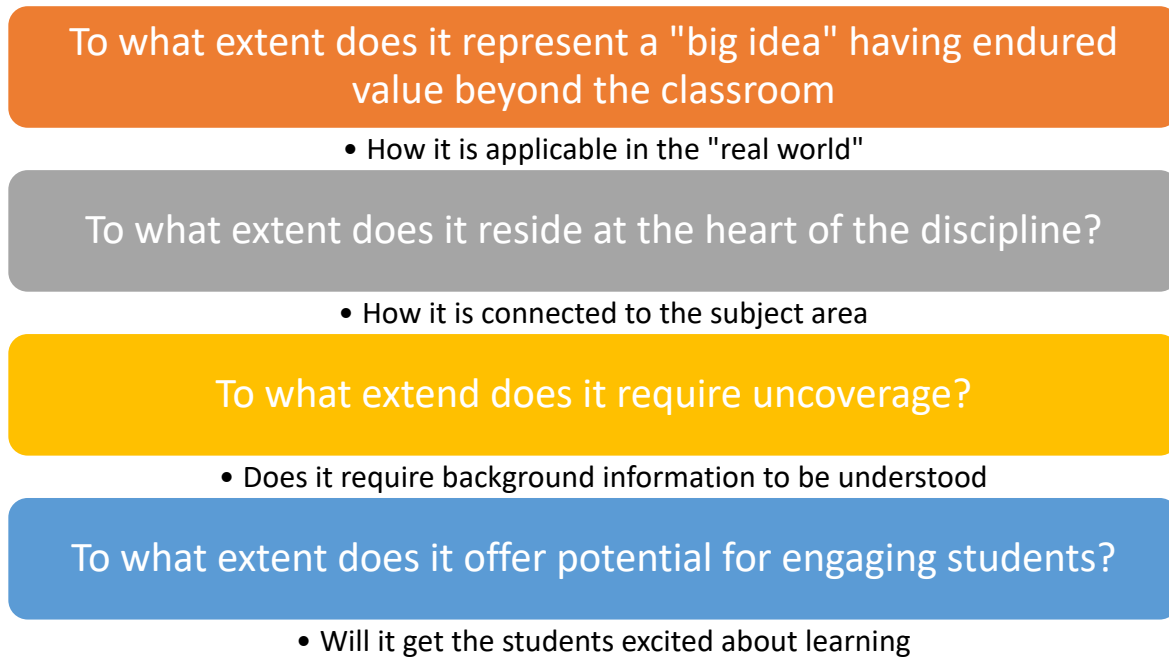


Figure 5 Backward Design Outcomes Filters

accomplish these goals, and is the overall design coherent and effective. This is the final step so it encourages teachers and designers to think about the outcomes and assessments and design a learning event around those (Wiggins & McTighe, 2008).

The Richards Model

The Richards model of curriculum development, seen in figure 6, is a hybridized version of the Tyler Model, the Taba Model, and the Backwards Design model. This model, organized into five steps, is used to guide the development of curriculum for a variety of learners and settings and prioritizes practitioners, rather than theory.

The first step in this model is the definition learning needs of the students. These learning needs ultimately define the knowledge, skills, and dispositions that students should master as a result of the learning experience(s). These three categories of learner needs define what students should know, be able to do, and the attitudes or dispositions they should display with this model of curriculum development, the learner outcomes can range from very general to hyper specific (Richards, 2016). It is important to develop the outcomes in the beginning of the development process because they provide a glimpse at where educators would like their learners to be at the end of the educational event. With a clear destination, it is easier to develop assessment and define pedagogy as the development process continues.

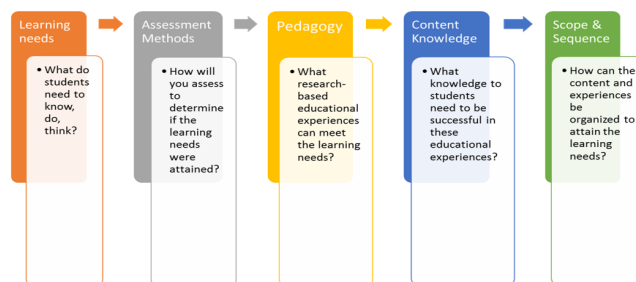


Figure 6 Richards Curriculum Development Model

The second step in the Richards model is the identification of assessment methods. This step looks at how educators will determine if the learning objectives were met during the instructional event. Richards places an emphasis on the importance of including both formative assessments, those that are given throughout the instructional events that provide student feedback almost instantly, as well as summative assessments (2016). Summative assessments are typically given at the end of an instructional event and measure the extent to which students have mastered the learning outcomes. By establishing assessment methods as a second step in the curriculum development process, designers are able to integrate formative assessments into the pedagogy and scope and sequence and ensure that summative assessments address their learning outcomes established in the previous step.

The third step in the Richards model identifies the most appropriate pedagogical strategies for the learning experience. After developers have defined what they want students to learn and how they will assess that learning, then they need to decide what instructional strategies are most appropriate for structuring learning events. In defining the pedagogy for learning events, developers are encouraged to look at strategies that actively engage students in learning through experiments, simulations, or project based learning strategies (Richards, 2016). Instructional methods should also reflect best practices in education for the given level of learners.

Identifying the concepts that compose the content knowledge for the learning experience is the fourth step in the Richards Model. This step focuses on what the background knowledge and content specific concepts students need to know or understand to be able to participate in the learning experiences (Richards, 2016). Content used in instructional events should be grounded in research and present factual information to learners. This step is ultimately guided by the learning objectives, but state or national content standards should also be considered when deciding what

content to present to the students. After content is decided, it should be mapped to learning outcomes to ensure that all learning outcomes have been addressed in terms of content.

The final step in the Richards model looks at the scope and sequence of the instruction. How can the learning experiences and content be organized so the students get the most out of the instruction (Richards, 2016)? Part of this is governed by the logical progression of the content, and part is driven by the need for students to progress from lower order thinking skills to higher order thinking skills. This progression is aided by linking instructional activities to different levels of Bloom's Taxonomy (Draper, 2016) (figure 7). Bloom's taxonomy helps learners progress from the remember level, where they simply recall basic information, to the create level, where students pull concepts from a variety of sources to form an original product (Krathwohl, 2002). Comparing the four models outlined, the Richards Model was the most conducive to use as it pulled important components from the three models off which it is based. The Richards Model also divides each step into easy to understand and accomplish steps, with each step focused on a specific item or action that needs to be accomplished and checked with respect to future steps and previous steps.



Figure 7 Bloom's Taxonomy Pyramid

Learning Styles and Instructional Methods

In order to be effective in determining an instructional method, one must have a basic knowledge of learning styles before deciding on a method by which to teach. Howard Gardner has done extensive research into the methods by which individuals learn. In his research, Gardner was able to identify seven major ways that individuals take in and retain information: Visual-Spatial, Bodily-kinesthetic, Musical, Interpersonal, Intrapersonal, Linguistic, and Logical-Mathematical. Each of these methods are important to consider when designing an instructional event (1983).

Visual-Spatial learners learn things visually. They are aware of their environments, and often like to draw or work jigsaw puzzles. Visual-Spatial learners learn best when taught through drawings, and physical images. Bodily-Kinesthetic learners learn through physical touch and performing the actions. These learners thrive in hands-on environments where they can interact with the object they are learning about (Gardner, 1983).

Musical learners learn and retain information when information is presented melodically. They often turn lessons into lyrics, speak rhythmically, or use other musical pathways to learn information and share what they have learned. Interpersonal learners learn best through interacting with others. Many interpersonal learners learn best when information is presented in group settings, and they are allowed to work alongside others to master concepts. These types of learners thrive in group-work settings and often prefer to learn with others (Gardner, 1983).

Intrapersonal learners tend to shy away from others. These types of learners prefer to learn information in a solitary setting and often retain more information when it is presented in an independent study type environment. Linguistic learners are highly effective at using words. These learners have highly developed auditory skills and often take part in reading and writing. They often have higher retention rates when the information is presented to them in a readable format.

Logical-Mathematical learners thrive when reasoning or calculating. They often look for patterns and relationships when learning material and often use this method to master concepts (Gardner, 1983).

Similarly to learning styles, there are also multiple instructional methods. 4-H project work is typically self-paced and self-directed. Tullis and Benjamin say “being an effective student requires the ability to guide one’s own learning activities effectively” (2010, p. 109). Their study indicated that individuals who take part in self-paced education expressed a significantly higher performance on educational tasks than individuals in a non-self-paced environment (Tullis and Benjamin, 2010). Another study finds that in a self-paced learning environment, learners are able to continuously monitor their level of mastery of content and tend to only stop once they have mastered what they would like to accomplish (Finley, Tullis & Benjamin, 2010). Metcalfe supports these findings by sharing that individuals often use metacognition, knowledge of their own knowledge, to determine when they have mastered a concept and can move to the next topic of study (2009). While this style may not be the ideal instructional method for younger students, as it is used in practice, agents will find ways to supplement the instruction provided.

Developmental Evaluation

Developmental Evaluation, as defined by Patton, is the evaluation of an innovative development, a change (2010). Innovations can take the form of new programs, products, or changes in framework. This type of evaluation has proved to be a relevant and appealing evaluation process for those leading social innovation. Traditional evaluation approaches fail to capture the ebbs and flows that come with evaluating innovative products (Patton, 2010).

Patton outlines a set of steps to be followed when using a Developmental Evaluation process. The first step is to inform and support what is being developed. This step deals with

identifying what is being developed and why, and provide that information to the public. The second step is to develop evaluation questions and instruments. How will the innovation be evaluated? The next step is to facilitate the use of the innovation. This involves guiding users through the process and gathering their feedback. The final step involves analyzing data, drawing conclusion, and refining. Based on results from data analysis, revisions are made, and then the cycle begins again (Patton, 2010).

Summary

By examining the history and structure of the 4-H program both on a national level, and on the state level, it is easy to see the program is rooted with a deep history in the development of youth to be productive citizens and leaders in their community. Studies show the importance of developing leadership skills in youth through the involvement in a club or activity outside of the classroom, but little literature exists to explain the procedures and effects of formal leadership education of 4-H members, thus indicating a need for further research in this area.

