INVESTIGATING IDENTIFIERS OF VOCATIONAL IDENTITY IN ANIMAL SCIENCE UNDERGRADUATES THROUGH TWO TYPES OF REFLECTIVE ASSIGNMENTS

BY

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THESIS

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ABSTRACT

With a high percentage of career indecision among undergraduates, it is beneficial to understand what influences them to make vocational decisions. Students are misinterpreting or not fully developing their own vocational identities, which can lead to career decisions that do not correlate with their strengths, desires, and goals necessary for success in the work force. As a result, college students may struggle to establish their overall self-identity during a crucial stage of psychosocial development.

A thematic analysis was used in this qualitative study to explore, specifically, what identifiers thirty animal science students at the University of Illinois in Urbana-Champaign used to describe their identities on a professional level. The identifiers were grouped into five themes that reflected twenty subcategories of identifiers that contribute to the development of vocational identity. The frequency of identifiers was calculated to determine which identifiers and corresponding themes were most commonly used in each of the assignments.

Two types of reflective assignments were analyzed from ANSC 298, a required undergraduate seminar, in order to explore what identifiers animal science students used to establish their vocational identities: The “Draw Your Life” assignment and “Autobiography” assignment. Both assignments were distributed during the spring semester of 2013 to the same group of students with each student completing both assignments.

The results concluded that the Occupational theme was the most commonly identified theme in both the “Draw Your Life” and “Autobiography” assignments. Within that theme, students focused on Animals as the main subcategory of identifiers followed by Future Job in both assignments. Interests/Strengths was the 2nd most prevalent theme in the “Draw Your Life” opposed to the Institutional theme ranked as number 2 in the “Autobiography” assignments. The
third most common theme differed between Institutional in the “Draw Your Life” assignments and Social in the “Autobiography” assignment. The drawings ranked Social as the 4th place theme compared to Interests/Strengths as 4th place in the autobiographies. The Other theme was contributed to the least by the students in both assignments, but contained uncategorized identifiers that were unexpected discoveries.

With this knowledge, educators in animal science, as well as other areas of study, will have a better understanding of what their students find important in developing what kind of professionals they hope to become. Instructors will also have a better idea as to which type of the two reflective assignments can be used to reveal certain identifiers of their students. Educators can then tailor their teaching accordingly to help students fully develop their vocational identities and guide them towards professional opportunities that better complement who they are as novice animal scientists. This can help students pursue a career path that corresponds to their vocational identity and can decrease the likelihood of career indecision and unsatisfactory career experiences in the future.
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CHAPTER 1
INTRODUCTION

In the spring semester of 2013, Animal Science students at the University of Illinois in Urbana-Champaign were required to take ANSC 298: Undergraduate Seminar; a course dedicated to helping students establish their identity as an animal scientist while exploring a spectrum of career opportunities within the field. Two types of reflective assignments were analyzed from this class in order to explore what examples of self-identity or identifiers animal science students used to establish a professional or vocational identity. With this knowledge, educators in animal science, as well as other areas of study, will have a better understanding of what their students find important in discovering what kind of professionals they hope to become. Instructors will also have a better idea as to which type of the two reflective assignments can be used to reveal certain identifiers of their students.

Background of the Problem

Beginning early in a student’s academic career, academic efforts are made to help him or her find a career path that fits his or her strengths and personality. Interest exams, personality profiles, and a wide assortment of questionnaires are used to categorize students in hopes of helping them establish a better sense of self-identity. As the students continue to mature intellectually through primary education, they further develop a sense of identity. Identity is a complex concept made up of corresponding areas of development that are influenced by internal and external factors (Chickering, 1969). One important area of development is the establishment of vocational identity.
Toward the end of a student’s high school career, a decision must be made as to whether that student will attend college following graduation, enter the workforce, or take time for self-discovery. If that student is college bound, he or she will apply to different colleges during high school and attend a college that accepts him or her after graduation. By their junior year of college, students are expected to have declared a major corresponding to their interests (Division of General Studies, 2014). Not only must they choose an area of interest, but also further focus on a type of professional they want to become. While animal science undergraduates have already selected a major, their future career plans are far from concrete.

In 2013, the University of Illinois in Urbana-Champaign consisted of 32,381 undergraduates (University of Illinois Public Affairs, 2014) with more than 500 students in the Animal Science program (Loerch, 2014). The majority of those animal science students were enlisted in the pre-veterinary concentration in hopes of becoming veterinarians. An estimated 75% of college students, including those in the Animal Science program, will have changed their major, or career focus, at least once prior to graduation (Freedman, 2013).

**Statement of the Problem**

With a high percentage of career indecision among undergraduates, it is beneficial to understand what influences them to make vocational decisions. In order to understand how animal science students view themselves as professional individuals, the research in this study focused on two types of reflective assignments in a required undergraduate seminar course. With little knowledge about animal science students and their vocational-identity, it was important to fill the gap by researching what aspects of vocational identity students felt define them, and which type of assignment can be used to reveal certain identifiers.
Research Questions

During the process of switching majors, or career paths within a major, students must reevaluate their interests and current career choice in order to follow a different path. The latter decision relies heavily on the vocational identity of the student. It is possible that undergraduate students do not initially choose a career path that fully complements his or her strengths, interests, and aspirations. Consequently, they may not have established or evaluated their own vocational identity. The question then becomes: What specific identifiers do undergraduate students commonly use to establish their vocational identity through two types of reflective assignments? Once the identifiers are revealed, the reflective assignments can be comparatively analyzed to explore the following secondary question: Which type of reflective assignments reveals certain themes representative of vocational identity?

Research Design

A thematic analysis was used in this qualitative study to explore, specifically, what identifiers thirty Animal Science students used to describe their identity on a professional level. The identifiers were grouped into five themes that reflect twenty subcategories of specific identifiers that contribute to the development of vocational identity. The frequency of identifiers was calculated to determine which identifiers and corresponding themes were most commonly used in each of the assignments.

The two reflective tools used in this study were the “Draw Your Life” assignment and the “Autobiography” assignment. In the “Draw Your Life” assignment, students were instructed to draw a picture that represented aspects of their current academic and personal life and illustrate how those aspects are interrelated and how they correspond to their future career interests. The
“Autobiography” assignment required students to write a two page minimum autobiography about themselves as novice animal scientists at the current point in their professional development. Both assignments were administered in the ANSC 298: Undergraduate Seminar course in the spring semester of 2013.

Significance of the Study

By evaluating student responses, educators will have a better idea of what influences the vocational identity of their students. Educators can then tailor their teaching accordingly to help students fully develop their vocational identity and guide them towards professional opportunities that better complement who they are as novice animal scientists. This can help students pursue a career path that corresponds to their vocational identity and can decrease the likelihood of career indecision and unsatisfactory career experiences in the future.

Limitations

As a former University of Illinois Animal Science undergraduate, I have several aspects of bias that must be noted. During the course of my education at the university, I was required to take ANSC 298, but the class was taught under a different instructor and consisted only of guest speakers that held a variety of career positions within animal science. However, during my senior year, I took ANSC 498: Integrating Animal Science, which was the initial class that implemented both reflective assignments used in this study. I completed the “Draw Your Life” and “Autobiography” assignments, and was familiar with the requirements and reflective thought process needed to approach each task.
As an Animal Science graduate, I am familiar with symbols, terminology, and identifiers that students used in this study. I also understand the dilemma of choosing a career path that did not reflect my vocational identity. Up until my senior year of undergrad, I wanted to be a veterinarian but realized, with strong guidance from Dr. Walter Hurley, professor of both ANSC 498 and 298, that I would be better suited for a career with a Master’s degree in Agricultural Education. As a result, I had to reevaluate what was important to me when considering a career path, understand why my former career path was not compatible with my interests, and discover how to use my vocational identity to pursue a career that would help me achieve success and contentment. As a graduate student in Agricultural Education, I was a teaching assistant for ANSC 498, which added an extra level to my experience with these types of reflective assignments as well as the demographics of the students.

