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Landherr, Rachael E. *The Relationship Between the Kuder Career Assessment and Program Completion at Chippewa Valley Technical College*

Abstract

In this study, the researcher examines the evidence on career choice and program completion of students taking the Kuder Career Assessment at Chippewa Valley Technical College. Although there is theoretical discussion and empirical evidence on program completion related to career assessment, a review of the Kuder Career Assessment was assessed to determine the logistics for keeping the assessment as a career planning tool at Chippewa Valley Technical College. Upon completion of the Kuder, users are given their top three career choices based on their answers. Four research questions guided this study: (1) What is the relationship between program completion and Kuder career cluster top choice?; (2) What is the relationship between program completion and Kuder career cluster second choice?; (3) What is the relationship between program completion and Kuder career cluster third choice?; and (4) What is the relationship between students who took the Kuder, but did not get into a program based on their top three clusters and program completion at Chippewa Valley Technical College? Findings, conclusions, and recommendations are discussed.

Acknowledgments

This work is dedicated to my mom and dad. Their patience, support, and love have guided me my whole life. You have never given up on me and have loved me every step of the way. Thank you for being my constant supporter through every phase of my life.

To my husband Justin, we started this journey as fiancés, and ended as husband and wife. I would never recommend getting married and writing a research paper at the same time, but looking back, I would not change it for the world. Thank you for being my loving partner.

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Chapter I: Introduction

In an NBC online news report, nearly 80% of students entering college are undecided on a major and up to 50% change majors at some point during their enrollment (Ronan, 2005). With this high percentage of undecided college students, it is essential for college administrators to understand and assist these students in their career journey.

Undecided college students experience difficulty making a commitment to a major and a potential career (Bullock-Yowell, McConnell, & Schedin, 2014). Around 45% of students who are enrolled in two-year colleges leave during their first year (Braxton, Hirschy, & McClendon, 2004). Student departure from an educational institution has a negative impact on the budget, enrollment, and public perception (Braxton et al., 2004). Vincent Tinto, a founding researcher of the nature on college retention, suggests student departure is based on student interaction between academic and social dimensions of a college (Braxton et al., 2004).

College can benefit students by allowing individuals to discover what they like or dislike, which can lead them to discover careers that are compatible with their interests and abilities (Tinto, 1993). While college can lead to self-discovery, career-planning tools such as career assessments can be used to keep students in school for successful program completion.

The Kuder General Interest Survey is a career assessment inventory that aims at providing users a measure of their interest and skills in certain occupations. The Kuder was developed due to the growing need for delivering younger generations a career assessment, especially to those in junior and senior high school (Kuder Inc., n.d.). The Kuder is broken into two major interest assessment types: the Kuder Navigator and the Kuder Journey. There are three different career assessments within the Navigator and Journey that users can take which include the career interest assessment with person-match, skills, and work-value assessments.

The Kuder Navigator is designed for middle school and high school clients to discover themselves, build an educational plan, and explore options after high school (Kuder Inc., n.d.). The Navigator is an interactive resource in which parents and educators can support students with career guidance, tracking, and decision-making for their future.

The assessments within the Kuder are aligned to the nation's 16 career clusters which include: agriculture, food, and natural resources; architecture and construction; arts, A/V technology, and communications; business management and administration; education and training; finance; government and public administration; health science; hospitality and tourism; human services; information technology; law, public safety, corrections, and security; manufacturing; marketing,; science, technology, engineering, & mathematics (STEM); and transportation, distributions, and logistics. The clusters group careers with shared knowledge and skills that are required to be successful. Career pathways promote the connection between education and workforce development and offer transitions from high school to career or occupation preparation (Kuder Inc., n.d.).

Middle schoolers can explore over 1,000 occupations through Kuder resources. Through the Navigator, students can plan for an education and prepare for high school and beyond by understanding what preparatory classes may be needed for college or career entrance. Users have an online portfolio, which they can use to organize their results of the three assessments and the exploration they have completed through the Navigator.

High school students who use the Kuder Navigator have access to the same sections as middle-schoolers, but they have additional access to resume development, reference collection, and learning how to search for job openings and employers. High schoolers can also research colleges and seek financial aid guidance. Parents and high school administrators have access to

student's records (Kuder Inc., n.d.). Through the Kuder Navigator, parents are provided tools and resources to be able to guide their children through their career-planning journey.