Insight into curriculum development and design was gained through exploring the Tyler, Taba, and Backwards Design models. Each model has strengths and weaknesses that were combined to form the Richards model of curriculum development, which guided the design of the TN 4-H Beginning Leadership Curriculum. Studies examined also proved that self-paced education has a positive impact on students' academic achievement, proving to affirm the choice of a self-paced, experience focused project curriculum. Since this is the first curriculum of its kind for the 4-H program in Tennessee, it is being approached as a Developmental Evaluation, since that style of evaluation is well suited for innovating changes being made. Studies showed that youth gained more from experiences than from traditional instruction when it came to leadership

development. This point, along with the lack of experience-based leadership curriculum for 4-H members guided the need for a new curriculum to be developed.

Chapter 3

Methodology

Methodology

This study was conducted utilizing a Developmental Evaluation approach (Patton, 2010). Given the innovative nature of the product that was to be developed and the truncated timeframe in which to complete the evaluation, a Developmental Evaluation approach proved to be the most appropriate choice. The study was designed to address three evaluation questions:

- What perceptions do key stakeholders have of the TN 4-H Beginning Leadership curriculum related to its appeal and the potential impact for student learning?
- To what extent does the TN 4-H Beginning Leadership curriculum impact students' knowledge, skills, and dispositions related to leadership competencies as defined by project area outcomes?
- To what extent are the TN 4-H Beginning Leadership curriculum and associated activities research-based, grounded in best-practices of education, and of sound quality?

Each evaluation question was evaluated by multiple means, as outlined in the evaluation matrix (table 1).

Each of the evaluation questions was assessed independently of one another by the researcher. This allowed for the researcher to evaluate the content, quality, and potential impact of the curriculum in a variety of contexts. For example, the curriculum could be well grounded in research-based content and best practices in adolescent education as indicated by stakeholder and expert review, but could fail to result in impacting student knowledge, skills, and dispositions as indicated by student work samples and statistical analysis. By choosing to address each question separately, the researcher could provide answers related to specific questions and identify overall

Table 1: Evaluation Matrix

Evaluation Question 1: What perceptions do key stakeholders have of the TN 4-H Beginning Leadership curriculum related to its appeal and the potential for impact on student learning?				
Number	Sub-Question	Data Source	Data Collection	Data Analysis
1.1	To what extent is appealing and interesting to agents, volunteers, and youth?	Extension Agents; Regional and State Specialists	Focus Group; Expert Reviews	Thematic Analysis
1.2	To what extent do you believe the curriculum will impact student learning?	Extension Agents; Regional and State Specialists	Focus Group; Expert Reviews	Thematic Analysis
Evaluation Question 2: To what extent does the TN 4-H Beginning Leadership curriculum impact students' knowledge, skills, and dispositions related to leadership competencies as defined by project area outcomes?				
2.1	What knowledge was learned by the participants?	4-H Members	Pre/Post Test; Work Samples	Paired T-Test; Effect Size; Review of Work Samples
2.2	What skills were developed by the participants?	4-H Members	Pre/Post Test; Work Samples	Paired T-Test; Effect Size; Review of Work Samples
2.3	What dispositions were affected by completing the curriculum?	4-H Members	Pre/Post Test; Work Samples	Paired T-Test; Effect Size; Review of Work Samples
Evaluation Question 3: To what extent are the curriculum and associated activities research-based, grounded in best-practices of education, and of sound quality?				
3.1	To what extent do the learning outcomes address programmatic needs?	Extension Agents, Regional and State Specialists	Document Review; Expert Reviews	Analysis of review comments
3.2	To what extent does the design of the curriculum and activities model best practices in adolescent instruction?	Extension Agents, Regional and State Specialists	Document Review; Expert Reviews	Analysis of review comments
3.3	To what extent does the curriculum present quality and impactful instruction to students?	Extension Agents, Regional and State Specialists	Pre-Post Tests; Work Samples; Document Review; Expert Reviews	Paired T-Test; Effect Size; Review of Work Samples; Analysis of review comments

strengths and weaknesses of the product as indicated by each of the data sources used in the study.

The remainder of this chapter is organized chronologically, following the evaluation timeline. Under each major task, the methods used for that action will be outlined, including descriptions of instruments developed, data collection methods, and data analysis.

Context of the Study

In 2015, TN 4-H hired a full-time curriculum specialist. This was the first position of its kind for the program. The curriculum specialist began with a systematic review of all 4-H programming and curriculum and found that the majority of the 4-H curriculum was outdated and not supported by a comprehensive framework that guided youth development (Richards, personal communication, December 3, 2016). After reviewing materials, the Curriculum Specialist began a holistic restructuring of curriculum for the program. In developing project area curricula, the curriculum specialist for TN 4-H set the following design parameters to which the curriculum was required to adhere: 1) the curriculum must be subdivided into a series of discrete activities that build on one another in complexity; 2) the activities must be age and developmentally appropriate such that they could be completed in a self-paced, self-directed manner by 4-H members ages 9-14; 3) each discrete activity must use research-based content; and 4) the design of each of the activities should reflect a modified version of Robert Gagne's Nine Events of Effective Instruction (J. Richards, Personal Communication, Oct. 1, 2016).

Evaluation Timeline

This evaluation study took place over an 18 month period. The scope of the evaluation involved the development, implementation, and field testing of learning outcomes, leadership curriculum, and instruments. The timeline for the evaluation can be seen in figure 8. Each step in the evaluation is then explained in detail in this chapter.

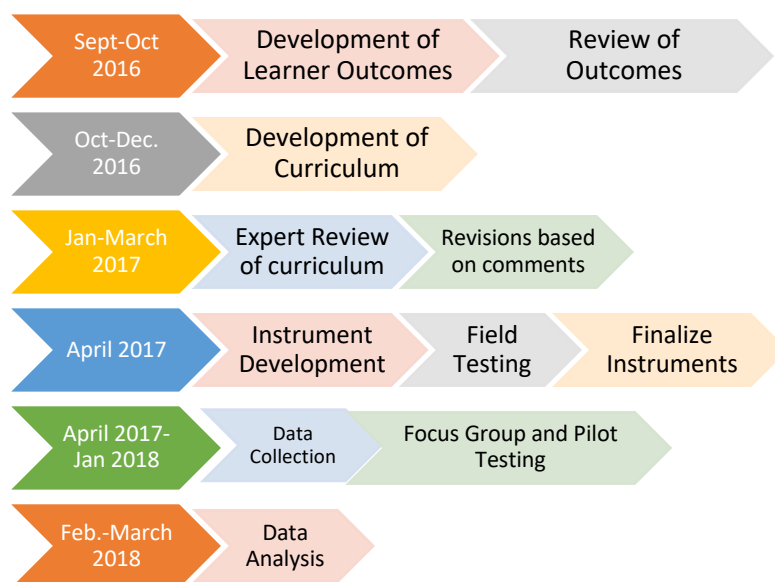


Figure 8 Evaluation Timeline

Development of Learning Outcome

The first step in this evaluation was to design the new project curriculum. Following the steps defined in the Richards Curriculum Development model (see Figure 6), the outcomes and indicators for the curriculum were established by the researcher, Dr. Lori Gallimore, an expert in Leadership and Youth Development, and the curriculum specialist, Dr. Jennifer Richards. Following development, outcomes were reviewed by Extension Agents, Regional Specialists, and State 4-H Staff members. These individuals were asked to evaluate the outcomes on a basis of their rigor, age and developmental appropriateness, and measurability. Reviewers were also asked to evaluate the outcomes for the progression from lower order thinking skills to higher order thinking skills. Reviewers' feedback was aggregated and suggested revisions were discussed with Dr. Gallimore. Revisions were made and the final set of outcomes was approved by Dr. Richards. The nature of this iterative process allowed key stakeholders to be actively engaged throughout development, thus helping to establish face validity with the users of the product.

The final version included eight outcomes that were defined and then further broken down into 18 indicators. All outcomes for this curriculum were written for the lower levels of Bloom's Taxonomy, Remember and Understand. As students progress to the higher levels of curriculum, learner outcomes will be focused on higher levels of the taxonomy. These outcomes and indicators guided the establishment of assessments, appropriate pedagogical strategies, the content knowledge, and the scope and sequence of the curriculum. The outcomes and indicators for the TN 4-H Beginning Leadership curriculum are found in Appendix I and were categorized as either knowledge, skills, or dispositions related to the concept of leadership which can be seen in Figure 9. A complete listing of outcomes and indicators for the Beginning 4-H leadership curriculum can be found in Appendix 1.

Curriculum Development and Review

Following the establishment of outcomes, the means of assessing the student's mastery of the concepts were defined. Formative and summative assessments, shown in figure 10, were developed and mapped to each outcome. These outcomes allowed students to show what they had learned from, not only the activity they had just completed, but also to show what they had retained in terms of knowledge, skills, or dispositions gained from previous activities. Each activity sheet within the curriculum also contained a url address where students could upload their assessment activities to a database. These work samples provided critical data to evaluate the quality and age appropriateness of the curriculum.

After the assessment methods had been established, the next step of the Richards Curriculum Development model suggests that the pedagogical methods be identified. Since much of 4-H project work takes part on an independent basis, the curriculum had to be designed with this in mind. The curriculum is presented in a self-paced, self-directed manner which research has

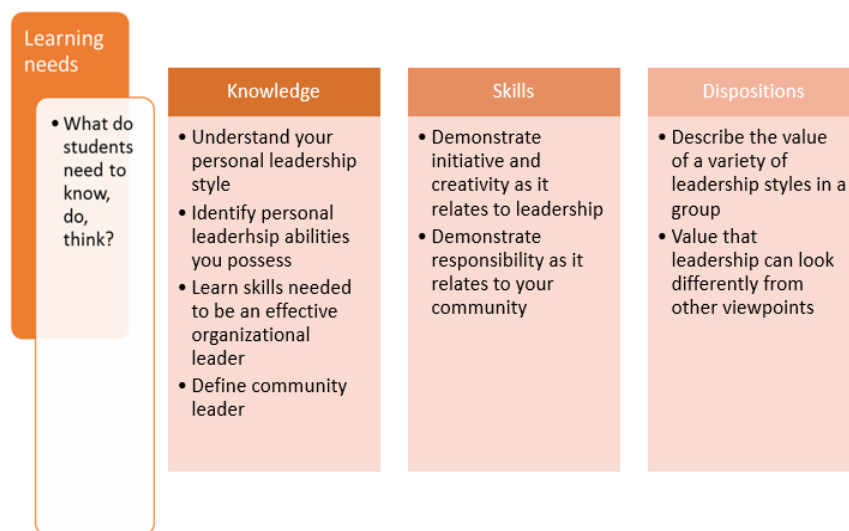


Figure 9 Learner Outcomes.