Due to my experience with ANSC 498, I have an advantage that allowed me to better interpret the reflective assignments of the students in ANSC 298. I had an idea of what areas students would find important as well as what potential key identifiers could be used. However, I did not know which students were in the class, and the assignments were coded to prevent any bias opinions resulting from knowing a student personally. In addition, I did not grade the “Draw Your Life” or “Autobiography” assignments as a teaching assistant. This prevented me from having prior experience analyzing the reflective assignments.

Moving Forward

In the next chapter, literature will be presented that introduces the initial concept of identity through the perspectives of White, Erikson, and Chickering. Identity will be broken down into smaller elements that affect student psychosocial development. Vocational identity
will then be brought into focus through studies that link occupational decisions and interests to identity development. Reflective pictorial and autobiographical assignments will surface as effective tools that can be used in the classroom to observe student perspectives, ideas, and indicators of identity development.
CHAPTER 2
LITERATURE REVIEW

In Chapter 1, the prevalence of career indecision among college students was brought to attention and the need for research of vocational identity development was identified. Students are misinterpreting or not fully developing their own vocational identities, which can lead to career decisions that do not correlate with their strengths, desires, and goals necessary for success in the work force. As a result, college students may struggle to establish their overall self-identity during a crucial stage of psychosocial development.

In order to further understand the importance of vocational identity research and the relationship between occupation and identity in undergraduates, the current state of relative research literature needs to be described. The concept of identity must be broken down into counterparts that can be more easily analyzed and interpreted. Vocational identity, as a counterpart, must be investigated further in order to comprehend its relationship between students, the identifiers that they find important, and their chosen occupation. In order to reveal the identifiers, literature based around reflective pictorial and autobiographical instruments and their uses in the classroom will be presented.

Describing Identity

Psychosocial development of college students has been a focus of educational research throughout the twentieth century. A defining moment for the twentieth century was the realization that identity was no longer “given” based on single set of beliefs, behaviors, and roles, and “socialization” was not the sole focus of education (Chickering, 1969). No longer
would individuals be instructed only on how to fit in properly with society. A new age of individuality and personal exploration had surfaced.

Robert W. White, an Associate Professor of Sociology at Indiana-Purdue University, defined identity in 1958 and set the stage for further research and exploration. White proposed that:

“Identity refers to the self or the person one feels oneself to be… Gradually, the sense of identity becomes a fuller and richer establishment, compounded of bodily sensations, feelings, images of one’s body, the sound of one’s name, the continuity of one’s memories, and an increasing number of social judgments delivered through the words and behaviors of others” (Chickering, 1969)

Developmental psychologist and psychoanalyst, Erik H. Erikson, later contributed to the description in 1963 by defining identity as “The accrued confidence that one’s ability to maintain inner sameness and continuity is matched by the sameness and continuity of one’s meaning for others” (Chickering, 1969). Instead of focusing on the development of identity from one stage of life, Erikson was the first clinical psychologist to continue the research from adolescence through adulthood (Evans, Forney, & Guido-DiBrito, 1998). Erikson described eight stages of identity development characterized by a psychosocial crisis to be resolved. From this, he coined the term “identity crisis” and believed that after each crisis is resolved, one progresses to the next stage and the development of identity becomes more advanced.

The first four stages of Erikson’s theory occur throughout childhood and include basic trust versus mistrust, autonomy versus shame and doubt, initiative versus guilt, and industry versus inferiority, respectively (Evans, Forney, & Guido-DiBrito, 1998). Stage five is identity versus identity diffusion and takes place during the transition from childhood to adulthood. In
this stage, resolution of conflict from the previous stages has prepared the young adult to commit to discovering who they are in terms of making deliberate decisions about their life. The final three stages occur after the resolution of identity. Stage six describes a young adult’s decision between intimacy and isolation while stage seven occurs during midlife when the adult must decide what legacy to leave behind. The eighth stage takes place during old age and causes the individual to question their life and the meaning of it (Evans, Forney, & Guido-DiBrito, 1998).

Based upon Erikson’s stage theory, psychologist, James Marcia, greatly added to the identity resolution process. He proposed that crisis, or exploration, and commitment were two vital variables in the development of identity. Marcia even suggested that “crisis and commitment in political, religious, and occupational decision making are the primary content of identity” (Evans, Forney, & Guido-DiBrito, 1998). With the focus on crisis and commitment, Marcia created four states of identity: Diffusion, Foreclosure, Moratorium, and Achievement. These states are unlike Erikson’s stages because they do not have to be progressive or permanent. Identity can change over the course of a person’s lifetime (Evans, Forney, & Guido-DiBrito, 1998). The state of Diffusion involves the inability to commit to exploring identity despite the presence of conflict. During Foreclosure, adolescents commit to accepting parental values without question and without crisis. In the Moratorium state, the crisis of questioning and challenging parental values is present in order to form individual identity. The ultimate goal is to reach the Achievement stage where an individual is fully committed to his or her identity and is able to make critical choices and decisions after a period of crisis (Evans, Forney, & Guido-DiBrito, 1998).

In 1969, award-winning educational researcher, Arthur W. Chickering, published a book entitled Education and Identity that summarized research in the field of student development,
including his own, to support his theory of psychosocial development. The work of both White and Erikson were discussed, among others, and implemented into his theory that identity formation is a complex process that is classified into seven vectors of young adult development: achieving competence, managing emotions, becoming autonomous, establishing identity, freeing interpersonal relationships, clarifying purposes, and developing integrity (Chickering, 1969). These vectors build upon each other and often overlap and change over time. For the purpose of this study, the vectors of establishing identity and clarifying purpose are of the utmost importance.

Chickering’s fifth vector, establishing identity, was based on multiple studies that he was involved in at Goddard College in 1967. Chickering, along with other Goddard faculty, studied the change in Personal Stability and Integration. They used the following three questions to analyze student ratings each semester:

“(1) What is the student’s level of reliability and responsibility on work program in relation to other responsibilities undertaken? (2) What level of personal stability and integration is reflected by students’ comments in relation to self, or self-development? (3) How comfortable is the student about the kind of person he [or she] is, or about the kind of person he [or she] was during the semester? How comfortable is he [or she] about his [or her] own past behavior? (Chickering, 1969).

The results of the study revealed a substantial change in student ratings from the first semester to the seventh semester. The study confirmed that entering freshman experienced a “culture shock” supported by the significantly lower ratings of the three questions (Chickering, 1969). This made sense considering the multitude of changes students undergo entering their first semester of college. Another substantial increase in ratings was observed during the seventh semester. This
suggested that Chickering’s fifth stage was a transition process from the first to last semester that helped students build a “higher level of personal organization and integration,” thus further developing a sense of self or identity (Chickering, 1969).

Chickering’s sixth vector, developing purpose, moves the concept of identity into the direction of pursuing valued goals and establishing a more professional identity. This stage requires future planning in respect to three major elements: avocational and recreational interests, vocational plans and aspirations, and life decisions regarding marriage and family (Chickering, 1969). Chickering states:

“First, when such plans have meaning, they serve to carry forward interests, values, and a way of life that has been rewarding in the past… Second, when plans become more clearly formulated, learning becomes organized in relation to them… Third, the importance of study not directly or only tangentially related to future professional plans is recognized more clearly” (Chickering, 1969).

Based upon further research with Goddard faculty, Chickering found that vocational plans and aspirations become clearer during the college years. Purpose develops and becomes increasingly strong for the student which influences the decision of what major to study, why to study it, and how much energy will be dedicated to the academic college experience (Chickering, 1969).

In addition, Chickering proposed six environmental influences that are relative to the seven preceding vectors. By 1993, Chickering had revised his theory to include seven environmental influences published in the second edition of Education and Identity. The seven environmental factors were institutional objectives, institutional size, student-faculty relationships, curriculum, teaching, friendships and student communities, and student development programs and services. Chickering argued that these factors strongly influenced
student development (Evans, Forney, & Guido-DiBrito, 1998). With the assistance of Linda Reisser, three principles that fall within the seven factors were also introduced in the revised edition. They were integration of work and learning, recognition and respect for individual differences, and acknowledgment of the cyclical nature of learning and development (Evans, Forney, & Guido-DiBrito, 1998).