The Kuder Journey is designed for post-secondary individuals and adults who are planning for a career, furthering their education, making a career change, or for those who are undecided on program choice (Kuder Inc., n.d.). A unique characteristic of the Kuder Journey is that it is tailored to each user. During the account set-up process, users are asked to select their user type from eight options such as: job status, disability status, transfer student, or first-time student. Based on their answers, the assessments are aligned to the client's needs.

Chippewa Valley Technical College (CVTC) in Eau Claire, Wisconsin is a two-year technical college, one of 16 in Wisconsin, and is one of 30,000 higher education institutions across the United States that employs the Kuder. For over four years, CVTC has provided the Kuder Career Assessment as a career-planning tool for a variety of measures for current and prospective students.

Research conducted at CVTC in 2007 with enrolled students, indicated that 29.8 percent of assessed students stated an uncertain career choice while 26 percent portrayed low degree focus, which leads to a high number of transfers between programs after beginning college. Students who graduate from the program they initially enrolled in, experience a graduation rate of 55 percent, consistently 10 percent higher than the overall institution (N. Marlaire, CVTC, Director of Student Services, personal communication, February 12, 2018).

Prospective CVTC program students include adult students (unsure of CVTC program/career path), Adult Basic Education (ABE) students, English Language Learners (ELL), GED students, high school students (uncertain of their CVTC program/career path), and dislocated workers. Students are offered four options for career planning. The first option is to

take the Kuder and use the results to apply to an appropriate program. The second option is to take the Kuder and then participate in an on-line CVTC Career Decisions Workshop. The third option is to participate in a face-to-face Career Decisions Workshop and complete the Kuder before participation. The final option is for the student to enroll in an eight-week Transition to College course. After students engage in the career assessment phase of the process, they have the option to schedule an appointment with a career specialist at CVTC.

The Kuder is used to provide all students with their interest, skill levels, and work values so they can choose a program, be successful in the program, graduate, and be career ready.

Statement of the Problem

Effective career planning forms an essential first step for students to select an academic program and achieve success. Yet, it is not clear if career assessments, such as the Kuder, are purposeful career planning tools for students to take before going into a program. As part of CVTC's retention and accreditation procedure, the Kuder Career Assessment has the potential to impact student's program completion and retention rates.

Purpose of Study

The purpose of this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion. The results of this study may provide data that can inform the other fifteen technical colleges about how their campuses could use the Kuder assessment. The following research questions guided this study:

1. What is the relationship between program completion and Kuder career cluster top choice?
2. What is the relationship between program completion and Kuder career cluster second choice?

3. What is the relationship between program completion and Kuder career cluster third choice?
4. What is the relationship between students who took the Kuder, but did not go into a program based on their top three clusters and program completion at Chippewa Valley Technical College?

Definition of Terms

To provide uniformity with terminology in this study, the following definitions are provided.

Career assessment. Test results that help job seekers match up with the employers and jobs that align with the individuals' skills, abilities, interests, and potential careers (Lock & Hogan, 2000, p. 414).

Kuder. The study assumes that the term "Kuder" is used in the broad sense; it is the generic term used for the full array of Kuder Career Assessments.

Official withdrawal. A student's formal withdrawal from all classes at the college (Chippewa Valley Technical College Handbook, 2017, p. 148).

Program completer. Individuals who have successfully completed all general and program courses with passing grades. These individuals have earned a technical or associate diploma. (Department of Education, 2018).

Unofficial withdrawal. Occurs when a student fails to formally withdraw from the college or receiving all F's in all classes (CVTC Handbook, 2017, p.151).

Limitations

There are some limitations to this study. A significant limitation is that not everyone who took the Kuder through CVTC applied and attended classes at CVTC. The total number of

individuals who have taken the Kuder to date is over 4,000. However, that number does not mean that 4,000 people applied and attend CVTC.

Another limitation of this study is that students who took the Kuder and attended CVTC, but did not graduate, may have left for a number of reasons not measured by the assessment. Program satisfaction may be a determining factor, but other factors play an important role in student departure and lack of program completion.

Assumptions

The assumptions of any study are the factors that are required to be true to conduct valid research. Those factors which were outside the immediate control of the researcher and were assumptions for the purpose of the study were the following: The study assumes:

- Students taking the Kuder at CVTC have not had previous career guidance.
- Students are taking the Kuder to assist them with a career choice.