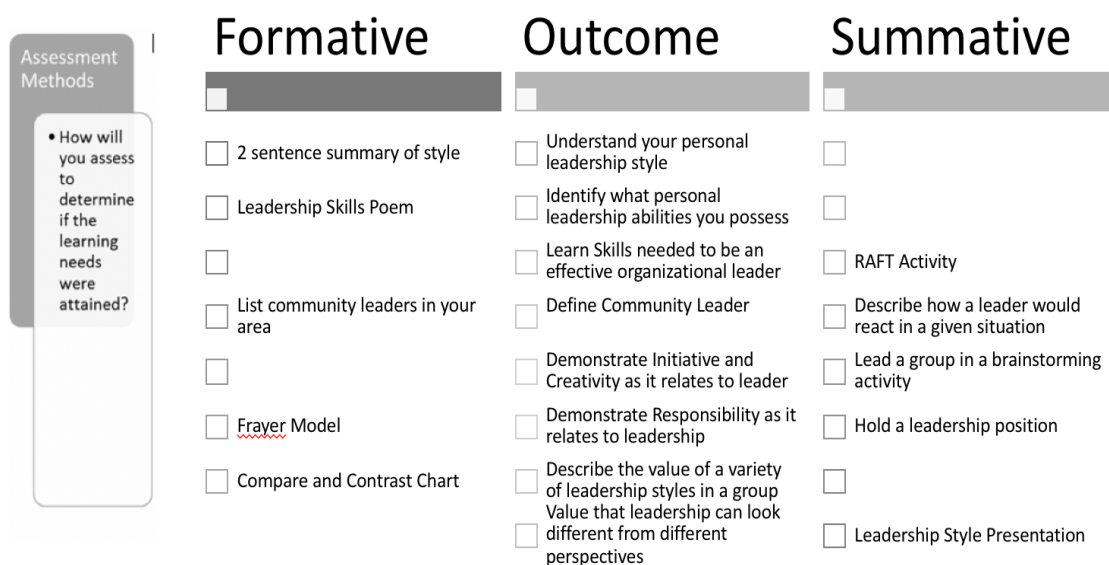


Figure 10 Formative and Summative Assessments

shown allows students to retain more content as opposed to other instructional methods (Tullis and Benjamin, 2010). This method also allows students to either read or research on their own, and then gives them an opportunity to practice what they have learned before they are assessed on mastery of the concept.

Content knowledge is the fourth step in the Richards model. This step focuses on determining what content must be presented in order for students to master the learning outcomes. The content included was grounded in research that describes the various styles and types of leadership presented in the curriculum. Much of this information was obtained from universities or existing Extension resources and then tailored to fit into the curriculum's self-paced and self-directed design. The organization of the content can be seen in figure 11.

The final stage in the development of the curriculum was to determine the scope and sequence of the curriculum. Since the curriculum was designed to introduce students to foundational leadership concepts that will be built upon in their intermediate and advanced project work, an introduction of content related to leadership styles and characteristics was the most appropriate scope.

In terms of sequence, the curriculum begins by providing students with the background knowledge related to leadership, and then moves to helping them develop skill sets before focusing on the student's development of leadership related dispositions, as defined by the outcomes. This organization and presentation of concepts can be seen in figure 12.

The final curriculum contained 12 separate activities that guided students toward mastery of each of the eight outcomes defined for the curriculum. The curriculum was reviewed by subject

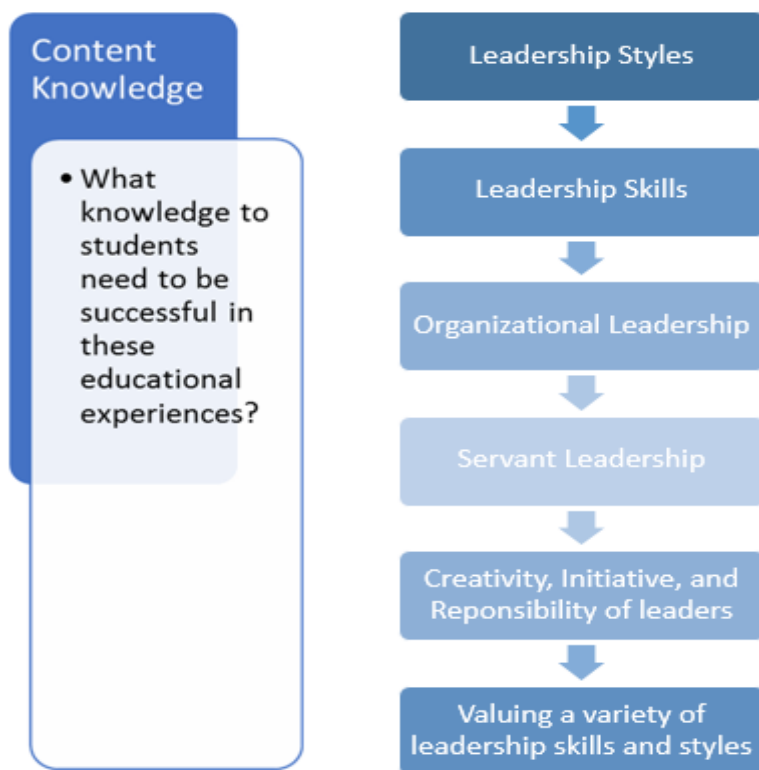


Figure 11 Content

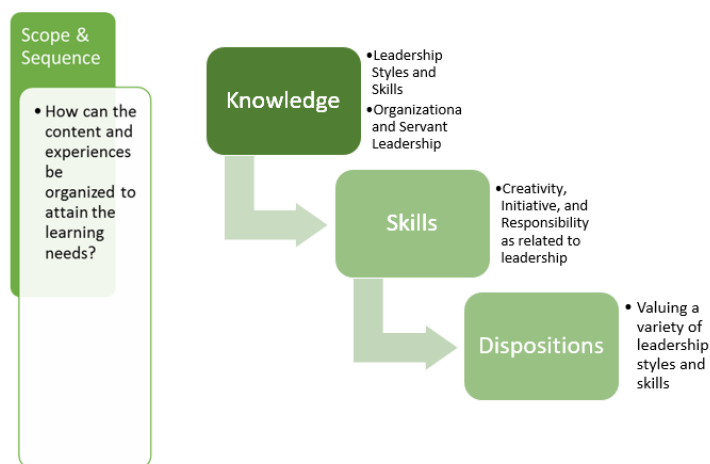


Figure 12 Scope and Sequence

matter specialists in the areas of leadership and instructional design, 4-H Extension agents, and Extension Specialists using an iterative design process. Reviewer feedback was analyzed and then prioritized as “essential,” “non-essential,” or “stylistic.” Essential feedback focused on changes regarding spelling, grammar, and wording of outcomes and indicator. Non-essential feedback was feedback based on personal preferences, and stylistic feedback related to the organization of the outcomes and indicators. Feedback prioritized as essential were addressed through appropriate revisions to the curriculum. Those that were prioritized as stylistic were addressed in consultation with the staff from UTIA’s Office of Marketing and Communications. Feedback that were prioritized as non-essential were addressed in consultation with Drs. Gallimore and Richards. Once revisions were completed, reviewers were asked to evaluate the curriculum again. This iterative process continued until no substantive changes were noted.

Data Sources

This study was completed using five sources of evaluation data: reviewer comments on learning outcomes, reviewer comments on the curriculum, a focus group with stakeholders, pre-post test data, and work sample reviews.

Reviewer feedback

As outlined in the curriculum development section, Extension Agents, Regional, and State 4-H staff were used as reviewers throughout the development process of both learning outcomes and the curriculum. Their comments were compiled, coded as essential, non-essential, or stylistic, and used to make revisions to the learning outcomes and curriculum. Extension Agents who had indicated considerable knowledge in the area of leadership were asked to review, along with all members of the regional and state 4-H staff. Key expert reviewers are outlined in table 2.

Table 2: Reviewer Area of Expertise

Individual Name	Position Title	Area of Expertise	Content Reviewed
Dr. Jennifer Richards	Assistant Professor, Curriculum Specialist	Curriculum Development, Adolescent Education, Instructional Design	Learning Outcomes, Curriculum, Survey Instruments, Focus Group Protocol
Dr. Lori Gallimore	Extension Specialist	Leadership, Instructional Design	Learning Outcomes, Curriculum
Justin Crowe	Extension Specialist	Youth Development, TN 4-H	Learning Outcomes
Dr. Joseph Donaldson	Assistant Professor, Evaluation Specialist	Youth Development, Evaluation	Learning Outcomes, Focus Group Protocol
Dr. Gary Skolits	Associate Professor	Evaluation, Assessment, Educational Research	Focus Group Protocol, Survey Instrument

Focus group

Agents for the focus group were selected using a stratified random sampling technique (Marshall, 1996). Agents were classified into two groups based on their number of years of service to UT Extension: less than three years and greater than three years. Agents were then further divided into the extension region of Tennessee in which they work: Eastern, Central, and Western. Of these groups, three agents with greater than three years' service to Extension and two agents with less than three years' service were selected from each region. The distinction between less than and greater than three years of service was made under the assumption that it takes extension agents approximately three years to have a firm grasp on what their job duties entail. These number of participants from each group were selected as a percentage of the number of agents who fell into each of the categories to have a representative sample from the population.

The purpose of conducting a focus group prior to pilot testing was to give the researcher the opportunity to gather immediate input from agents on the overall quality, feasibility, and usability of the curriculum. Questions used for this focus group can be found in Appendix II. Questions used in the focus group were modeled after other focus group questions provided to the researcher by advisors and mentors. These questions focused on the 4-H agent's first impressions

of the curriculum, their thoughts on the potential for student engagement with the newly designed curriculum as compared to the older project material, and their thoughts on the potential for student excitement toward the new curriculum. Questions on the topics of student knowledge gain, intentionality of the curriculum, and the overall design of the curriculum were also included.