J. H. Schuh, researcher, professor, and interim director at Iowa State University, believed that Chickering’s theory has generated the most research out of any work in the field of student development (Evans, Forney, & Guido-DiBrito, 1998). Researchers have tested the validity of Chickering’s theory, applied it to diverse groups of students, and used it to form a relationship between psychosocial and cognitive development. As a result, professionals in student affairs value the importance of identity research and use the findings to create purposeful and positive experiences that promote the overall development of student identity (Evans, Forney, & Guido-DiBrito, 1998).

As previous mentioned, Chickering identified that college students undergo a series of changes in psychosocial identity development as they progress in their academic career. Such changes are influenced by environmental factors that can greatly affect the decisions a student will make in terms of his or her future career. Psychologist, John Holland, also discovered an influencing factor of identity that he believed would relate directly to students’ vocational preferences. However, his research went in the direction of intrinsic or internal influences opposed to Chickering’s external factors of identity development.
Vocational Identity

In the 1970’s, John Holland developed a theory based on the idea that occupational, or vocational, preferences were related to a person’s personality type. In 1971, he introduced an independent instrument called the Self-Directed Search (SDS) to measure a person’s vocational personality (Evans, Forney, & Guido-DiBrito, 1998). This assessment was based off of his earlier Vocational Preference Inventory (VIP) which measured personality type based upon a list of occupations that individuals either liked or disliked. The SDS was more complex in that individuals had to identify activities and occupations that were of interest to them as well as strengths and self-estimates. The person was then assigned a three-letter Holland Occupational Code (HOC) with each letter representing one of three highest summary scores from the individual’s profile. Over 1,335 occupations corresponded to the HOC and specific codes were matched with vocations that would be compatible, or congruent, with a person’s personality (Evans, Forney, & Guido-DiBrito, 1998). Today, revised and improved versions of Holland’s SDS have been used, such as the Myers Briggs assessment, to aid in the career development of college students of various diversities.

In 2009, Thomas W. Ng and Daniel C. Feldman examined the mediating effects of identity construction in college students in terms of personality, social relationships, and vocational indecision. Data was collected from 202 college student students in Hong Kong at four different intervals in the duration of five months. Ng and Feldman found that college students relate personality traits and interpersonal relationships to the search for identity. In addition, the role identification processes of positive anticipation and level of identification with the student role, were related to lower levels of vocational indecision. A final crucial discovery was that the results of the study supported the idea that identity variables, or identifiers, serve as
mediators for vocational interests and relationships. By assessing the development of multiple role identities and the variables that affect them, students can be better prepared for the start of their careers (Ng & Feldman, 2009).

In 2012, a study by J. A. Galles and J. G. Lenz examined vocational identity and career thoughts of 329 undergraduates in a career development course. It was hypothesized that students possessed a “calling,” or strong outer desire to pursue a vocational pathway, when it came to career decisions. The results of the study concluded that variables of interest shared significant relationships in addition to predictive power. This meant that the formation of a calling to pursue a certain career path was contributed by vocational identity and career-based thoughts (Galles & Lenz, 2012).

In the same year, Louise Sutherland and Lina Markauskaite examined the role of authenticity in supporting the development of professional identity. They believed that students needed new ways of defining themselves as professionals in order to accomplish the complex process of actually transitioning from a student to a professional. The transition was traced through a professional identity concept using an online discussion forum in a graduate teacher education program. The Cognitive Product 9 Professional Focus (CPPF) model was used to assess the development of students’ professional identity. The results concluded that an online discussion forum with professional practitioners created an authentic learning experience that could be used for other professional education courses. The CPPF model was also discussed as a viable tool for assessing the development of students’ professional identities (Sutherland & Markauskaite, 2012).

When discussing tools that can be used for assessing the development of vocational identity, assignments that require students to reflect on their current state as a novice professional
can give educators an inside look into what students value. In terms of identifiers, written statements and personal drawings can serve as examples of student self-expression. By investigating what identifiers students use to represent their life in reflective assignments, educators can have a better understanding of how to fulfill and foster the academic needs of their students.

Reflective Assignments

Two forms of reflective assignments are used in this study to help understand the formation of vocational identity: an autobiography and a personal drawing. Both assignments are reflections of the students’ current role as animal science students and serve to create a map to discover their future career goals. The following articles are demonstrations of the use of such reflective assignments in various settings.

In 1989, Mary Jane Dickerson discussed the complexity and depth of information that can be obtained from an autobiography of student. A student was tasked with creating meaning out of a reading written by Virginia Woolf. The student was required to use personal experience and details of reality, in the form of an autobiography, to relate to and understand Woolf’s text. Dickerson talked about observing the relationships between the self and others and how it affects the development of self-identity or the developing self. Relationships among family, friends, education, and work must be analyzed in order to create a narrative form of writing as seen in the autobiography. Culture, personal environment, and social context all come into play when making personal meaning out of something foreign. Stories from others were combined with the student’s own memory to create a narrative of understanding which revealed an educational value of using reflective assignments (Dickerson, 1989).
In 1992, the American Educational Research Association published an article by John Solas in relation to using an autobiography and repertory grid to investigate teacher and student thinking about the teaching and learning process. Solas argued that the autobiography and grid were two methods that ideally served the purpose of clarifying the perspectives of teachers and students. He drew attention to the fact that the teaching and learning process had not “received the type of attention it deserves” (Solas, 1992). By this statement, Solas meant that teachers and students had previously been viewed simply as processors of information that needed direction. However, with the use of autobiographies and repertory grids, teachers and students have the ability to reflect and describe their thoughts, feelings, and actions and can be thought of as deconstructionists. Solas concluded his article by proposing that the autobiography and repertory grid are, in fact, tools that can effectively be used to reveal teachers’ and students’ perspectives while still maintaining integrity (Solas, 1992).

In the spring of 1997, J. L. Antonek, D. E. McCormick, and R. Donato concluded a study about developing a professional identity through the use of student teacher portfolios as autobiographies. Their study followed two pre-service foreign language teachers as they reflected on items of their portfolios. The analysis of their reflections revealed that the two teachers were able to construct a professional identity from their classroom experience. The portfolios were shown to function as more than a collection of professional items to inform educators and could be used as a type of autobiography that helps form the identities of novice teachers (Antonek, McCormick, & Donato, 1997).

In 2001, Dempsey and Betz hypothesized that drawing could be used as a scientific tool for learning in a biological setting. Students were instructed to draw their observations of different elements of biology such as the leaves of plants and trees. The theory was that the
students had to focus their attention on the physical details of the object and were then able to describe it. The drawing techniques were considered tools to aid students in paying attention to detail so they could form a picture. The results concluded that qualitative information in nature can, indeed, be collected in the form of a drawing and can stimulate further observation and discussion. This can then facilitate knowledge and answers that address questions that quantitative research cannot answer (Dempsey & Betz, 2001).

In 2012, Jatila van der Veen proposed the idea of using art and self-expression as a method for understanding physics. Van der Veen described how students’ drawings and written commentaries could “provide insight into students’ preferred learning modalities, promote understanding of abstract concepts through visualization, and reveal students’ preexisting attitudes toward science” (Van der Veen, 2012). Several student progressions were followed through the course by analyzing their writing and physics-related art projects. These assignments indicated the various attitudes and transformations demonstrated by the students as well as their conceptual understanding of the course material.

Given this past research in college student development through reflective assignments, my research question for this study remains the following: What specific identifiers do undergraduate students use to establish their vocational identity through two types of reflective assignments? The next chapter will explain why the reflective assignments of animal science students in a seminar course are thematically analyzed to explore the identifiers of vocational identity. The methodological process will be validated in comparison with the literature presented in this section and the pre-existing themes of influencing identifiers will be introduced. Chapter 4 will reveal the findings of the study including the type and frequency of identifiers.
used and their corresponding themes. Lastly, Chapter 5 will provide a thorough discussion of the implications of this research and provide a foundation and need for further study.
Chapter 3
Methodology

This continuation of psychosocial research was part of a qualitative study that explored what identifiers were used to establish vocational identity in undergraduates studying animal science. Identifiers that were most prevalent in the pictorial and autobiography assignments were interpreted as elements that had a greater influence on the establishment of vocational identity. Microsoft Excel was used to document the number of times an identifier was present within each student’s separate assignments. Thematic analysis was used to recognize identifiers, group them into subcategories, and categorize them according to a corresponding theme.