Chapter II: Literature Review

For over 60 years, career assessments including the Kuder, have been administered as a career-planning tool (Kelly, 2002). Findings from previous research state that when students have identified a career and declare a major of study, retention rates increase by 22% (Willcoxson & Wynder, 2010). The purpose of this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion. The following research questions guided this study:

1. What is the relationship between program completion and Kuder career cluster top choice?
2. What is the relationship between program completion and Kuder career cluster second choice?
3. What is the relationship between program completion and Kuder career cluster third choice?
4. What is the relationship between students who took the Kuder, but did not go into a program based on their top three clusters and program completion at Chippewa Valley Technical College?

This literature review will describe the history of the Kuder, followed by the components of the Kuder, and then discuss the theory related to student success and retention that supports this study.

History of the Kuder Career Assessments

The Kuder Career Assessment is an evidence-based career assessment, educational planning, and guidance resource (Kuder Inc., 2007). In partnership with the International Center for Career Development Public Policy (ICCDPP), the Kuder Assessment has helped 165 million

people on their career pathway (Kuder Inc., 2007). The Kuder Assessment is a twenty minute scientifically validated assessment that measures interests, skills, and work value.

In 1939, Dr. Frederic Kuder debuted the first in his line of formal inventories evaluating occupational interests. Shortly after his debut, Dr. Kuder became a leading voice and authority in the field of vocational psychology due to his impressive body of published work, including publications. Along with being a founding father of the American Psychological Association (APA) and assisting returning World War II veterans seeking GI Bill assistance, Dr. Kuder had become a well-known name in the education systems across the United States through his development of career assessment for grade 6 and up (Kuder Inc., 2007).

In July of 1974, a study was published that analyzed validity of 25 years of Kuder results, stating that out of the 1,800 people who had taken the career assessment over that time, 60% of the population whose careers were revealed found that the results were forecasted correctly (Kuder Inc., 2007). Through the years, the assessment went through a redesign, cosmetic in nature, to become web available with the first computers. After the Kuder's 75th anniversary as a career assessment tool, the series of Kuder assessment were renamed the Kuder Career Interests Assessment, the Kuder Skills Confidence Assessment, and the Kuder Work Value Assessment.

Kuder Career Interest Assessment. The Kuder identifies skills, interests, abilities, and values and encourages users to find a cluster of careers that fit those characteristics. The Kuder teaches individuals to become career explorers by gathering information about educational choices, occupational choices, relationships and attitudes towards work while learning about the economy and labor market (Zytowski, 2001).

The Kuder Career Search section of the Career Interests Assessments is composed of over 150 activities. A unique characteristic of the Kuder is in the preference record section: it has

the survey-takers mark a set of three occupations, selecting the most, second most, and least preferred (Zytowski, 2001). Other career assessments offered to secondary and post-secondary students have users choose one item they like or would want to do, which could allow users to guide their answers in a specific direction to obtain the results they want to see. As mentioned with the Kuder, users are forced to select their three preferences, ultimately narrowing down their results to create a more accurate career cluster for direction.

The questions in this assessment are designed to relate to each of the 16 national industry career clusters. The score report shows users their degree of interest in each of the clusters presented in rank order. Kuder suggests beginning exploration with the top five career clusters (Bowlsbey-Harris, 2010). The results of this assessment do not group a person's skills or work-related values. While the results have been shown to be valid and informative, the results do not provide a perfect match.

Kuder Skills Confidence Assessment. The Kuder Skills Confidence Assessment measures typical skills that are required in each of the 16 career clusters (Bowlsbey-Harris, 2010). For each item on the assessment users are to respond to questions related to occupations and respond with the following answers: cannot do at all, slightly certain can do, moderately certain can do, very certain can do, or completely certain can do. A report similar to the career interest assessment will appear and a composite report of the user's interests and skills will be summarized which includes the list of skills they are completely certain they can do and related occupations from the Person Match. Since skills can be transferable between occupations, users can explore their skills and compare them to the national 16 career clusters (Bowlsbey-Harris, 2010).

Work Values Assessment. During this assessment, users rate the importance of a variety of work-related values (Bowlsbey-Harris, 2010). There are 12 work-related values that are presented in this assessment of the Kuder which include: achievement, co-workers, creativity, income, independence, lifestyle, mental challenge, prestige, security, supervision, variety, and work environment. As users are exploring different occupations, their top four work-related values are intended to assist with finding occupations that correspond to the values (Bowlsbey-Harris, 2010).