The focus group protocol contained a set of eight multi-part questions that focused on overall first impressions of the curriculum, the overall design, ease of use, and projected student knowledge gain from completion of the curriculum. The focus group protocol can be found in Appendix 2. The questions and focus group protocol for this focus group were reviewed in an iterative process for reliability and face validity by a panel of experts in developmental evaluation, instrument development, Extension, and leadership for coherence, clarity, and researcher bias. After the initial review, changes were made to X questions to further clarify wording, reduce researcher bias, and more closely adhere to the evaluation questions. This process was continued until there were no further changes recommended by the panel. Due to an equipment malfunction focus group was not recorded, so direct quotes from participants are not included in the results from the focus group. The researcher, in consultation with Dr. Richards, decided to proceed with the evaluation study as designed, despite recorded data as the focus group's purpose was to inform, rather than for research purposes.

Data were collected after receiving approval from The University of Tennessee Institutional Review Board. Prior to the pilot test of the curriculum, a focus group took place and discussed the design of the curriculum, participant's impressions on its effectiveness, and any potential issues they saw with the curriculum's design, which were linked to the questions that guided the evaluation. One focus group was conducted in a virtual environment. The focus group lasted approximately two hours. Data from the focus group was recorded by taking notes of

participant's responses to the questions. Focus group discussions were not recorded, and answers to questions were not attributed to specific individuals. Notes from the focus group discussions were then recorded electronically for analysis. The data from the focus group were analyzed using Thematic Analysis (Creswell & Creswell, 2018). Thematic Analysis allowed for hand coding of the results from the focus group as they related to different themes. This method was used based on the low number of responses and the need to find general themes from responses.

Pre-Post test

The pre- and post-test that was given to participants was developed in three parts. The first part was composed of 15 multiple choice questions. These questions were developed from the content of the curriculum and were closely aligned to the learning outcomes and indicators developed to guide the curriculum. The second part of the survey instrument used 11 Likert-type statements to determine the student's self-reported level for different leadership skills. These statements provided students the opportunity to report their skills on a Likert-Type scale ranging from one to five, with one representing that they cannot complete the action at all and five being that they can complete the action for sure. The third, and final component of the survey, uses eight Likert-Type statements to determine the students opinions related to leaders. These statements are ranked on a scale of one to five, with one being never true and five being always true. The student survey instrument can be found in Appendix III. This survey instrument was reviewed by a panel of experts in Extension, leadership, and measurement and evaluated for appropriate reading level. The instrument was then field tested to establish reliability and validity with a group similar to, but not included in, the study's target population. Item difficulty was calculated for each of the knowledge items in the instrument and items with a consistently low difficulty were removed.

A total of twelve agents were selected for pilot testing using the stratified random sampling technique described for the focus group, and each agent was asked to identify five to ten students

to complete the curriculum. Prior to beginning work on the curriculum, students were asked to complete a pre-test instrument that assessed their knowledge related to the concepts covered in the curriculum, the perceived self-efficacy related to topics in leadership, and their overall opinion of what a leader is and what actions define them. Students were then asked to complete the project curriculum. The completion timeframe was approximately five months in length. Instructions given to the students regarding the curriculum was not closely controlled by the researcher, in that no directions were given in regards to helping students complete the activities, when to ask for help, etc. This was done to help model the process that is used when completing other project activities. Following completion, students were given the same instrument as a post-test to determine their overall knowledge gain, change in their reported skill levels related to leadership, and to see if their opinions related to leaders had changed after completing the curriculum. Data from student surveys was collected and either physically or electronically mailed to the researcher at The University of Tennessee. Answers from the surveys were then entered into SPSS (IBM Corp, 2017) to allow for data analysis.

Quantitative data was analyzed by following the steps for data cleaning outlined by Morrow (2013). A codebook was created outlining all variables from the student survey. The codebook can be found in Appendix IV. When all data had been collected, initial frequencies were calculated for all variables. From analyzing the frequencies, items were then removed from the data set due to inconsistencies (i.e. the item had a 100% correct rate on both pre and post) and items were reverse coded if necessary. After this, skewness and kurtosis were calculated to determine the normality of the data to help guide what statistical analysis would be performed. Following this calculation, a paired sample t-test was performed to determine if statistically significant results were seen from pre to post (Cohen, 1990). This analysis was performed using

SPSS on a personal computer. After performing the t-test, effect size was also calculated to supplement the results from the t-test. One reason for choosing to calculate effect size was based on the total number of returned pre-tests and post-tests being low ($n=30$). The benchmarks for effect size were as follows: small ≥ 0.2 , moderate ≥ 0.5 , and high ≥ 0.8 (Rocconi, 2018).

Work samples

Participants were asked to upload their assessments to a website, like they would when completing the curriculum as a part of project work. These work samples were captured and reviewed to establish evidence of student knowledge and skill gain as a result of completing the curriculum.

Internal and External Threats to Validity

This research design presented possible issues related to the validity of the study. While the curriculum is designed to be self-directed and completed on an independent basis, there were no protocols in place for how much the 4-H agent or parent could be involved with the completion. This could result in the student's not completing the activities completely on their own, meaning they could not be gaining the maximum amount of knowledge possible from the curriculum.

Another possible threat to the study was associated with the survey instrument and its validity. Since the surveys were administered by different 4-H agents, there stood the possibility that different guidelines, time limits, or other factors differ from one group of students to the next.

With the focus group discussions, the possibility of interviewer bias may have presented an issue to the validity of the study. Since the researcher conducted the focus group discussions, agents and students participating may have felt as if they needed to share the answer that the researcher wanted them to say, rather than the answer they wanted to give. This type of bias could have been reduced by the researcher following the set list of questions and controlling their tone and body language while conducting the focus groups.

Researcher Bias

Before beginning the study, the researcher identified personal qualities that could impact the relationship with participants of the evaluation. The researcher holds a strong passion for the Tennessee 4-H Youth Development program and is well-known by many employees of the program. The researcher also holds a strong connection to the product created. These connections could have impacted the questions asked of experts and participants. To help alleviate this bias, all reviews were compiled and specific comments were not attributed to a specific individual.

Prior to data analysis, the researcher reflected on his biases of the research and presumptions of the study's outcomes in order to maintain a neutral viewpoint. However, when analyzing data, the researcher's personal impressions of participants may have influenced his perception of the meaning of the participants' responses. In addition, the researcher structured questions in a way to avoid leading or guiding participant's responses in a particular direction. After collection and analysis of data from the focus group, the results were shared with an individual outside of the study to eliminate any bias that was shown during data analysis.

Chapter 4

Results and Discussion

Introduction

The results and discussion of this evaluation are organized based on the three main evaluation questions and sub-questions as defined in the evaluation matrix (Table 1). Conclusions and implications are discussed in Chapter 5. Results were gathered through multiple qualitative and quantitative means, including a focus group, a pre-post test instrument, evaluation of work student samples, expert review, and comments from stakeholders on learning outcomes and the curriculum.

Population and Sample

The population for this evaluation was made up of two groups: UT Extension Agents with a 4-H appointment from across the state and Tennessee 4-H members in the 4th and 5th Grade. Extension Agents for both the focus group and pilot testing portions were selected using a stratified random sampling technique. Fifteen agents were invited to participate in the focus group and twelve were invited to participate in pilot testing.

Focus Group

The focus group was made up of a group of agents with a variety of years of experience in the Tennessee 4-H Youth Development program, as shown in Table 3. Agents also represented each of the three extension regions for the state. Agent 1 had two years of experience working in a rural county in the Central Region; Agent 2 had one year, four months experience and worked in a rural county in the Western Region. Agents 3 and 4 were from the Eastern Region. Agent 3 had two years, nine months experience working in a rural county, and Agent 4 had eight years of experience working in an urban county.

Table 3: Demographics of Focus Group Participants (n=4)

Criteria	n
> 3 Years' Experience	3
< 3 Years' Experience	1
Eastern Extension Region	2
Central Extension Region	1
Western Extension Region	1

The sample for the focus group captures a diverse sample, in terms of work experience and location, it does not, however, make a representative sample for extension agents across the state. Those who indicated that they would be willing to participate in the focus group would have composed a much more representative sample. Of the fifteen invited to participate, approximately half were male, and half female. The focus group was held in April, which is a month where many agents are finishing up in-school programming. This could have contributed to the low number of participants and non-representative sample of participants, as many agents were unable to join.

4-H Members

A total of fifty pre-tests and twenty-five post-tests were returned to the researcher. Of the twenty-five participants from five counties (one from the Eastern Region, two from the Central Region, and two from the Western Region) across the state of Tennessee. The low response rate may be contributed to several factors: agents were unable to recruit participants in their county for the study, students selected would initially agree to participate, but then would not return a pre-test, or agents would initially agree to participate in the study, but then chose not to move forward due to the time needed to help complete the study. Of the participants, seventeen were female and eight were male, figure 13. Twenty were white, two were African American, two were Hispanic, and one chose not to disclose their race, figure 14. Ages of participants ranged from nine years old to twelve, as shown in figure 15.

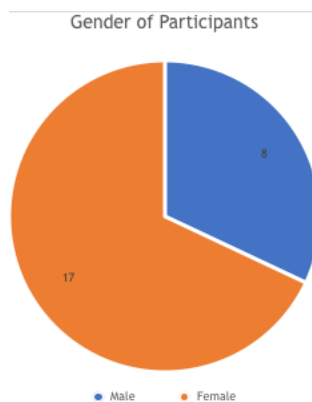


Figure 13 Gender of Participants

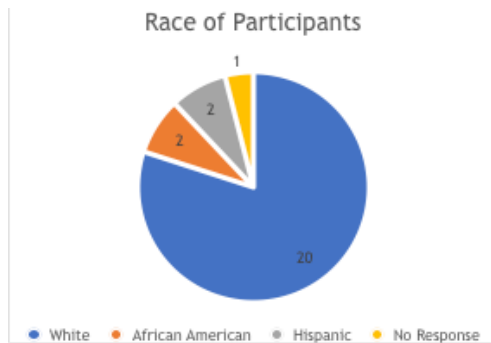


Figure 14 Race of Participants

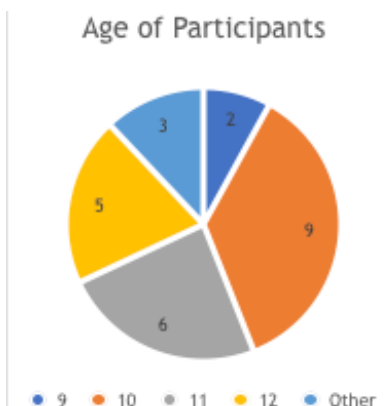


Figure 15 Age of Participants

Three participants fell outside of this age range, and that could be explained by agents not following procedures when recruiting participants.