Research Sample

The population in this study was thirty undergraduates majoring in Animal Science at the University of Illinois in Urbana-Champaign. The students in the Animal Science program, as well as this study, were predominantly females from urban and suburban locations (Albert, 2012). Most students were interested in focusing on companion animal and equine species, and had little experience with agriculture prior to entering the program. The majority of incoming freshmen were interested in pursuing a career in veterinary medicine due to an intrinsic desire to work with animals (Albert, 2012).

The Animal Science curriculum at the University of Illinois is designed for students to take core courses that focus on animal care, reproduction, genetics, anatomy, physiology, and growth during the first two years of college (University of Illinois, 2014). The last two years are for juniors and seniors to build upon their strong core foundation by taking courses based on
their interests. This study focused on students and their reflective assignments in the core class, ANSC 298: Undergraduate Seminar.

ANSC 298 is a course at the University of Illinois that helps students establish their identity as animal scientists. Visiting speakers offer diverse perspectives about aspects of Animal Science and the career opportunities that are available. A series of course assignments challenge students to self-evaluate their career interests, learning style preferences, strengths and skill capabilities, as well as their metacognitive understanding of Animal Science and what role they will play in the field. The following section will introduce the two assignments used to investigate student perceptions of their own vocational identity.

Instrumentation

Two reflective assignments were used to explore what identifiers animal science students enrolled in the ANSC 298 class used to define their vocational identity: The “Draw Your Life” assignment and the “Autobiography” assignment. Both assignments were distributed during the spring semester of 2013 to the same group of students. Each of the 30 students completed both assignments leading to 30 “Draw Your Life” assignments and 30 “Autobiography” assignments. The following paragraphs provide a full description of each assignment:

For the “Draw Your Life” assignment, students were instructed to draw a picture that represented their current life as a student. They could not use written words, only images. They were to include aspects of their academic and personal life, and illustrate how those aspects were interrelated as well as how they correspond to their future career interests. This assignment contains fewer guidelines in comparison to the autobiography assignment to allow for creative
freedom and self-expression. Printer paper, pens, pencils, crayons, markers, and colored pencils were provided for the students to work on the assignment in class.

In the “Autobiography” assignment, students were instructed to write a two page minimum autobiography about themselves as novice animal scientists at the current point in their professional development. They were encouraged to focus on their time as an animal science major along with including aspects of their experiences before coming to the university that impacted their interest in animals and their decision to enter the field. Career goals and long-range interests as an animal scientist were required as well as the direction the students hope to take in the broad field of animal science. The students had to discuss factors that have stimulated them to have an interest in animals and that motivated them to make decisions about their study of the science of animals. Lastly, students had to identify what influenced the evolution and maturation of their interest in animals and the science behind it.

**Methodology**

Thematic analysis was the categorizing strategy used for this qualitative study. This was the most appropriate method because this research required a flexible process of encoding qualitative information. The data analysis began with a broad look at vocational identity and narrowed into discovering patterns, developing themes, and recognizing specific identifiers. As a researcher, I reviewed the data, made notes for each assignment, and began to sort it into categories. A coding process took place that required themes, subcategories, and identifiers to be created. Thematic analysis allowed for a finer examination of the data as well as a deeper appreciation of the content.
Identifiers that were hypothesized to be observed in this study were categorized into the following themes that influence vocational identity: Social, Occupational, Institutional, Interests/Strengths, and Other. These themes were inspired by Chickering’s seven environmental influences that he found to strongly influence identity: institutional objectives, institutional size, student-faculty relationships, curriculum, teaching, friendships and student communities, and student development programs and services (Evans, Forney, & Guido-DiBrito, 1998).

The first theme used to categorize identifiers in the two reflective assignments was Social. This included aspects of students’ relationships and interactions with their peers, family, friends, and significant others. Social relationships affect the establishment of students’ vocation identity (Chickering, 1969). Ng and Feldman also found that college students relate interpersonal relationships to the search for identity (Ng & Feldman, 2009). As an example, the location where students decide to pursue a career can be influenced by a desire to remain close to family and friends or to move elsewhere to maintain a relationship with a significant other. Depending upon the destination, certain career options may or may not be available. This requires students to consider different career options that will coincide with their desired locations.

The second theme used to categorize identifiers was Occupational. When working with vocational identity, I expected occupational identifiers to be present. Such identifiers included elements that were related to the students’ chosen vocation. Due to the fact that the subjects were majoring in Animal Science, I assumed that the students would be interested in a career pertaining to animals. For this reason, any drawings or written statements about animals (pets, livestock, wildlife, etc.) were related to the subjects’ chosen occupation. Other hypothesized identifiers in this theme were money, future job, and laboratory work. Animal Science students have an idea of what they want their future career to entail and put a large focus on obtaining the
necessary experience, such as laboratory work, needed to acquire their desired occupation (Albert, 2012). As a result, I hypothesized that students would find occupational identifiers especially important and more commonly reference them when defining their vocational identity.

The third theme used for categorization in this study was *Institutional*. This theme represented identifiers related to the university the students attended. In this case, the University of Illinois in Urbana-Champaign would be the main area of focus for many students. Examples of school pride, registered student organizations, sports teams, and academics fell into this category under the hypothesis that a student’s educational institution influences the establishment of his or her vocational identity. Chickering and Dickerson both concluded that a student’s environment plays a vital role in establishing their identity (Chickering, 1969; Dickerson, 1989). For the purpose of this study, the University served as the environment in which the students spent the majority of their time. Therefore, indicators affiliated with the University of Illinois and any pre-college institutional factors required their own category.

The *Interests/Strengths* theme consisted of hobbies and talents that students found to be significant enough to include in their reflective assignments. A student’s interests lead to the development of passions. Having passions guides students toward a career path that will complement their strengths and beliefs. For instance, a student interest in milking cows may turn into a passion for dairy science, which leads that student to pursue a PhD in lactation biology. Holland derived his theory around the idea that occupational, or vocational, preferences were related to a person’s personality type (Evans, Forney, & Guido-DiBrito, 1998). His Self-Directed Search instrument even required individuals to identify activities and occupations that were of interest to them, as well as their own personal strengths, in order to match them with a specific career.
In each of the themes, as well as a theme of its own, there was a section labeled Other. As a category within each theme, Other refers to identifiers that were not predicted to be present. However, those identifiers could be categorized into one of the four established themes. As its own theme, Other refers to any uncertainty that students have expressed within each of the two assignments. As mentioned in the first chapter, not all undergraduates have established their vocational identity to the extent that they do not have uncertainties about their future. For this reason, the Other theme was created. In addition to uncertainty, the Other subcategory was reserved for any emerging identifiers that could not be grouped into Social, Occupational, Institutional, or Interests/Strengths.

When interpreting the results for this qualitative study, data was analyzed both qualitatively and quantitatively. Although there were themes and subcategories hypothesized to be present, it was uncertain as to what exact identifiers would be observed. For this purpose, the Other theme and subcategories were included in a spreadsheet in addition to a Notes section. Information categorized in the Other sections enabled exploration of unknown or unexpected identifiers and themes from the two reflective assignments. The Notes column provided room for comments regarding specific identifiers and was used to document specific drawings or statements and interesting or unexpected discoveries. This qualitative data was compiled and used to expand the knowledge on what students find important when establishing their vocational identity. The prevalence of Social, Occupational, Institutional, Interests/Strengths, and Other themes were quantitatively analyzed by counting the number of instances an identifier within a subcategory was observed. Numerical values were used to determine which themes undergraduate students most commonly focused on.
Microsoft Excel spreadsheets were used to record data from each student’s reflective assignments. A number was assigned to each student to ensure confidentiality and prevent bias opinions from recognizing the name of a student. The assignment abbreviations of “DYL” and “AB” were used in the spreadsheets as acronyms for “Draw Your Life” and “Autobiography,” respectively. The five themes were divided into the multiple subcategories that were previously mentioned. Each time an identifier represented a subcategory, a “1” was placed in the corresponding cell. After the assignment was analyzed for identifiers of vocational identity, the “1s” were added and replaced with the actual number listed (i.e. 111 = 3). The numerical values of each subcategory were then added together to equal an overall sum, or total, for the corresponding theme. Lastly, the themes were ranked from 1 to 5 in descending order with 1 representing the theme with the highest subcategory value for each separate assignment. The theme with the number 1 ranking was the most common theme observed, followed by 2, 3, 4, and 5.