The validity of Kuder Assessments. The Kuder assessments represent few among many career assessments available, and validity of assessments is important for users. To determine the validity of career assessments, there are two measures to consider: the assessment's ability to differentiate between occupational groups and the assessment's ability to assign individuals to occupational groups based on the results from the assessment (Burns, Garcia, Smith, & Goodman, 2016).

In a study using the Kuder person matching assessment with 420 individuals, 60% of those individuals picked a career based on their top five results (Burns et al., 2016). This research indicated that unlike the Kuder, traditional career assessments only have an 11% accuracy in top career choice, a 3% accuracy in second career choice, a 1% accuracy in the third choice, a 2% accuracy in the fourth choice, and a 1% accuracy in the fifth choice (Burns et al., 2016). Kuder person matching had the ability to obtain 50% accuracy for the closest five matches (Burns et al., 2016).

Career assessment and program choice. Research indicating whether career assessments help college students determine a career path and persist show that giving students a clear path to follow improves their likelihood of degree completion (Jenkins & Cho, 2012; Scott-Clayton, 2011). Studies on career counseling and guidance have found that self-assessment

inventories are related to improved career-selection measures, such as increased career decidedness and career maturity (Hughes & Karp, 2004). Studies of the Kuder found participation to be linked to postsecondary persistence, identification of a college major, and persistence in majors well aligned with career goals (D'Achiardi-Ressler, 2008).

Career Development Theory

Career journey is an important aspect of one's life. Our careers define who we are and finding the right career can lead to a lifetime of satisfaction while, on the contrary, not finding the right career can lead to poor self-esteem and can lead to depression (Kosine & Lewis, 2008). Career development is a continuous process and is distinctive to every person (Kosine & Lewis, 2008). Gender, ethnicity, socioeconomic status, family, and geographic factors play a part in one's career development process (Kosine & Lewis, 2008).

Donald E. Super, who spent nearly six decades researching and evolving his theory on career development, is a prominent theorist. Super's theory is a mixture of stage development and social role theory which states that people progress through five stages during career development. The five stages include growth, exploration, establishment, maintenance, and disengagement (Super, 1957).

During the growth stage, which ranges from ages 0-14 years old, children and adolescents are introduced to occupations and start to develop their career self-concept (Kosine & Lewis, 2008). During this stage, children and adolescents form a general understanding of work, work habits, and attitudes towards work.

During the exploratory stage, which ranges from ages 15-24, individuals are developing their career identity through researching careers, work experience, and classroom education (Kosine & Lewis, 2008). Individuals are either entering the workforce or continuing their educational training.

During the establishment stage, which ranges from ages 25-44, individuals are focused on maintaining their career and/or working towards career advancement (Kosine & Lewis, 2008). Individuals want to secure a place in their chosen career. Continuous education, certifications, and advanced degrees are sought during this stage.

During the maintenance stage, which ranges from ages 45-64, individuals are wanting to maintain their job or continuing to keep up with their career. Some individuals may decide to change careers to switch to a new employer within their career field. Individuals may revisit the exploration and establishment stages, but their focus is on maintaining their positions within their careers (Patton & McMahon, 2006).

The final stage, disengagement, ranges from age 65 +, when individuals are prepping for retirement. Individuals are reducing their workload and may find jobs or hobbies to sustain their interests during retirement (Kosine & Lewis, 2009).

Super stated that people live in multiple-role environments which includes work, family, and community roles (Super, 1980). After high school, individuals are learning responsibility, financial independence, and making their own choices, which includes career identity (Rosemond & Owens, 2018). Choosing a career can be a major milestone in one's life. However, every individual may be at a different level of career development which means that individual's needs, value, and interests develop as they go through life (Super, 1980).

The Kuder is designed for individuals in different stages of career development. As mentioned earlier, the Kuder Navigator, is designed for middle and high school students and has activities and assessments tailored for their needs and developmental stages of career development: growth and exploratory stages. The Kuder Journey is designed for adults and during the account set-up process, users are asked to select their user type based on their career

state: just out of school looking for a first full-time job, laid off and/or seeing a job in the same occupations, exploring a change to entirely different occupation, a veteran or active member in the military, an adult with a disability, an ex-offender, a retired person, seeking another job or volunteer work, and someone thinking about going to a postsecondary institution or already one.