Evaluation Question 1

What perceptions do key stakeholders have of the TN 4-H Beginning Leadership curriculum related to its appeal and the potential for impact on student learning?

Interest and Appeal

Focus group participants were asked to think about how many of the 4th and 5th graders in their county would be interested in completing the curriculum. The average number shared within the group was approximately half of the 4th and 5th graders they interact with in their county. The participants shared that as more members in their counties became involved, it would likely stimulate more involvement after students can see what their peers are working with.

Focus group participants were also asked to identify components they found appealing and not appealing. The variety of activities included throughout the curriculum was cited as being very appealing. The technology component, including the inclusion of QR Codes to guide students to share their work was also a commonly noted appealing concept of the curriculum. The only negative comment associated with this question centered on minor editorial changes associated with colors used and the layout of a few items, such as the leadership style quiz and the inclusion of a variety of color blocks on one particular activity. All participants shared that the 4-H members would likely share their opinions on the appealing components of the curriculum as well during the pilot testing of the curriculum in the fall. Figure 16 shows the first iteration of one activity included in the curriculum. Participants in the focus group, as well as other experts who reviewed the curriculum were concerned with the use of colored components throughout the curriculum.

Many county extension offices do not have the ability to print in color, and those that do often choose not to based on cost. These stated concerns were considered when redesigning, and the final

Tennessee 4-H Youth Development

Beginner Leadership Project Sheet 2

Project Outcome
Identify what personal leadership abilities you possess
Project Indicator
Find what independent leadership abilities you possess
Summarize different leadership skills and abilities you possess

Completion of this sheet will earn you the second Leadership Digi-Badge!



On sheet 2, you defined some common terms associated with leadership. Let's see which of those skills you already have, and which ones you can work on learning!

For each of the words below, place it in the box you feel best describes your level with that skill. IN addition to these words, make up 3 other traits you think a leader should possess.

WORD BANK

Self-Motivated	Confidence	Positivity	Engaged	Discipline
Communication	Accountability	Open-mindedness	Listening	Maturity
Focus	Transparency	Innovation	Decisiveness	Ability to Teach

These describe me very well

I could use a little work with these

I could use a lot of work with these

These don't describe me at all

Author: James W. Swart, Graduate Assistant, 4-H Youth Development

Figure 16 Initial Iteration, Activity 2

version of the activity can be seen in figure 17. While this version still includes color, it is significantly less when compared to the first iteration.

Participants were asked to share their first impressions of the curriculum. This question generated different responses from the participants. Major themes included the curriculum's focus on the use of technology and interest research that engaged the students. One participant focused on the variety of activities that had been developed for a variety of learning styles. Another participant stated that the curriculum was very employer focused, in that it teaches skills at a young age that employers are looking for. This makes Tennessee 4-H youth more marketable job candidates when entering the work force. All participants shared that their overall impressions were positive and they believed the youth would share their same thoughts. One participant also shared that this style of curriculum would be well received by volunteer leaders lead project groups.

Impact on Student Learning

Participants in the focus group were asked to assign a number indicating their perceived level of student knowledge gain after using the curriculum. Among the group, a score of 6 to 8 was the consensus. One participant shared that until students take part in 4-H beginning in the 4th grade, there is not a focus on leadership skill development in the school setting, and even then, not a lot of information is presented beginning in 4th grade. That participant shared that this curriculum opened a new door to leadership education and building the skills needed to be a great leader and member of society early. Another participant shared that this allows more leadership education to take place outside of the home, which is where it is primarily taking place now.

Evaluation Question 2

To what extent does the TN 4-H Beginning Leadership curriculum impact students' knowledge, skills, and dispositions related to leadership competencies as defined by project area outcomes?

PROJECT OUTCOME:
 Identify what personal leadership abilities you possess
PROJECT INDICATORS:
 Find what independent leadership abilities you possess
 Summarize different leadership skills and abilities you possess

1-2 YEARS IN PROJECT

In the previous activity, you defined some common terms associated with leadership. Let's see which of those skills you already have and which ones you can work on learning.

Place each of the leadership traits below in the box you feel best describes your level with that trait.
 Example: Focus describes me very well, it will go in the blue box.

WORD BANK

Self-Motivated	Confident	Positivity	Engaged	Discipline	Maturity
Communication	Accountability	Open-Mindedness	Listening	Ability to Teach	
Focus	Transparency	Innovation	Decisiveness		

These traits describe me well

I need a little work on these traits

I need a lot of work on these traits

These traits do not describe me at all

Figure 17 Final Iteration, Activity 2

Knowledge Gain

The first section of the pre-post test measured knowledge gained by participants. To measure these items, students were presented with a question or statement and provided four potential answers. A correct answer was scored as a 1, and an incorrect answer was scored as a 0.

As shown in table 4, three items saw significant increases in knowledge. These items were each definitions of leadership terms. Improvements from pre- to post-test scores were seen across 10 of the 15 items included in this section of the instrument. Looking at effect size (Cohen's d) five of the items indicated a moderate (>0.5) effect size. The data suggest that the curriculum is effective at teaching students definitions of terms related to leadership skills. Results also indicate that the curriculum is effective at helping student master lower level thinking items, such as remembering the first person to use the phrase servant leadership. Items that saw a decrease from pre-test to post-test primarily related to identifying skills needed by different types of leaders. This could be explained two ways. The first by the skills portion of the curriculum following the knowledge portions.

For the knowledge items, students were asked to make lists or categorize skills needed by different types of leaders. In the skills portion of the curriculum, they identify which skills a leader used in a situation. The second possible explanation deals with the shortened time frame, students could have picked different activities they wanted to complete and chose to not complete that portion of the curriculum.

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Table 4: Items Related to Leadership Knowledge

Item	Pre		Post		p	Effect Size
	Mean	SD	Mean	SD		
Which of the following best describes a participative leader?	0.32	0.476	0.48	0.510	0.256	.324
This leadership style is most associated with sports coaches or generals.	0.56	0.507	0.60	0.500	0.714	.079
Of the following definitions, which best describes passion, as it relates to leadership	0.28	0.458	0.12	0.332	0.212	.400
Which of the following leadership traits best define building team members up	0.44	0.507	0.52	0.510	0.491	.157
To be effective, a leader must inspire action. Which statement best describes what inspiring action means	0.28	0.458	0.56	0.507	0.05*	.580***
Being fair and treating others with respect is best described by which trait of highly effective leaders	0.04	0.200	0.24	0.436	0.057	.590***
A community leader can also be said to be all of the following except	0.76	0.436	0.68	0.476	0.491	.175
What does the phrase servant leader mean	0.32	0.476	0.32	0.476	1	0
Who is responsible for coming up with the phrase servant leader	0.20	0.408	0.44	0.507	0.056	.522***
What is meant by the phrase empathy	0.72	0.458	0.40	0.500	0.008**	.667***
Initiative is defined as	0.20	0.408	0.08	0.277	0.265	.334
Which of the following is not a brainstorming technique	0.20	0.408	0.36	0.490	0.294	.335

Table 4. Continued

	Pre		Post		p	Effect Size
	Mean	SD	Mean	SD		
Which of the following best defines motivation as it related to leadership	0.36	0.490	0.40	0.500	0.746	.081
Striving for a stronger team is part of which of the following leadership traits	0.48	0.510	0.60	0.500	0.327	.238
Knowing how others see them is an example of which of the following leadership traits	0.08	0.227	0.36	0.490	0.032*	.733***

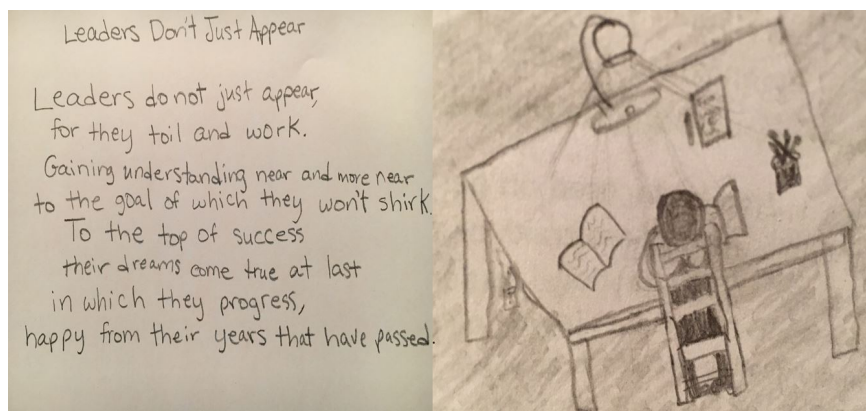
* $p < 0.05$ ** $p < 0.01$

*** Moderate Effect Size

portion of the curriculum. Work samples that were reviewed indicated that students were able to demonstrate mastery of different knowledge items through formative and summative assessments. These samples included reviews of poems written about the importance of leadership skills and what skills students possessed. The sample included in figure 18 shows that this student gained an understanding that a leader must work to gain skills over time, and that becoming a leader is not an instant process. Videos were reviewed of the RAFT Activity completed by participants, which was used as a summative assessment for the knowledge portion of the curriculum. Videos watched indicated that students possessed the knowledge necessary to effectively describe the skills needed by a variety of leaders in different situations.

Skill Development

The second section of the pre-posttest instrument focused on skills related to leadership that were taught in the curriculum. These items were ranked on a Likert-scale from 1 to 5, with one being I cannot do at all, and 5 being I can do for sure.



Leaders Don't Just Appear
 Leaders do not just appear,
 for they toil and work.
 Gaining understanding near and more near
 to the goal of which they won't shirk.
 To the top of success
 their dreams come true at last
 in which they progress,
 happy from their years that have passed.

Figure 18 Leadership Skills Poem

Results for this section are shown in table 5. Three items, all related to leadership styles and characteristics, showed significant differences from pre- to post test. Two of the three items that showed statistical significance were related to identification or description of skills needed by different types of leaders. This contradicts what was shown by the knowledge results, which could be contributed to the students being able to identify skills in context, but not knowing the skills when selecting from a list. Statistical significance was also seen in the item related to comparing and contrasting two leadership styles. From this, it appears that the curriculum is effective in presenting information related to a variety of leadership styles. Four of the skills-related items saw a moderate effect size. Three of those items also showed statistical significance, and the fourth was related to identifying skills needed by community or servant leaders.