To find out what theme was the most common overall, the numerical values of corresponding themes from the “Draw Your Life” assignments were added together to reflect a point value. The lowest point value (representing the most number 1 rankings) was considered the most commonly referenced theme and the highest point value represented the least common theme. The same procedure was used for the “Autobiography” assignments.

The next chapter of this study will reveal which themes and identifiers were most commonly observed in the student assignments as well introduce any unexpected discoveries. The pictorial and autobiography assignments were analyzed separately, but also compared in a final analysis to see if any connections could be made between the two as well as note any significant similarities and differences.
CHAPTER 4

RESULTS

In this chapter, brief categorizations of identifiers will be discussed for each of the five themes within the “Draw Your Life” and “Autobiography” assignments. Although each theme and subcategory contained data from both reflective assignments, the focus of this chapter is to recognize the most common identifiers present within each theme, reveal unexpected identifiers in the Other subcategories, and rank each theme according to frequency of representation. A comparative analysis of the two assignments will follow with noticeable similarities and differences being addressed.

Social Identifiers

In the “Draw Your Life” assignment, drawings of people representing families, friends, and significant others were sorted into the Social theme. A family was identified by, but not limited to, a mother, father, siblings, the student, and grandparents. Friends were recognized by drawings of people resembling the age of the student without recognizable characteristics of a mother, father, grandparent, etc. Relationships were classified based on drawings of the student present with one other individual with the accompaniment of a heart or the couple holding hands to portray intimacy. Social identifiers that could not be classified as family, friends or relationships were listed in the Other subcategory.

The most common subcategory of Social Identifiers was Family. 16 out of the 30 students used stick figures, people within a home, and familial references to portray more identifiers of family opposed to friends, relationships, and other social aspects. 4 students
thought that Other social identifiers influenced their vocational identity more, followed by 3 students that had a greater focus on relationships. 1 student chose friendship as the greatest social identifier. The remaining students chose not to focus on social factors as representations of their vocational identity.

Unexpected identifiers were present within the Social theme and encompassed the Other subcategory. Elements of leadership were identified and portrayed by pictures of the student at the front of a group of people assembled in a line. A specific example of this was a drawing of a student on horseback leading a group of people on a trail ride. Working with others was another common identifier that was documented. People shaking hands and speaking with one another were additional observed identifiers.

In the autobiography assignment, identifiers were documented in the social category each time family (familial roles), friend(s), relationships (boyfriend or girlfriend, husband or wife), and phrases about human interactions were mentioned. Examples of identifiers documented from student autobiographies included the following statements about family, friends, and other human interactions: “With the support of my family and friends, I know that I will succeed in this dream, despite the doubts that others may have” and “I want to be able to help people and animals…”

The most common Social identifier for this reflective assignment was human interactions that were categorized in the Other subcategory. These identifiers included social influences made by the students’ peers, professors, advisors, and mentors. In addition, desires to work with people, meet new people, and share knowledge with others were documented. 19 out of the 30 students focused more on these identifiers while 7 students talked mostly about family influence
and 4 students more frequently referenced friendship. *Social* identifiers were observed in each student autobiography with more than one identifier of each subcategory referenced.

**Occupational Identifiers**

The “Draw Your Life” assignment depicted the *Occupational* theme with images of dollar signs, students dressed as veterinarians, and flasks and graduated cylinders. Calculators and other financial identifiers (dollar bills, cents, credit cards, a bank, etc.) were recorded in the *Money* category while items representative of occupations (stethoscope, vaccines, a zoo, farming equipment, etc.) were considered part of the *Future Job* category. *Lab Work* consisted of identifiers reflecting research and laboratory procedures and equipment. The laboratory category could overlap into the future job section so laboratory identifiers were classified in *Lab Work* if another future job identifier was present. In other words, when drawings of laboratory equipment were present along with the student teaching in a classroom, the lab supplies were classified as *Lab Work*, and the student teaching categorized into the *Future Job* category. Similarly, *Lab Work* identifiers could also be considered part of the *Academic* subcategory within the *Institutional* theme. For example, a DNA strand would be reflective of a genetics laboratory if paired with laboratory equipment or it could represent a student’s interest in studying genetics if accompanied by textbooks.

*Animals* was the most common subcategory of *Occupational* identifiers documented in the “Draw Your Life” assignments, followed by representations of future jobs. 19 out of 30 students drew more identifiers of *Animals* than any of the other subcategories within that theme. 6 students equally shared subcategories as containing the most *Occupational* identifiers. 3 students shared *Animals* and *Future Job*, and 1 student each shared *Animals* and *Lab Work*. 


Animals and Money, and Animals with Future Job and Lab Work. With Future Job as the second most common category, 3 out of 30 students chose to more frequently incorporate the identifiers reflective of their career path into their drawings. Money was of the utmost concern for 2 students, which left the Other subcategory as the least common group.

Occupational identifiers that could not be classified in the Animals, Money, Future Job, or Lab Work subcategories were considered Other. Although this subcategory was not the most frequently represented, uncategorized Occupational identifiers were observed in several student assignments. These identifiers were experiences or actions that were either related or unrelated to animal science. In example, a student portrayed herself wearing blue overalls and boots, which is what student workers at the university farms wear. A non-animal experience example is a student working as a waitress serving tables. Both examples are Occupational identifiers, but do not adequately fit in any of the existing categories.

In the autobiography assignment, written statements about animals, money, future occupation, and laboratory work were categorized as Occupational. Specific species of animals were mentioned along with more broad Animal categories such as companion animals or livestock. Financial terms as in “I want to be able to support myself financially” or “Making enough money” were present in this theme under the Money category in addition to future career goals of “Becoming a veterinarian” or “Improving reproduction in livestock” that made up the Future Job classification. Statements of laboratory experience such as “Conducting research in Dr. Wheeler’s lab” or “Isolating DNA in the lab” represented the Lab Work category. Each of the categories demonstrated students’ desires to further their knowledge and make an effort towards achieving their occupational goals.
As observed in the “Draw Your Life” assignment, animals were the most commonly represented subcategory in the Occupational theme of the “Autobiography” assignments. 26 out of 30 autobiographies revealed Animals as the lead subcategory. One student found the subcategories of Animals and Future Job equally important when containing the most Occupational identifiers. With Future Job as the second most common category, 4 out of the 30 students focused on identifiers of future occupations more than any of the other subcategories within the Occupational theme. The categories of Money, Lab Work, and Other were represented as well, but not as frequently as Animals and Future Job.

Other identifiers within the Occupational theme in the “Autobiography” assignments were elements of experience along with factors that influenced a students’ decision to pursue a certain career path. Identifiers of animal experience such as “Volunteering at an animal shelter” or “Applying for a summer internship at the zoo” were documented as well as non-animal experiences consisting largely of side jobs (working on a farm or at a place of business). Medical experience was also portrayed as students described various surgical operations that they observed while shadowing veterinarians. Decision factors for a desired occupation were another area of focus for many students. For instance, a student that did not want to slaughter animals or cut carcasses as a job changed his or her decision to pursue a career in meat science. Another student decided not to be a veterinarian only because they could not handle the sight of blood.