Activities are specially presented to these individuals based on their answer of which stage they are in on their career development journey. The average CVTC user falls within the exploratory, establishment, or maintenance stages. However, CVTC does have users from the disengagement stage as well.

Student Departure and Retention

Although over 1.5 million students in the United States leave college within their first-year without receiving a degree (Tinto, 1993), not all student departures lead to withdrawal from the broader system of higher education (Tinto, 1993). At CVTC, students can withdraw, officially or unofficially, without stating the reason behind their departure. Some may truly be dissatisfied in their program choice and may not reach out for help, while others may transfer to another institution for another program. Outside factors may also be another reason why retention in higher education may be difficult to analyze.

Since Tinto's first research in 1987, the number of students who work while going to college has increased (Tinto, 1993), and so has the number of students raising families. The increase in tuition cost also plays a role in student departure. Paying for college can be a significant stressor for college students.

A recent study found that more community college students are taking out loans compared to their peers but are leaving college without having earned a degree (McKinney & Burrige, 2015). While community colleges are one-third the cost of four-year public

universities, many community college students still need to take out additional loans to afford the total cost of attendance. Access to financial aid, such as loans and grants can allow students to cut back on work hours, pay for child care, and focus their attention on their schoolwork (Student Debt Project. 2009).

Similar circumstances occur in students' lives that could also have a negative effect on student graduation rates in higher education. At Chippewa Valley Technical College, students often leave college without program completion due to the death of a loved one, medical leave, family dynamics (single-parent, spouse work schedule, etc.), number of hours working, or pregnancy. (R. Nowicki, Registration and Records Assistant, personal communication, July 19, 2018). During the 2016-2017 academic year, over 230 students appealed and were approved for resubmission to CVTC. Many of these students stated in their appeal the above circumstances as hindrances in their educational completion (R. Nowicki, Records and Registration Assistant, Personal Communication, July 19, 2018).

Many colleges have proactive approaches for such life events for students. It is important that career planning tools such as academic advising (discussing unofficial vs. official withdrawal), financial literacy, and career assessments available to students. These resources assist students to understand their interests, skills, and values, and can help them make appropriate decisions that may play an important role in retention rates.

Summary

The Kuder is a complex, but educational career-planning tool that allows users to explore career options from the nation's 16 career clusters based on the user's results from their career interests, skills, and work-related values assessments. Individuals vary in their interests, skills, and values. Depending on the individual's age and career maturity, users are in different career

development stages. Each user is unique, so it necessary for individuals to understand that the Kuder is one of many career planning tools to help guide those during the different stages of their career development journey.

Past research builds on evidence that giving students a clear path to follow improves their likelihood of degree completion (Jenkins & Cho, 2011; Scott-Clayton, 2012). These pathways are designed to help students enter and progress through their program of study, but only if students have the resources to guide them.

Chapter III: Methodology

For colleges to maintain state and federal funding and accreditation, colleges have to understand how to retain students for successful program completion. Research conducted at Chippewa Valley Technical College in 2007 stated that 26% of students portray low degree focus, which leads to a higher number of transfers between programs after beginning college (N. Marlaire, CVTC, Director of Student Services. personal communication, February 12, 2018). The purpose of this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion. As part of CVTC's retention and accreditation procedure, the Kuder Career Assessment has the potential to impact student's program completion and retention rates. The following research questions guided this study:

1. What is the relationship between program completion and Kuder career cluster top choice?
2. What is the relationship between program completion and Kuder career cluster second choice?
3. What is the relationship between program completion and Kuder career cluster third choice?
4. What is the relationship between students who took the Kuder, but did not go into a program based on their top three clusters and program completion at Chippewa Valley Technical College?

Research Design and Data Selection

This research is an ex-post facto study that used existing data. "When ex-post facto research is done, variables are studied in retrospect in search of possible relationships and

effects” (Wiersma, 2009, p.194). The research is designed to study the variables, which have been previously documented, to determine the possible relationships. For this study, the independent variable was the Kuder Assessment results, while the dependent variables were program choice and completion.

The data set used was from Chippewa Valley Technical College (CVTC) based out of Eau Claire, Wisconsin. The college has four campuses in the surrounding areas including River Falls, Menomonie, Chippewa Falls, and Neillsville. Eau Claire is a mid-sized town located in Western Wisconsin, about 90 miles east of Minneapolis/St. Paul, Minnesota and 180 miles northwest of Madison, Wisconsin. Over 4,000 individuals have taken the Kuder through CVTC. Since the college provides free access to the assessment through its public website, high schools and government agencies are included in the total users.