All items in this portion of the survey saw an increase in responses from pre- to post except one. The item showing a decrease was focused on responsibility. Students were asked whether or they could identify if someone was responsible in a situation. This decrease could be explained by students having a false sense of what acting responsible looks like prior to completing the curriculum, and then recognizing their misconception after completing the curriculum.

Table 5: Items Related to Leadership Skills

Item	Pre		Post		p	Effect Size
	Mean	SD	Mean	SD		
I can identify my personal leadership style correctly	2.84	1.463	3.20	1.225	0.175	.267
I can describe what leadership skills I possess and which ones I don't possess	2.88	1.394	2.92	1.441	0.914	.282
I can list at least 5 leadership skills and describe them	2.52	1.327	3.04	1.06	0.091	.416
I can explain what skills an organizational leader needs	2.40	1.225	3.08	1.382	0.024*	.521***
I can list leaders who have certain leadership traits	2.38	1.173	2.79	1.062	0.211	.366
I can describe the skills needed by a servant, or community leader	2.04	1.172	2.64	1.186	0.079	.509***
I can identify qualities of a servant leader in different situations	2.16	1.179	2.92	1.152	0.015*	.652***
I can list community leaders in my area	2.96	1.399	3.36	1.524	0.301	.273
I can lead a group in a brainstorming activity	3.08	1.472	3.42	1.283	0.312	.246
I can identify whether or not someone was responsible in a situation	4.00	1.354	3.80	1.384	0.569	.146
I can identify places where I can be a leader in my community	2.88	1.453	3.32	1.282	0.252	.321
I can compare and contrast two different leadership styles	2.20	1.258	3.20	1.258	0.011*	.795***

* $p < 0.05$

*** Moderate Effect Size

Looking again at work samples, items submitted as assessments for skill focused activities showed levels of mastery for skill acquisition. Assessments for this portion asked students to identify skills needed by different types of leaders. Figure 19 shows a collection of responses from students from this assessment. Other assessments required students to lead a brainstorming session. Evidence from these assessments showed that not only did students lead a brainstorming session, but the session proved to be effective in accomplishing its goal.

Affected Dispositions

The third section of the survey observed attitudes of students related to leadership. Using a Likert-Scale, students ranked the items from never true (1) to always true (5).

Attitude item results are shown in table 6. Two survey items indicated significant changes from pre-test to post-test; these statements related to leadership characteristics and styles of leaders. Similarly to the previous section on skills, all items saw an increase from pre-test to post-test. Two of the seven items indicated moderate to high effect sizes.

Healing, Empathy, Foresight, Awareness, Stewardship, Persuasion, Conceptualization

Building Community - everyone has a task to complete. Listening - everyone shares issues.

The servant leadership qualities that were observed are building community, empathy, awareness, stewardship, persuasion, and conceptualization.

listening, building community, awareness, and persuasion

Integrity, decisive, honest, trust, communicate, confidence, strong

Building a community

Figure 19 Student Assessment Responses, Skills Portion

Table 6: Items Related to Attitudes toward Leadership

Item	Pre		Post		p	Effect Size
	Mean	SD	Mean	SD		
A person has to be in charge of something to be a leader	3.32	0.945	3.88	0.971	.02*	.584***
A leader is usually a loud person	3.12	1.333	3.28	1.173	0.672	.127
Only certain people can be leaders	2.72	0.891	3.00	0.764	0.215	.337
A leader always tries to take control of a situation	1.88	1.054	2.36	1.44	0.168	.380
All people have to have the same style of leadership	3.14	1.167	2.77	1.066	0.236	.331
A person who lets other people decide how to complete a task isn't a real leader	1.32	0.69	2.00	1.118	0.018*	.732***
A leader can be a shy person ^a	2.08	1.32	2.40	0.957	0.303	.278

^aReverse Coded for analysis

* $p < 0.05$

*** Moderate Effect Size

The questions that did not show statistical significance, such as “A leader is usually a loud person,” or “A leader can be a shy person” indicate that students who completed the assessment may have already received some level of leadership training through prior 4-H experiences. This may mean that the pre- post-instrument was not sensitive enough to capture changes in dispositions made by the curriculum when students entered with previously established connotations of what leadership looks like and what behaviors leaders possess.

Students were invited to submit work samples of their summative assessments, thus allowing additional analysis of the curriculum's impact on dispositions. The final summative assessment for the curriculum dealt with using knowledge and skills to compare their leadership style and skills to one of their peers. In this evaluation, they were to compare the strengths and

weaknesses of their style to their peers. One participant shared *“I compared my leadership style to my sister’s. I have more patience than she does, but she is more passionate than me. We complement each other well.”* Evaluation of these presentations showed that students were able to effectively compare their styles and understood that different leadership skills and styles were needed for an effective group.

Evaluation Question 3

To what extent are the curriculum and associated activities research-based, grounded in best-practices of education, and of sound quality?

Addressing Programmatic Needs

Participants in the focus group were asked to compare the quality of the new curriculum to that of the older project materials. Participants shared that this curriculum does more than just market the project, which is what the previous materials did. They indicated that with the new materials, students are encouraged to focus on the self-aspect of leadership and can build from there as they progress through the project. The participants all shared that they believe that students will be far more engaged with the new curriculum based on the design and inclusion of a variety of activities.

Participants shared that the curriculum was well put together, and it showed that a lot of hard work and revision had gone into producing the product. One participant shared that they really liked how it stretched the students, and in some cases made them get out of their comfort zone. The participants shared that they look forward to being able to use the curriculum after it has been pilot tested and validated.

Other key stakeholders, including state and regional state members, shared that the new framework for project areas in the 4-H program along with the development and implementation of project curricula would dramatically improve the quality of project work across the state. Even if students were to not complete the project curriculum, they would still be able to use the project

outcomes (learner outcomes) to guide their project work. Having a set of guidelines of what is expected of 4-H members in a project area will aid in closing the gap between members of a project area. Project work often covers a wide-spectrum of activities. Frequently, what is included in project works is largely dictated by the 4-H agent's interests and areas of expertise. For example, an agent who does not have a strong interest in Leadership could result in 4-H members in their county receiving little to know supplemental instruction in this project area. The activities of the curriculum aid in providing 4-H members with supporting materials, showing that they have mastered certain aspects of project work and including that evidence in project portfolios and other competitions related to project work.

Modeling Best Practices

The curriculum was designed using research-based strategies in adolescent instruction. Gagne's Nine Events of Effective Instruction were followed when developing the curriculum, as well as the inclusion of high levels of student engagement, and multiple intelligences instructional strategies. Review from experts in adolescent education helped to establish this. Participants in the focus group were asked to evaluate the sequencing of the curriculum and whether or not it was effective. One participant greatly enjoyed the instructional design of the curriculum. They shared, *"I like how the curriculum moves students from thinking about themselves, then to their organization, and then to their community."* Participants also shared that they liked how the students were moved from lower levels of thinking to higher levels, as everything ultimately builds on their previous knowledge gained earlier in the project. Participants also shared that they liked that each piece could also standalone if necessary.

Quality and Impactful Instruction

Reviews from experts in the field of instructional design, 4-H Youth Development, and Leadership indicated that the curriculum was designed well to guide students to the mastery of

learning outcomes. These experts reviewed each iteration of the curriculum and provided comments on restructuring of activities, graphic design, and layout of materials. The first draft of curriculum was submitted for review in October and the curriculum was finalized in late December. As an example of this iterative process and the resulting changes to instructional design, Figure 20 shows the initial draft of activity 11 in the curriculum while figure 21 shows the final version. Revisions were made on both the graphic design of this portion of the activity, and the way in which students responded. The major instructional changes were made because the initial activity was designed at a high cognitive level which was not developmentally appropriate for the age range of the intended audience. For example, students were asked to identify four leadership skills, group them in two distinct groups, and then compare and contrast each group. The final version of the activity reduced the focus to just two leadership skills and eliminated the need to create grouping.

On the next page, you will be completing a compare and contrast table for 4 different leadership skills that you feel are essential for community leaders. Brainstorm now and list those 4 skills below.

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Compare and Contrast

From the 4 words you identified on the previous page, let's compare and contrast those terms using a compare and contrast table. An example is below, and a blank one can be found following this page. You will need to group the 4 skills you identified into 2 groups however you see fit.



Figure 20 Initial Draft, Activity 11

On the next page, you will complete a compare and contrast table for two different leadership skills that you feel are essential for community leaders.

Brainstorm now and list those two words below.

Leadership Skill 1 _____

Leadership Skill 2 _____

Beginning Leadership Curriculum 26

Compare and Contrast

From the two skills on the previous page, let's compare and contrast those terms using a compare and contrast table. An example is below and you can find a blank one on the following page.

Communication

Team Building

Figure 21 Final Draft, Activity 11

Chapter 5

Conclusions and Implications

Introduction

The purpose of this study was to develop and validate curriculum aligned to the new Beginning Project Area Outcomes using a developmental evaluation approach. The study aimed to address three evaluation questions and the sub-questions associated with each:

1. What perceptions do key stakeholders have of the TN 4-H Beginning Leadership curriculum related to ease of use, quality of the curriculum, and impact on student learning?
 - 1.1. To what extent is the curriculum appealing and interesting to agents, volunteers, and youth?
 - 1.2. To what extent do you believe the curriculum will impact student learning?
2. To what extent does the TN 4-H Beginning Leadership curriculum impact students' knowledge, skills, and dispositions related to leadership competencies as defined by project area outcomes?
 - 2.1. What knowledge was learned by the participants?
 - 2.2. What skills were developed by the participants?
 - 2.3. What dispositions were affected by completing the curriculum?
3. To what extent are the TN 4-H Beginning Leadership curriculum and associated activities research-based, grounded in best-practices of education, and of sound quality?
 - 3.1. To what extent do the learning outcomes address programmatic needs?
 - 3.2. To what extent does the design of the curriculum and activities model best practices in adolescent education?
 - 3.3. To what extent does the curriculum present quality and impactful instruction to students?

Conclusions

Based on results gathered from each of the data sources for the evaluation, the following conclusions were made. The evaluation question to which the result corresponds has been noted.