Institutional Identifiers

Drawings of the “Block I” emblem, the Chief mascot, Fighting Illini signs, and items in the school colors of orange and blue were present in the student “Draw Your Life” assignments representations of the School Pride. Acronyms and symbols of registered student organizations
(RSOs), such as a snake coiled around a staff for the Pre-Vet Club, signified group involvement related to a student’s academic interests. University Sports Teams identifiers of logos, student sections (Orange Crush), and sports equipment (indicative of a university sports team), if included, would have demonstrated a level of commitment, support, and desire for camaraderie among students. Academic identifiers were observed as representations of education including classroom settings, textbooks, school supplies (pencils, laptops, book bags), and graduation memorabilia (caps, gowns, diplomas). Other identifiers within the Institutional theme were drawings of campus locations (bus stops) and university buildings (dorms).

The subcategories of School Pride, RSOs, and Other institutional identifiers were well represented in the “Draw Your Life” assignments, but could not compare to the prominence of Academics. 15 out of 30 students used identifiers of academia as the main Institutional influence. School Pride was the top category for 5 of the students, followed by 3 students that focused on their involvement with RSOs. The remaining students represented a combination of the three categories along with 2 students including Other identifiers. The Sports Teams category was not exemplified in the “Draw Your Life” assignments.

Phrases in the “Autobiography” assignments were also analyzed to reveal aspects of the Institutional theme. Identifiers of School Pride were observed through statements describing the University of Illinois as a “Big Ten School” and “Prestigious University,” along with actual statements of “I am proud to be a student at the University of Illinois”. In addition, sentences including the names of RSOs, classes and course numbers, and university athletics were documented and the frequency of each identifier was recorded. In addition to University of Illinois experiences, students included institutional identifiers from other colleges as well as their high school, middle school, and elementary school experiences. The “Autobiography”
assignment encouraged students to focus on experiences before coming to the University of Illinois as well as during their undergraduate career. This required students to think back to when they first began contemplating the idea of vocational identity. As a result, the earliest of identifiers of vocational identity were revealed.

The mostly commonly observed Institutional identifiers in the “Autobiography” assignments belonged to the Academic subcategory. 23 out of 30 students chose academia as the most influential identifiers within their universities. In fact, there was only a single student that did not reference Academics at least once within his or her autobiography. References to college courses at the University of Illinois were most commonly observed as well as concentrations within animal science (nutrition, behavior, etc). 3 students thought RSOs were the most important Institutional factor, 2 students chose School Pride, and 1 student each referenced Other, and a tie between Academics and Other.

Other identifiers within the Institutional theme included University programs (study abroad), hands-on experience (learning at university farms), special honors (scholarships and early acceptance letters), college decision factors (travel convenience, having an animal science program), pre-college experiences (high school and middle school clubs/organizations), conferences and workshops, and the process of transferring from another college.

Interests/Strengths Identifiers

Drawings representative of Interests/Strengths included a multitude of items ranging from a tennis racquet to a science fair ribbon. Hobbies took the form of objects or were present as actions. If a student enjoyed playing baseball, they drew a baseball or him or herself swinging a baseball bat. Strengths or Talents were harder to portray, but were represented in a similar way.
A student that was good at public speaking would draw a picture of a microphone and a podium or they could use an image of him or herself talking to a group of people from a stage setting. Additionally, students drew themselves in a variety of roles including, but not limited to, dressing as a veterinarian (lab coat, stethoscope), portraying a student in class, and as an included member of his or her family. These identifiers were classified in the Self subcategory because they included visions of how a student represented him or herself as a person.

The most frequently referenced “Draw Your Life” subcategory in Interests/Strengths was Hobbies. 11 out of 30 students drew identifiers representing sports, leisure activities (reading, traveling), and other interests (music, construction). The second most popular subcategory was Self with 8 students drawing pictures of him or herself as a veterinarian, student, and/or family member. 3 students used examples of Other identifiers that will be revealed in the next paragraph. 2 students chose Talents by using images of awards won during competitions, and skills such as confidence (girl holding the world high above her head), organization (to-do lists), playing a musical instrument, and speaking a foreign language (Spanish dictionary). Lastly, 5 students shared a combination of the mentioned categories and 1 student did not represent any identifiers within the Interests/Strengths theme.

Other identifiers observed within Interests/Strengths were holidays, beliefs, and favorite foods and locations. Holidays were represented by Christmas presents or Halloween decorations and beliefs ranged from religious artifacts (Bible or cross) to being a vegetarian (pieces of meat with an “X” through them). Favorite foods were easily identifiable (vegetables, pizza, steak, hamburger) and vacation destinations were either labeled (Dixon Springs) or represented an island or mountainous area.
In student autobiographies, *Interests/Strengths* was represented by, but not limited to, statements beginning with “I have a strong interest in” or “I am good at”. Even though the two elements of the theme may not always coincide, many student hobbies were derived from a strength or talent possessed by that student. For example, a student that had an interest in solving problems referenced a talent in science. Either an interest (*Hobbies*) or strength (*Talents*) could be present within a statement. A student did not have to write about both in order for data to be recorded. Phrases that exemplified the *Self* subcategory included direct statements of a student describing him or herself such as “I have always been a country girl” or “As an African American student…”

In the “Autobiography” assignments, the most common *Interests/Strengths* identifiers were in *Talents* and were portrayed by qualities learned though life lessons such as responsibility, dedication, and leadership. Awards and special recognitions for livestock showmanship were also included in this category. 10 out of the 30 students focused the most on *Talents* within *Interests/Strengths* while 8 students represented more *Other* identifiers. 4 students found *Hobbies* to be most influential, 3 chose to focus on the *Self* category. 2 highlighted a combination of subcategories, and 3 chose not to relate to the *Interests/Strengths* theme.

*Other* interests and strengths were revealed in the “Autobiography” assignments as well. They included passions (for agriculture, production, conservation), beliefs (Christianity, vegetarianism, anti-deforestation), feelings (boredom, anxious to try new things) and personality traits (driven to succeed, has high expectations, etc.).
Other Identifiers

In the “Draw Your Life” assignment, *Uncertainty* was expressed within the *Other* theme by question marks or multiple pathways and arrows that originated from the student. An example of an identifier that fit in the *Other* subcategory of *Other* theme was a drawing of a Bible that represented that student’s religious beliefs and values. Additional *Other* identifiers included nature (sun, clouds, trees), farm equipment (combine, grain bin, barn), time (clock), locations (Illinois, city skyline, road signs), feelings (zzzz’s to symbolize fatigue, hearts for love), actions (eating, sleeping, driving), and thoughts (thought bubbles surrounding objects). Within the drawing assignment, 2 students expressed uncertainty. 12 students mostly included *Other* identifiers that were previously mentioned and 16 students did not portray identifiers within the *Other* theme.

The “Autobiography” assignment possessed similar identifiers that were unexpected and reflected uncertainty. In written form, students stated that they had “difficulty choosing career paths” or were “unsure what their future would hold”. 16 out of 30 demonstrated some level of *Uncertainty* with 14 of those students choosing *Uncertainty* as their most common subcategory of identifiers within the *Other* category.

*Other* autobiography identifiers included feelings, obstacles, moving from one location to another, and elements of nature. Feelings were represented by the phrases “helplessness” or “feeling judged”. Obstacles included “personal issues with new people and environments,” which had a negative effect on the student, as well as “helpful obstacles” like overcoming a fear or accomplishing a difficult task. Moving from one location to another was an area of focus for several students in addition to an appreciation of nature and being outdoors. 13 out of 30 student
“Autobiographies” contained more Other identifiers than the Uncertainty category. A total of 16 students referenced at least one uncategorized identifier within the Other theme.

**Analysis**

The results of this study revealed that the Occupational theme was the most commonly identified theme in both the “Draw Your Life” and “Autobiography” assignments. Likewise, the Other theme was the least common theme within the two types of reflective assignments. Figure 1 displays the point values for each theme within the “Draw Your Life” assignments calculated from the amount of identifiers observed in each category. In descending order, the ranking of themes from most common to least common was the following: Occupational, Interests/Strengths, Institutional, Social, Other. Note that there is an inverse relationship between point value and theme frequency; the lowest point value represented the most common theme.
Figure 2 displays the point value of each theme within the “Autobiography” assignments. In descending order, the ranking of themes from most common to least common was the following: Occupational, Institutional, Social, Interests/Strengths, and Other. Recall that there is an inverse relationship between point value and theme frequency; the lowest point value represented the most common theme.