The data selected for this research was taken from the Kuder Administrative Database Management System (ADMS). The ADMS offers a variety of reports and resources. The Director of Student Services who oversees the Academic Advising, Student Success, and Career Development Department at Chippewa Valley Technical College (CVTC) provided administrative access to the data. Through the ADMS, a report was created of all the users who have taken the Kuder at CVTC. Over 16,714 assessments to data have been taken, which include all three of the Kuder sections. Out of the 16,714 assessments, 4,611 were confirmed students.

Data Description

The data collected from the Kuder Administration Database Management System (ADMS) was cross-referenced to a report retrieved from CVTC’s Academic Advising, Student Success, and Career Development Department, listing students who had taken the Kuder then applied to CVTC. Using the Academic Advising Department reports, the students were

compared to CVTC's Student Management System, Banner 9 by Ellucian Software™ to determine which of the original 4,611 users who took the Kuder applied and attended a program at CVTC. Review of this data revealed 874 students who took the Kuder assessment, applied and attended a program at CVTC.

Data Analysis

Each student in the sample of 874 was reviewed using criteria that as found in Banner 9™ fields and compiled in an Excel™ spreadsheet. Data collected from 2014-2016 was coded for research analysis. Data from 2016-2017 and 2017-2018 was excluded because it did not allow for calculation of three and four year graduation rates. To determine the relationship of the Kuder Career Assessment and program completion at CVTC, pivot tables in Microsoft Excel™ were used, which allows the user to select and compare from within tables. A Chi-square analysis was used to test for independence of variables. The sample of 874, was reviewed based on criteria that were found in Banner 9™ and compiled in an Excel™ spreadsheet.

Limitations of the Methodology

There were several limitations to the study. Not all 4,611 users who took the Kuder applied to and attended CVTC. The Kuder was offered as a career-planning tool on CVTC's public website where high school students, government agency clients, and community members could take the Kuder, which means they did not necessarily attend CVTC. For those who did not attend CVTC there was no record to determine if they were successful in their career or educational pathway. The 874 students who were reviewed for the research were a small sample of CVTC students. The total enrollment at CVTC is over 5,600 students.

Chapter IV: Results

For colleges to maintain state and federal funding and accreditation, colleges must understand how to retain students for successful program completion. Research conducted at Chippewa Valley Technical College in 2007 stated that 26% of students portray low degree focus, which leads to a higher number of transfers between programs after beginning college (N. Marlaire, CVTC, Director of Student Services. personal communication, February 12, 2018). The purpose of this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion. The following research questions guided this study:

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3. What is the relationship between program completion and Kuder career cluster third choice?
4. What is the relationship between students who took the Kuder, but did not go into a program based on their top three clusters and program completion at Chippewa Valley Technical College?

This chapter describes data collected on program completion and Kuder career cluster top choice. The research included a student sample of 874 individuals who took the Kuder between 2014 and 2016 through CVTC and then applied and started a program at CVTC.

Sample Demographics

The sample from CVTC's 2014-2016 Kuder assessment was comprised of 621 females (71%) and 253 (29%) males. Students do not have to select their age when setting up their Kuder accounts, but the average student age at CVTC ranged from Early Adulthood (18-24) and Mid-Adulthood (25-40) in age. There were outliers who did not fall in the age range.

Users were asked to describe their user type from eight different options. Of the 874 sample, 580 (66%) identified themselves as exploring a change to an entirely different occupation, 238 (27%) identified themselves as thinking about going to a postsecondary institution or already attending one, 31 (4%) identified themselves as just out of school looking for their first full-time job, 15 (2%) identified themselves as laid off and/or seek a job in the same occupation, 7 (1%) identified themselves as a veteran or active member in the military, 2 (<1%) identified themselves as an adult with a disability, and 1 (<1%) identified themselves as a retired person, seeking another job or volunteer work.

The sample consisted of 651 (74%) students identifying themselves as Caucasian, 34 (4%) did not disclose their racial identity, 23 (3%) identified themselves as Hispanic and the remaining 166 (19%) individuals identified themselves as African-American/Black, American Indian, Native Hawaiian, or two or more races.

Research Question 1: What is the Relationship between Program Completion and Kuder Career Cluster Top Choice?