1. Key stakeholders shared that the curriculum will be easy to implement in their programming and will not require major changes in structuring of current programming, due to the self-paced, self-directed nature (1.1).
2. Key stakeholders, including Extension Agents, Regional, and State 4-H staff members, perceived that students who complete the curriculum will demonstrate gains in terms of knowledge, skills, and dispositions (1.2).
3. Key stakeholders appreciated the inclusion of technological components, such as online research and sharing of assessments with their peers. They also appreciate the collaborative nature of the curriculum, in that it encourages students to compare responses with their peers (1.1, 1.2)
4. The curriculum proved to educate students on the definitions of terms, particularly those related to leadership skills, well. This was shown through statistical and practical significance from the pre-post test (2.1).
5. The curriculum proved ineffective at guiding students to an understanding of what leadership skills are needed by different types of leaders, such as servant leaders or organizational leaders (2.1).
6. While statistical evidence did not show high levels of significance, work samples observed indicated that some students did master the concepts related to leadership knowledge (2.1).
7. Students indicated from the skills portion of the pre-post test that they can identify the skills needed by different types of leaders. This contradicts what was found from the

- knowledge portion, but could be contributed to students identifying the skills in context, but not being able to select the skills from a list indicating that the survey questions need to be addressed by either rewording or eliminating the questions (2.2).
8. Students showed a decrease from pre-test to post-test on a question related to identifying whether or not someone acted responsible in a situation. This could show that the curriculum is effective at teaching what responsibly is, and correcting misconceptions held by students prior to completing the curriculum (2.2).
 9. The curriculum proved ineffective at changing a majority of dispositions that students held with respect to leadership. This could be because of the truncated timeframe during which the curriculum was completed (2.3).
 10. Stakeholders perceived that the new style of curriculum provides more instruction to students when compared to older project materials (3.1).
 11. Stakeholders perceived that the curriculum and learning outcomes have the potential to make project work more uniform across the state. This may lead to higher quality project work from 4-H members (3.1).
 12. Stakeholders perceived that the curriculum models best practices in adolescent instruction, and presents content in a cohesive way (3.2).
 13. Observations of work samples indicate that students have mastered concepts presented in the curriculum, suggesting that the instruction may have a positive impact on student learning (3.3)

Recommendations

Based on the results gathered from each of the data sources, specific recommendations for revisions to the curriculum and data collection instruments include:

1. Activity 6: All items related to servant leadership on the pre-post test did not show statistical or practical significance, indicating that instruction was ineffective. Therefore, the recommendation is to restructure the activity to provide more instruction on servant leadership topics. For example, adding scenarios for students to read from servant leaders or videos to watch highlighting servant leadership to the activity might allow for a more in-depth understanding of what servant leadership looks like in practice.
2. Instrument Revision: Items on the instruments used to collect statistical data would need to be revised based on revisions to the curriculum. As noted on the dispositions results, the instrument was not sensitive enough to measure changes in dispositions when students already possessed ideas and mindsets related to leadership behavior. This revision could include items more specifically related to leadership dispositions covered in the curriculum instead of blanket leadership statements. The knowledge item related to the founder of servant leadership would also need to be adjusted. This adjustment could include rephrasing of the question to “Robert Greenleaf is credited with founding ____.” After revisions of the curriculum were made, the instrument would need to be evaluated to determine that items included on the survey were still addressed in the curriculum.
3. Sharing results with key stakeholder: As this was one of the first studies examining the effectiveness of a curriculum at teaching leadership concepts and skills to youth, it will be important to share the results with not only stakeholders across the state of Tennessee, but also with other individuals in leadership education and youth development. These results could be shared through peer-reviewed journal articles in

the Journal of Youth Development or the Journal of Extension. Presentations could be made at state and national extension conferences, such as NAE4-HA, Biennial Conference, or TAE4-HW Conferences.

Implications

This evaluation presented two implications. The first, this style of self-paced, self-directed curriculum can be used as a framework for future project curriculum for the Tennessee 4-H program. Feedback from stakeholders, as well as evidence gathered from work samples and pre-post tests indicate that students learn from this style of curriculum. This, coupled with supplemental instruction from club activities, will aid students in mastering not only the outcomes developed for project areas, but also life skills outlined in the Life Skill framework for Tennessee 4-H (Richards, 2017).

This evaluation provided a framework for future 4-H curriculum pilot testing and validation. Care was used to describe, in detail, the steps taken in development and pilot testing of the curriculum. As this was the first curriculum developed under the new ideology for the TN 4-H Program, it was the first evaluation of its kind for the program as well.

Early assessment of the efficacy of project area curricula will likely be heavily reliant on expert review and feedback from agents and 4-H'ers. However, long-term efficacy can likely be established by reviewing the portfolio rubrics over a period of years to identify criteria on which 4-Hers are consistently strong and those where they are consistently weak. This evaluation has shown that a pre-post test instrument is not the ideal choice for evaluating the efficacy of project curriculum in regards to student knowledge, skills, and dispositions.

Recommendations for further research

Based on this study, there are several potential foci for future research. The most obvious further study would be to redesign the curriculum based on the results of this study and then

retest the curriculum to see if the redesigned items prove to show more significant results.

Another area for further research lies in observing the retention of material from the curriculum by administering a follow up test at different intervals. One could also study whether students retain more from a direct instruction approach as opposed to a self-paced study of leadership concepts.

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Appendices

Appendix I

Outcomes and indicators for the TN 4-H Beginning Leadership Curriculum

Knowledge

Understand your personal leadership style.

- Identify your personal leadership style.
- Describe your personal leadership style.

Identify personal leadership abilities you possess.

- Explain different concepts, such as honesty and motivation, associated with leadership on a personal level.
- Find the independent leadership abilities you possess.
- Summarize the different leadership skills you possess.

Learn skills needed to be an effective organization leader.

- List leadership concepts that relate to organizational leadership.
- Describe leadership abilities exhibited by individuals in organizational leadership roles.
- Summarize the skills needed by someone in an organizational leadership role.

Define community leader.

- Define what it means to be a leader in a community.
- List community leaders in your local area.
- Define the leadership skills needed by community leaders.

Skills

Demonstrate initiative and creativity as it relates to leadership.

- Use creativity to brainstorm solutions to a club issue.
- Brainstorm possible solutions to a problem or issue in your community.

Demonstrate responsibility as it relates to your community.

- Define what it means to be responsible to yourself.
- Demonstrate responsibility by taking on leadership roles within your club and community.

Dispositions

Describe the value of a variety of leadership styles in a group.

- Compare the leadership styles of community leaders in your area.

Value that leadership can look differently from other viewpoints.

- Compare your leadership style to that of others.
- Compare leadership concepts and how they differ when looked at from a standpoint of self, organization and community.

Appendix II

Focus Group Protocol

Agent Perceptions prior to Pilot Testing

Say to the participants, “Thank you for taking the time to meet with me today. My name is James Swart and I am currently a Graduate Assistant for the Tennessee 4-H Youth Development Department and pursuing a Master’s of Science degree in Agricultural Leadership, Education, and Communications with a focus in Curriculum Development. Also with me on the call today is my major professor, Dr. Jennifer Richards. Today, we will be discussing your perceptions of, thoughts on, and overall impressions of the newly developed Tennessee 4-H Beginning Leadership curriculum. I will be capturing the main ideas of your answers to the questions and will use those to look for the big take away’s from today’s focus group to use in my thesis research.

Just to give you a background on this project, my thesis is focused on the development and pilot testing of the new curriculum you had a chance to review. This curriculum was developed following the outcomes and indicators that were adopted for the Leadership project, and has been reviewed by subject matter specialists in the areas of Leadership and Curriculum Development. Today’s focus group is the first of three parts of the results section of my thesis work. The second portion will be completed using 4-H members’ results from a pre- and post-test that they will complete before and after working through the project curriculum. The final component will be focus group conversations with the students who complete the curriculum and their 4-H agents to gain insight into their thoughts on the curriculum having worked through it. What questions can I answer for you about our purpose or the procedures of today’s focus group?

1. What were your first impressions of the Beginning 4-H Leadership curriculum when you received it?
 - a. Would you say they were overall positive impressions or negative impressions? Why?
 - b. Do you think 4-H members would have similar first impressions when they receive the curriculum? Why?
2. Comparing the new curriculum to the older project materials, such as the project activity sheets, do you think students will likely be more or less engaged with project work?
 - a. Do you think the students will gain more knowledge, skills, and dispositions from the old project activity sheets or the new project curriculum? Why?
3. After looking through the curriculum, what are some components that have been included that you find appealing? Why?
 - a. What are some components that you do not find appealing? Why?
 - b. Do you think 4-H members will share your thoughts on what is appealing and what is not? Why is that?
4. Do you think the sequence of the curriculum will be effective in guiding the knowledge, skill, and disposition gain of the students? Why or why not?
5. In your experience of working with 4-H members in clubs, do you feel as if the curriculum has been designed in such a way that students will feel excited about completing the activities included? Why or why not?

6. If you were to assign a number to the percentage of 4-H members in your county that would express a lot of interest in completing this curriculum, strictly based on your impressions of it, what would that number be and why?
7. Based on a scale of 1 to 10, with 1 being no knowledge gained at all, and 10 being an extreme amount of knowledge gained, based on your impression of the curriculum, for an average 4-H member, what would be their total knowledge gained? Why did you choose that number?
8. Are there any final thoughts or opinions you wish to share about the design, format, or organization related to the new Tennessee 4-H Beginning Leadership Curriculum?

Appendix III

Student Pre-Post Test

Student Assessment

Directions: Read each of the following statements or questions below and choose the BEST answer from the choices given. Make sure that you mark your answer clearly. If you change an answer, make sure you completely erase the old answer.