Summary of Comparison of Assignments

The Occupational theme was the most commonly identified theme in both the “Draw Your Life” and “Autobiography” assignments. Within that theme, students focused on Animals as the main identifier subcategory in 88.33% of the “Draw Your Life” assignments and 86.67% of the “Autobiography” assignments. In addition, the Other theme was contributed to the least by the students in both assignments. To review, this theme included identifiers that were not categorized into one of the other four themes.
In terms of identifying subcategories, both assignments had the *Future Job* identifiers listed as the second most common subcategory within the *Occupational* theme. Also, the *Academic* subcategory of the *Institutional* theme was the most frequently referenced by students in both reflective assignments. Additionally, there was some level of uncertainty represented by the two types of student assignments, although the “Autobiography” assignment displayed far more instances.

Discrepancies between the two reflective assignments consisted of the ranking of the 2nd, 3rd, and 4th most common themes. *Interests/Strengths* was the 2nd most prevalent theme in the “Draw Your Life” opposed to the *Institutional* theme ranked as number 2 in the “Autobiography” assignments. Likewise, the third most common theme differed between *Institutional* (“Draw Your Life) and *Social* (“Autobiography”). Lastly, the drawings ranked *Social* as the 4th place theme compared to *Interests/Strengths* as 4th place in the autobiographies.

In the final chapter, implications of this research are identified as well as connections between vocational identity, themes, and identifiers. The significance of the study is reviewed and educational benefits for both the students and instructors are discussed. The two reflective assignments are analyzed and evaluated as tools used for professional identity development. Improvements for continuation of this research are established in addition to a section dedicated to recommendations for future vocational identity research.
Now that the results have been established, it is important to discuss the implications of these research findings. To review, this study began with the creation of themes based upon Chickering’s seven environmental influences that affect student development of vocational identity. These themes gave rise to subcategories that broke down each theme into smaller, more specific counterparts that could more easily be used for categorization. Within these subcategories were observed identifiers that students used to interpret and represent unique aspects of their own vocational identities.

As discovered in the previous chapter, students included more identifiers within the *Occupational* theme than any of the other four themes. Both the “Draw Your Life” and “Autobiography” assignments shared this result, which indicated a strong influence of job related factors on student vocational decisions and how they can be used to identify themselves as future professionals. From the subcategories, *Money, Future Job,* and *Lab Work,* it is apparent that students are concerned with their future salary, current financial situation, work environment, required duties, ultimate job satisfaction, and necessary research experience when choosing a career path. From this research, it can be stated that students focus on occupational characteristics that appeal to them personally, financially, intellectually, physically, and mentally when developing vocational identity.

As I hypothesized, the *Animal* subcategory was most commonly represented in both types of student reflections. Every student assignment, regardless of type, included some aspect of animal representation. Animal Science students are passionate about working with animals, as
indicated by this study. However, it is interesting to note that, even when developing vocational
identity, more students focused on Animal identifiers than Future Job identifiers. My
interpretation of this is that students enter the field of Animal Science to learn about how they
can professionally incorporate their passion for animals into their everyday lives. They do not
initially enter the program because they have a strong desire to do research or practice medicine
and animals just happen to be involved in the process. Students develop a drive to conduct
research or solve medical problems as they progress within the program, but if you remove the
animal aspect, would students still pursue that career? As a result of this study, students would
choose a different career path that would accommodate their intrinsic motivation to work with
animals.

Another similarity between the “Draw Your Life” and “Autobiography” assignments was
that there were, in fact, identifiers present that could not be categorized into existing themes and
subcategories apart from Other. Representations of nature, farm equipment, time, emotions,
actions, and locations were observed within the Other theme in addition to a level of uncertainty
about career paths. The “Autobiography” assignments represented a larger level of uncertainty
among students. This could be because Animal Science students are more used to articulating
thoughts and emotions through writing, which is the main form of assignment submission in
many science-related fields. The students in ANSC 298 were hesitant to initially draw pictures
because it seemed “elementary” or something they would do in grade school. However, when it
came time to actually complete the task, they realized that the task was more complicated than
they thought.

Before moving on to the significance of the different rankings of remaining themes
between the “Draw Your Life” and “Autobiography” assignments, it is first important to evaluate
how these reflective tools differed in terms of evaluating identifiers of vocational development. The “Draw Your Life” assignment required students to use only drawings to represent themselves. Although this requirement added a layer of complex thinking as far as organization and how to turn detailed thoughts into pictures, this assignment contained fewer guidelines and was more difficult for me to interpret than the “Autobiography” assignment. Although the autobiographies took far longer to analyze than the “Draw Your Life” assignments, I appreciated the consistent chronological organization that clearly demonstrated where a student’s passions and very first vocational thoughts originated.

When evaluating the drawings, I had to first interpret the entire picture before analyzing each separate component. As a former Animal Science student, I had an educated idea of what the drawings represented, but there is no guarantee that absolutely every image was interpreted in the exact way that the artist intended. With the structure and required material of the autobiographies, I could immediately start analyzing the written phrases and have a more accurate idea as to what the author was representing through his or her writing.

On the other hand, some features of a student’s character and personality can be interpreted from drawings that cannot be observed in an autobiography. As an example, organizational skills can be detected based upon picture placement, attention to detail, neatness, and how the individual pictures work together to form a common theme. Also, whether or not a student uses color, positive images of happy faces within a sun, or more negative images of boredom or fatigue with sad faces on students studying, can say a lot about that student’s personality and emotional state of being. With Interests/Strengths as the second most popular theme in the drawings, it was clear that personality plays a key role in influencing a student’s identity. Here, the two reflective assignments differed because the autobiographies reflected a
stronger reference to Institutional identifiers than Interests/Strengths. This could be a result of the difference in specific directions listed for reflective assignments. Since students were informed to draw a picture of their “life” in the drawings, they may have been inclined to use representations of fewer professional and occupational related interactions. The “Autobiography” assignment required the students to focus on their current life as a novice animal scientist. As a result, the “Draw Your Life” assignment allowed students to express their creative freedom and highlight their interests and strengths more while the “Autobiography” influenced them to focus largely on professional and academic influences.

Another noticeable difference was in the ranking of Social themes. As the least common theme in the drawings, it was interesting to learn that students felt that their families had a greater influence on their lives than friends, intimate relationships, professional contacts, and the desire to work with others. the same difference in assignment directions may be responsible. Social identifiers can reflect more professional factors than Interests/Strengths. As a result, identifiers in the Social theme were more common in the “Autobiography” assignment. Similarly, Other identifiers in the autobiographies including professional contacts, networking, and helping people were more commonly represented than Family in the Social theme.

Despite the frequency of subcategories and themes, it is clear that vocational identity is not just influenced by vocation alone. There are social and institutional factors, as well as elements of a student’s interests and strengths, that play a role in many career-based decisions made my undergraduates. As a result, this study was an important attribute to vocational identity research for students and faculty in Animal Science as well as other disciplines of study. Not only were common themes identified, but unexpected identifiers were discovered. Educators will now have a better idea of what influences the vocational identity of their students and can modify
curriculum to adhere to the developmental needs and interests of the students. This will help students fully develop their vocational identity and allow instructors to prepare and guide them towards professional opportunities that better complement who they are as novice animal scientists. Consequently, students can pursue a career path with a well-developed vocational identity that can decrease the likelihood of career indecision and unsatisfactory career experiences in the future.