Of the 874 individuals, 115 (13%) chose a program based on their first program choice from the top three program choices from their Kuder results (Table 1). Of those students, 65 (57%) graduated within four academic years while 50 (43%) did not graduate. When analyzing graduation rates of students in this category, a period of graduation within 3 or 4 years is typical.

Of the students who graduated, 7 (11%) were in one-year programs and 58 (89%) were in two-year programs.

Table 1

Graduation Completion Rates, Cluster 1 (n=115)

Length of Program	Length of time to completion			
	One year	Two years	Three years	Four years
One year	1 (1%)	6 (5%)		
Two year		11 (9%)	23 (20%)	24 (21%)

Research Question 2: What is the Relationship between Program Completion and Kuder Career Cluster Second Choice?

Of the 874 individuals, 127 (15%) chose a program based on their second program choice from their Kuder results (Table 2). Of these students, 57 (45%) graduated within four academic years, meaning that that 70 (55%) did not graduate. When analyzing graduation rates, a period of graduation within 3 or 4 years is typical. Of the students who graduated, 7 (12%) were in one-year programs and 50 (88%) were in two-year programs.

Table 2

Graduation Completion Rates, Cluster 2 (n=127)

Length of Program	Length of time to completion			
	One year	Two years	Three years	Four years
One year	0 (0%)	7 (6%)		
Two year		11 (9%)	18 (14%)	21 (17%)

Research Question 3: What is the Relationship between Program Completion and Kuder Career Cluster Third Choice?

Of the 874 individuals, 105 (12%) chose a program based on their third program choice from their Kuder results. Only 34 (32%) of students graduated within four academic years, while 71 (68%) did not graduate (Table 3). When analyzing graduation rates of students in this category, a period of graduation within 3 or 4 years is typical. Of the student who graduated, 8 (24%) were in one-year programs and 26 (76%) were in two-year programs.

Table 3

Graduation Completion Rates, Cluster 3. (n=105)

Length of Program	Length of time to completion			
	One year	Two years	Three years	Four years
One year	3 (3%)	5 (6%)		
Two year		5 (6%)	9 (9%)	12 (11%)

Research Question 4: What is the Relationship between Students who Took the Kuder, but did not go into a Program Based on their Top Three Clusters and Program Completion at Chippewa Valley Technical College?

Of the sample analyzed, 526 (60%) students did not go into a program based on their top three careers clusters. Of this group, 158 (30%) student's graduated and 368 (70%) did not graduate within 4 years. Of the students who did not go into a program based on their top three career clusters, but graduated, 21 (13%) were in one-year programs and 137 (87%) were in two-year programs.

Table 4

Graduation Completion Rates, Did not Go into a Program (n=526)

Length of Program	Length of time to completion			
	One year	Two years	Three years	Four years
One year	5 (1%)	16 (3%)		
Two year		21 (4%)	53 (10%)	63(12%)

Table 5 summarizes the data between the three different choices among the Kuder, the career cluster match and graduation. The table shows matched career choices based on their top three results and the percentage of students who graduated within four academic years.

Table 5

Kuder Results Matched with Program Chosen and Graduation Rates (n=874)

Kuder Results	Matched Career Choice	Graduated in 4 years
1 st Choice	115 (13%)	65 (57%)
2 nd Choice	127 (15%)	57 (45%)
3 rd Choice	105 (12%)	34 (32%)
Other Choice	526 (60%)	158 (30%)

Further analysis was done to determine if there was a relationship between choosing a program from their top three Kuder career choices and program completion at CVTC. A chi-square test was performed to examine the relationship between students who entered a program tied to one of their top Kuder career choices and graduation. The relation between these variables were significant, $X^2(2, N=874) = 19.90, p < .05$. Students who chose one of their top three choices were more likely to graduate.

Chapter V: Discussion, Conclusions, and Recommendations

Retention of students is a problem in higher education which has a direct impact the lives of students, on the workforce, and on colleges and universities (VanWagoner, Bowman, & Spraggs, 2005). For over 60 years, career assessments including the Kuder, have been administered as a career-planning tool to help people start a career (Kelly, 2002). Studies of the Kuder found participation to be linked to postsecondary persistence, identification of a college major, and persistence in majors well aligned with career goals (D'Achiardi-Ressler, 2008).

As part of CVTC's retention and accreditation procedure, the Kuder Career Assessment has the potential to impact on students' program completion and retention rates. The purpose of this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion. The following research questions guided this study.