- 1) Which of the following **does NOT** describes a participative leader?
 - a. Someone who only gives one option when leading a group
 - b. Someone who wants to build a strong team
 - c. Someone who wants all team members engaged
 - d. Someone who is involved with their team

- 2) This leadership style is most associated with sports coaches and military generals.
 - a. Authoritarian
 - b. Participative
 - c. Laissez-Faire
 - d. Personable

- 3) Of the following definitions, which **best** describes passion, as it relates to leadership?
 - a. Being honest and having strong morals
 - b. Being fully invested in a project
 - c. Taking responsibility for one's actions
 - d. Paying attention to major tasks

- 4) Which of the following leadership traits **best** define building team members up?
 - a. Integrity
 - b. Inspiration
 - c. Patience
 - d. Accountability

- 5) To be effective, a leader must inspire action. Which statement **best** describes what inspiring action means?
 - a. Being honest and fair
 - b. Sharing all information with team members
 - c. Making decisions
 - d. Creating a vision for the group

- 6) Being fair and treating others with respect is **best** described by which trait of highly effective leaders?
- a. Inspiring action
 - b. Having integrity
 - c. Communicating
 - d. Being decisive
- 7) A community leader can also be said to be all of the following, **except**.
- a. A servant leader
 - b. An authoritative leader
 - c. A participative leader
 - d. A by-stander
- 8) What does the phrase “servant leader” mean?
- a. Someone who does exactly what they are asked
 - b. Someone who desires for other’s needs to be met
 - c. Someone who wants others to serve them
 - d. Someone who doesn’t know how to lead a team
- 9) Who is responsible for coming up with the phrase “Servant Leader?”
- a. Barack Obama
 - b. Maya Angelou
 - c. Robert Greenleaf
 - d. Bill Gates
- 10) What is meant by the phrase empathy?
- a. To understand what others are going through
 - b. To foresee the outcome of an event
 - c. To listen to what others want
 - d. To convince others
- 11) Initiative is defined as:
- a. The ability to ignore traditional ideas and create new ones
 - b. The ability to work independently and form your own ideas
 - c. The opportunity to take charge before others do
 - d. A duty you are expected to complete

- 12) The Sticky Wall is an example of a:
- a. Brainstorming technique
 - b. A piece of playground equipment
 - c. Wall covered in Velcro
 - d. None of the above
- 13) Which of the following best defines motivation, as it relates to leadership?
- a. Knowing how others see them as a leader
 - b. Knowing the goals and visions of an organization
 - c. Serving as a positive role model
 - d. Striving for a stronger team
- 14) Striving for a stronger team is a part of which of the following leadership traits?
- a. Motivation
 - b. Perception
 - c. Team Building
 - d. Risk Taking
- 15) Knowing how others see them is an example of which of the following leadership traits?
- a. Sharp Perception
 - b. Knowing the organization
 - c. Risk Taking
 - d. None of the above

For each of the following, fill in the circle under the box that that applies to you.

1. Can't do at all
2. Can do a little
3. Can do some
4. Can do mostly
5. Can do for sure

	Can't do at all	Can do a little	Can do some	Can do mostly	Can do for sure
16) I can identify my personal leadership style correctly	☐	☐	☐	☐	☐
17) I can describe what leadership skills I possess and which ones I don't possess.	☐	☐	☐	☐	☐
18) I can list at least five leadership skills and describe them	☐	☐	☐	☐	☐
19) I can explain what skills an organizational leader needs	☐	☐	☐	☐	☐
20) I can list leaders who have certain leadership traits	☐	☐	☐	☐	☐
21) I can describe the skills needed by a servant, or community leader	☐	☐	☐	☐	☐
22) I can identify qualities of a servant leader in different situation	☐	☐	☐	☐	☐
23) I can list community leaders in my area	☐	☐	☐	☐	☐
24) I can lead a group in a brainstorming activity	☐	☐	☐	☐	☐
25) I can identify whether or not someone was responsible in a situation	☐	☐	☐	☐	☐
26) I can identify places where I can be a leader in my community	☐	☐	☐	☐	☐
27) I can compare and contrast two different leadership skills	☐	☐	☐	☐	☐

For each of the following, fill in the circle of the choice that you believe to be true.

1. The statement is **never** true.
2. The statement is **rarely** true.
3. The statement is **sometimes** true.
4. The statement is **usually** true.
5. The statement is **always** true.

	Never True	Rarely True	Sometimes True	Usually True	Always True
28) A leader always has to be an adult	☐	☐	☐	☐	☐
29) A person has to be in charge of something to be a leader	☐	☐	☐	☐	☐
30) A leader is usually a loud person	☐	☐	☐	☐	☐
31) Only certain people can be leaders	☐	☐	☐	☐	☐
32) A leader always tries to take control of a situation	☐	☐	☐	☐	☐
33) All people have the same style of leadership	☐	☐	☐	☐	☐
34) A person who lets other people decide how to complete a task isn't a real leader	☐	☐	☐	☐	☐
35) A leader can be a shy person	☐	☐	☐	☐	☐

Appendix IV

Statistics Code Book

Beginning Leadership Code Book

Response Scale Options:

Knowledge Questions

Each question has four multiple choice options with only one correct answer.

1=Correct, 0=Incorrect

Skills Scale

1=Can't do at all, 2=Can do a little, 3=Can do some, 4=Can do mostly, 5=Can do for sure

Attitudes Scale

1=Never True, 2=Rarely True, 3=Sometimes True, 4=Usually True, 5=Always True

Abbreviations

K	Knowledge		p	Pre-Test
S	Skills		t	Post-Test
A	Attitude		D	Demographic

* indicates an item that was reverse coded

** indicates an item that was thrown out

Variable	Survey #	Question	Response Scale
ID			Open-ended
K1p	1	Which of the following best describes a participative leader?	K 1 or 0
K2p	2	This leadership style is most associated with sports coaches or generals.	
K3p	3	Of the following definitions, which best describes passion, as it relates to leadership	
K4p	4	Which of the following leadership traits best define building team members up	
K5p	5	To be effective, a leader must inspire action. Which statement best describes what inspiring action means	
K6p	6	Being fair and treating others with respect is best described by which trait of highly effective leaders	
K7p	7	A community leader can also be said to be all of the following except	
K8p	8	What does the phrase servant leader mean	
K9p	9	Who is responsible for coming up with the phrase servant leader	

K10p	10	What is meant by the phrase empathy	
K11p	11	Initiative is defined as	
K12p	12	Which of the following is not a brainstorming technique	
K13p	13	Which of the following best defines motivation as it related to leadership	
K14p	14	Striving for a stronger team is part of which of the following leadership traits	
K15p	15	Knowing how others see them is an example of which of the following leadership traits	
KCompp			Scale
K1t	1	Which of the following best describes a participative leader?	K 1 or 0
K2t	2	This leadership style is most associated with sports coaches or generals.	
K3t	3	Of the following definitions, which best describes passion, as it relates to leadership	
K4t	4	Which of the following leadership traits best define building team members up	
K5t	5	To be effective, a leader must inspire action. Which statement best describes what inspiring action means	
K6t	6	Being fair and treating others with respect is best described by which trait of highly effective leaders	
K7t	7	A community leader can also be said to be all of the following except	
K8t	8	What does the phrase servant leader mean	
K9t	9	Who is responsible for coming up with the phrase servant leader	
K10t	10	What is meant by the phrase empathy	
K11t	11	Initiative is defined as	
K12t	12	Which of the following is not a brainstorming technique	
K13t	13	Which of the following best defines motivation as it related to leadership	
K14t	14	Striving for a stronger team is part of which of the following leadership traits	
K15t	15	Knowing how others see them is an example of which of the following leadership traits	
KCompt			Open-ended

S1p	16	I can identify my personal leadership style correctly	S 1 to 5
S2p	17	I can describe what leadership skills I possess and which ones I don't possess	
S3p	18	I can list at least 5 leadership skills and describe them	
S4p	19	I can explain what skills an organizational leader needs	
S5p	20	I can list leaders who have certain leadership traits	
S6p	21	I can describe the skills needed by a servant, or community leader	
S7p	22	I can identify qualities of a servant leader in different situations	
S8p	23	I can list community leaders in my area	
S9p	24	I can lead a group in a brainstorming activity	
S10p	25	I can identify whether or not someone was responsible in a situation	
S11p	26	I can identify places where I can be a leader in my community	
S12p	27	I can compare and contrast two different leadership styles	
SCompp			Open-ended
S1t	16	I can identify my personal leadership style correctly	S 1 to 5
S2t	17	I can describe what leadership skills I possess and which ones I don't possess	
S3t	18	I can list at least 5 leadership skills and describe them	
S4t	19	I can explain what skills an organizational leader needs	
S5t	20	I can list leaders who have certain leadership traits	
S6t	21	I can describe the skills needed by a servant, or community leader	
S7t	22	I can identify qualities of a servant leader in different situations	
S8t	23	I can list community leaders in my area	
S9t	24	I can lead a group in a brainstorming activity	
S10t	25	I can identify whether or not someone was responsible in a situation	
S11t	26	I can identify places where I can be a leader in my community	

S12t	27	I can compare and contrast two different leadership styles	
SCompt			Open-ended
A1p*	28	A leader always has to be an adult	A 1 to 5
A2p	29	A person has to be in charge of something to be a leader	
A3p	30	A leader is usually a loud person	
A4p	31	Only certain people can be leaders	
A5p	32	A leader always tries to take control of a situation	
A6p	33	All people have to have the same style of leadership	
A7p	34	A person who lets other people decide how to complete a task isn't a real leader	
A8p**	35	A leader can be a shy person	
ACompp			Open-ended
A1t*	28	A leader always has to be an adult	A 1 to 5
A2t	29	A person has to be in charge of something to be a leader	
A3t	30	A leader is usually a loud person	
A4t	31	Only certain people can be leaders	
A5t	32	A leader always tries to take control of a situation	
A6t	33	All people have to have the same style of leadership	
A7t	34	A person who lets other people decide how to complete a task isn't a real leader	
A8t**	35	A leader can be a shy person	
ACompt			Open-ended
Gender	D1	What is your gender?	1=Female 2=Male 3=Prefer not to respond
Race	D2	What race category best describes you?	1=American Indian or Alaska Native 2=Black or African American 3=Asian 4=Hispanic 5=Native Hawaiian or Other Pacific Islander 6=White 7=Other
Age	D3	What is your age?	1=9 2=10 3=11 4=12 5=Other
Grade	D4	What grade are you in?	1=4 ^a

			2=5 ^a 3=Other
County	D5	What county do you live in?	1=Blount 2=Johnson 3=Unicoi 4=Monroe 5=Grundy 6=Giles 7=Wilson 8=Fayette 9=Madison 10=Hardeman 11=Marion

Vita

James William Swart was born in Madisonville, Tennessee. He earned a Bachelor of Science in Biosystems Engineering from the University of Tennessee in 2016. James then found his passion in education and enrolled in a Master's of Science program in Agricultural Leadership, Education, and Communications with a concentration in Curriculum Development. In the fall, he will begin the pursuit of a PhD in Education from George Mason University in Fairfax, VA.