If I, or anyone else, were to repeat this study, I would make a few changes to improve the quality of the research. Initially, I would add the new subcategories from the Other theme and subcategories in order to further classify identifiers. Also, if the “Draw Your Life” and “Autobiography” assignments will be comparatively analyzed, I recommend revising the directions for the two assignments so that they both require students to focus on their current life, in general, or current life as a novice animal scientist. For future vocational identity research in college undergraduates, it would be interesting to incorporate demographic information of the students in order to research whether or not gender, race, year in school, etc. affects the identifiers students focus on. I also recommend expanding the study to include students in a variety of disciplines. From there, students in different majors can be studied to see if vocational themes are consistent across multiple areas of study.
REFERENCES


Table 1. Data table used to analyze reflective assignments and record identifiers. A student code and assignment code was listed on the far left. The “AB” code stood for “Autobiography” assignment. The “DYL” code is not pictured, but represented “Draw Your Life” assignment. The frequency of subcategories was calculated by adding the number of identifiers. The theme frequency is the total sum of the subcategory frequencies within each theme. The theme with the highest frequency was the most common theme.

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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>1</td>
<td>shelter veterinarian spoke in class</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Occupational</td>
<td>Animals</td>
<td>6</td>
<td>dogs, cats, birds, special needs dog, sheep,</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Future Job</td>
<td>6</td>
<td>veterinarian, vet school, working at a shelter</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lab Work</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>5</td>
<td>bath, liver failure, bone cancer, working at Piti</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institutional</td>
<td>School Pride</td>
<td>5</td>
<td>happy at U of I</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RSGs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sports Teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academics</td>
<td>4</td>
<td>animal science courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>2</td>
<td>pleased and displeased with courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interests/ Strengths</td>
<td>2</td>
<td>intelligence, drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Self</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>1</td>
<td>helplessness</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Uncertainty</td>
<td></td>
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</table>
Table 2. Data table used to calculate the most common identifiers in the “Draw Your Life” assignment. The five themes are listed across the top and corresponding subcategories are listed in the columns. The most common subcategory of identifiers for each theme is listed at the bottom along with the number and percent of students that referenced that subcategory the most.

<table>
<thead>
<tr>
<th>Student Code</th>
<th>Social</th>
<th>Occupational</th>
<th>Institutional</th>
<th>Interest/Strengths</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>None</td>
<td>Animals, Future Job, School Pride</td>
<td>Hobbies</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Family</td>
<td>Animals</td>
<td>None</td>
<td>Other (food items)</td>
<td>Other (tree)</td>
</tr>
<tr>
<td>45</td>
<td>None</td>
<td>Animals, Money</td>
<td>None</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>44</td>
<td>None</td>
<td>Animals</td>
<td>School Pride</td>
<td>Other (nature)</td>
<td>None</td>
</tr>
<tr>
<td>42</td>
<td>Family</td>
<td>Animals</td>
<td>RSOs</td>
<td>Talents, Self</td>
<td>Other (tractor)</td>
</tr>
<tr>
<td>41</td>
<td>Family</td>
<td>Future Job</td>
<td>Academics</td>
<td>None</td>
<td>Other (time)</td>
</tr>
<tr>
<td>40</td>
<td>Other (leading p)</td>
<td>Animals</td>
<td>None</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>39</td>
<td>None</td>
<td>Future Job</td>
<td>Academics</td>
<td>Self</td>
<td>Uncertainty</td>
</tr>
<tr>
<td>38</td>
<td>Family</td>
<td>Animals</td>
<td>Academics</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>37</td>
<td>Family</td>
<td>Animals</td>
<td>School Pride</td>
<td>Talents, Self</td>
<td>Other (nature)</td>
</tr>
<tr>
<td>36</td>
<td>Family, Relations</td>
<td>Animals</td>
<td>Academics</td>
<td>Talents</td>
<td>Other (happy face sun)</td>
</tr>
<tr>
<td>35</td>
<td>Family</td>
<td>Animals</td>
<td>Academics, Other</td>
<td>Hobbies</td>
<td>Uncertainty, Other (dinner plate)</td>
</tr>
<tr>
<td>33</td>
<td>Family, Lab Work</td>
<td>Animals, School Pride/Academics</td>
<td>Hobbies</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Other (faceless)</td>
<td>Animals</td>
<td>Other (campus)</td>
<td>Self</td>
<td>None</td>
</tr>
<tr>
<td>29</td>
<td>Family</td>
<td>Animals</td>
<td>Academics</td>
<td>Hobbies, Other (na)</td>
<td>Other (hearts everywhere)</td>
</tr>
<tr>
<td>28</td>
<td>Family, Relations</td>
<td>Animals</td>
<td>Academics</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>27</td>
<td>None</td>
<td>Animals</td>
<td>Academics</td>
<td>Self</td>
<td>Other (nature)</td>
</tr>
<tr>
<td>26</td>
<td>Family</td>
<td>Animals</td>
<td>Academics, Other Self</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Family</td>
<td>Animals, Future Job</td>
<td>None</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>23</td>
<td>Family</td>
<td>Animals</td>
<td>Academics</td>
<td>Other (hearts)</td>
<td>None</td>
</tr>
<tr>
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<td>None</td>
<td>Animals, Future Job</td>
<td>Academics</td>
<td>Self</td>
<td>Other (city skyline)</td>
</tr>
<tr>
<td>21</td>
<td>Other (peers in c)</td>
<td>Animals</td>
<td>Academics</td>
<td>Self</td>
<td>Other (zzzz clouds)</td>
</tr>
<tr>
<td>20</td>
<td>None</td>
<td>Money</td>
<td>Academics</td>
<td>Talents, Self, Other</td>
<td>None</td>
</tr>
<tr>
<td>19</td>
<td>None</td>
<td>Animals</td>
<td>School Pride, RSI</td>
<td>Talents</td>
<td>None</td>
</tr>
<tr>
<td>18</td>
<td>Family, Friends</td>
<td>Animals</td>
<td>RSOS</td>
<td>Hobbies, Self</td>
<td>None</td>
</tr>
<tr>
<td>10</td>
<td>Family</td>
<td>Future Job</td>
<td>RSOS</td>
<td>Hobbies</td>
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</tr>
<tr>
<td>9</td>
<td>None</td>
<td>Animals</td>
<td>School Pride</td>
<td>Hobbies</td>
<td>None</td>
</tr>
<tr>
<td>8</td>
<td>Family</td>
<td>Animals</td>
<td>School pride</td>
<td>Self</td>
<td>Other (moving van)</td>
</tr>
<tr>
<td>5</td>
<td>Other (professor, Money)</td>
<td>Academics</td>
<td>Self</td>
<td>Other (direction arrows and plus)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Relationships</td>
<td>Animals, Future Job</td>
<td>Academics</td>
<td>Hobbies</td>
<td>Other (street signs, uhaul)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Most Common:</th>
<th>Family</th>
<th>Animals</th>
<th>Academics</th>
<th>Hobbies</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Students</td>
<td>16 out of 30</td>
<td>26 out of 30</td>
<td>15 out of 30</td>
<td>11 out of 30</td>
<td>12 out of 30</td>
</tr>
<tr>
<td>Percent</td>
<td>53.33%</td>
<td>86.66%</td>
<td>50%</td>
<td>36.66%</td>
<td>40.00%</td>
</tr>
</tbody>
</table>
Table 3. Data table used to calculate the most common identifiers in the “Autobiography” assignment. The five themes are listed across the top and corresponding subcategories are listed in the columns. The most common subcategory of identifiers for each theme is listed at the bottom along with the number and percent of students that referenced that subcategory the most.

<table>
<thead>
<tr>
<th>Most Common Identifiers in AB Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Code</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>46</td>
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<tr>
<td>48</td>
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<tr>
<td>44</td>
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<tr>
<td>42</td>
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<td>41</td>
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<tr>
<td>36</td>
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<tr>
<td>15</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Most Common</th>
<th>Other</th>
<th>Animals</th>
<th>Academics</th>
<th>Talents</th>
<th>Uncertainty</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Students</td>
<td>19/30</td>
<td>26/30</td>
<td>23/30</td>
<td>10 out of 30</td>
<td>14/30</td>
</tr>
<tr>
<td>Percent</td>
<td>63.33%</td>
<td>86.66%</td>
<td>77%</td>
<td>33%</td>
<td>46.66%</td>
</tr>
</tbody>
</table>