1. What is the relationship between program completion and Kuder career cluster top choice?
2. What is the relationship between program completion and Kuder career cluster second choice?
3. What is the relationship between program completion and Kuder career cluster third choice?
4. What is the relationship between students who took the Kuder, but did not go into a program based on their top three clusters and program completion at Chippewa Valley Technical College?

To answer these questions, a review of CVTC Kuder assessment results from 2014-2016 was completed. The researcher studied the ex post facto data collected from students who took the Kuder Career Assessment through CVTC and their first, second, and third choice results in

relationship to program completion. The research included a student sample of 874 individuals who took the Kuder between 2014 and 2016 through CVTC, applied and started a program at CVTC.

Discussion

The overarching consideration in this research was to determine the relationship between the Kuder Career Assessment as a career planning tool and successful program completion at CVTC. Data shows a relationship between program choice and graduation from the sample of students from the 2014-2016 years at CVTC and the Chi-square analysis suggests it is significant. The data shows that nearly 40% of the sample went into a program based on their top three choices with an overall graduation rate of 44%, which is higher than CVTC's overall graduation rate of 36%.

When students were compared by each choice, those who chose programs based on their first choice had the highest graduation rate at 57%, compared to 36% to the college overall. As students select a lower choice the graduation rates go down. Those who do not choose a program based on their top three results, had the lowest graduation rates (30%), even lower than the campus's graduation rate of 36%. This data aligns with the literature stating that the Kuder assessment is linked to post-secondary persistence and program choice (D'Achiardi-Ressler, 2008).

The largest percentage of students taking the Kuder assessments were in two-year degree programs. This is not surprising, as this reflects the program array of CVTC's 95 programs, with 80 of those being two-year programs and 15 being one-year or less in length. The Kuder is not an admission requirement for any of these programs, but it is a career planning tool to assist students who may be undecided or are reentering the college. The high number of students in two-year programs may contribute to the largest percentage of two-year students who may be

more undecided than one-year students if they plan on transferring to another college or university to further their education.

Conclusion

The literature and findings from this study indicate a positive relationship between taking the Kuder assessment and program completion at CVTC. Students who went into a program based on their top choice had the highest graduation rate. As students selected their second program choice, the graduation rate declined, but their graduation rates were still higher than CVTC's overall graduation rate of 36%.

Given this relationship between choice and graduation rates, it is concerning that a high percentage of the sample (60%) did not choose a program based on their top three choices. This group of students had the lowest graduation rate (30%), which is lower than CVTC's overall graduation rate of 36%. This large group of students perhaps need additional interventions, as the literature suggests which includes workshops or guided explorations; they have been found to have positive impacts on students' vocational decision-making processes (Zagora & Cramer, 1994).

This group of students may need additional interventions with advising and additional support that will assist with career choice and program completion. Based on the results of this study, CVTC's Academic Advising, Student Success, and Career Development Department. The challenge is for CVTC to provide students who are taking the Kuder with additional support that will assist students choosing a program based on their top career clusters. Additional support will help contribute to a higher percentage of program completion within their program and at CVTC, which suggests that more advising is needed.

Recommendations

Based on the result of this study, several recommendations can be made. Career Service Specialists and General Advisors spend time offering career planning events, seminars, and meeting with students, but if students are still not going into a program of top choice, these additional strategies may need to be re-examined. Students can take the Kuder and then participate in an on-line CVTC Career Decisions Workshop which could help them choose a program related to their top choice. Another options is for students to participate in a face-to-face Career Decisions Workshop and complete the Kuder before participation or can enroll in an eight-week Transition to College course. Additional hands-on career planning tools, in combination with the Kuder, such as offering job shadowing, career tours, and meetings with program instructors can be another option in a student's career journey.

Second, the recommendation for students using the Kuder as reentrance should be examined. The Kuder is currently offered to individuals who have been academically dismissed from CVTC in the past, as evidence that they have taken the time to prove their return to CVTC will be successful. However, students may not follow their Kuder results. Additional documentation or meetings with Career Specialists or General Advisors before being approved for reentry is recommend to help the students understand the benefits of choosing their first or second program choice.

The final recommendation is to reexamine the data set by removing Liberal Arts students. Graduation rates for Liberal Arts students are less than 20% at CVTC, and these are the students who tend to transfer to a four-year institutions. Taking them out of the data set may show different results.

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