

RURAL UNIVERSITY STUDENTS: EXPLORING RETENTION AND ACADEMIC SUCCESS**Yuleinys A. Castillo**

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Rural students face unique challenges that shape their educational journey. This study assesses non-cognitive factors that could influence college rural students' retention. These variables included student alienation, vocational identity, locus of control, and university social support. Data collection involved self-report surveys from students enrolled in a rural university. Pearson's correlation was used to test possible relationships among variables and regression analysis identified significant variables. Increasing social support and a need for support was associated with an increased likelihood of student retention. Recommendations for college professionals and faculty to improve rural college student retention are explored.

Keywords: college retention; rural students; non-cognitive factors; social support; university services

Introduction

Attending community college or university is an exciting new experience for young adults to begin working on future careers. In 2019, approximately 19.7 million students enrolled in college (National Center for Educational Statistics [NCES], 2019) with students' decision to attend a university shaped by institution acceptance and the motivation to graduate (Alarcon & Edwards, 2013; Zyphur et al., 2007). While college admission is an important milestone for any student, graduation from college can become an unstable goal without proper institutional support.

Many institutions' acceptance measures are based on traditional factors, such as previous performance in high school and standardized test performance (Saunders-Scott et al., 2018). Most students are accepted into college because of cognitive measures, for example grade point average (GPA), standardized testing such as the ACT or SAT scores, class rank, and evaluating overall achievement (Bowman et al., 2019; Farrington et al., 2012; Schmitt et al., 2009). Once a student is accepted into an educational program, institutions must consider how to retain the student until degree completion. Tinto (2006-2007) noted that retention rates in higher education is one of the most widely researched topics, consisting of over four decades of research. He stated that initially, when research began, discontinuation of the student from a university was a result of the students' actions and not the university, but as further research was conducted, the responsibility was understood to be not only on the student, but also on the institution.

Therefore, universities consider retention a top priority for the fiscal responsibility and institutional longevity. College retention measures the number of students who continue enrolled in college year after year until successful completion of their degree. Alarcon and Edwards (2013) stated that students leaving the university is costly to the institution, the student, and society. In addition, many institutions view a student leaving before completion as a misuse of resources. Retention is a highly researched area in higher education because of the importance of universities to recruit a diverse student population and find ways to assist these students in successfully completing a college degree (Berger et al., 2012).

Influential Factors on College Students' Success

When considering university retention, cognitive and non-cognitive characteristics are interpreted to help predict college success (Alarcon & Edwards, 2013; Bowman et al., 2019; Hurford et al., 2017; Saunders-Scott et al., 2018; Schmitt et al., 2009; Zyphur et al., 2007). College students have to manage a complicated set of changes in the college environment, including moving away from support networks (parents, family, and friends), new academic standards and requirements, financial challenges, time management, anxiety and worry because of a sense of failure, and changes in social interaction (Alarcon &

Edwards, 2013. Hence, college students utilize different set of skills and environmental support to perform well academically leading to their successful graduation.

For years, universities predicted academic performance and retention by evaluating standardized tests, such as the Scholastic Aptitude Test (SAT) and the American College Test (ACT), high school GPA, student demographics, and student experiences (Bowman et al., 2019; Murtaugh et al., 1999; Schmitt et al., 2009). Saunders-Scott et al. (2017) evaluated the best predictor of retention by comparing GPA, ACT scores, students' grit (ability to reach long-term goals) and perceived stress. Based on the research, the authors determined that ACT and GPA are more predictive of college GPA and less for retention, but grit and perceived stress are more predictive of retention and less for college GPA.

In addition, Hurford et al. (2017) found that a high school GPA below 3.0, enrolling past the deadline for the enrollment period, college GPA below 1.4, and enrolling in less than 10 hours, and maintaining part-time enrollment status predicted if freshman students would leave school before degree completion. These cognitive measures may help to predict academic performance, but multiple factors in the university environment might contribute to academic success. The personal characteristics of each student, support systems, and resources available at each university and community are all areas to consider when it comes to motivation and retention to degree completion.

Additional factors also contribute to students' performance and motivation to remain in a university setting. Farrington et al. (2012), for instance, evaluated the impact of five non-cognitive characteristics on student performance, which consisted of academic performance, academic perseverance, academic mindsets, learning strategies, and social skills. The authors indicated that these characteristics have influenced student performance and retention rates faced by universities. Furthermore, Bowman et al. (2019) provided additional non-cognitive factors that included student self-efficacy, resilience, time management, and study skills improved retention. Likewise, added non-cognitive factors including living off campus, low socioeconomic status, poor social relationships, inability to have independent goal directed behaviors, low self-efficacy, lack of resiliency, limited study skills, poor judgment, and failure to make sound decisions can contribute to academic success and retention of college students (Almlund et al., 2011; Borghans et al.,

2008; Bowman et al., 2019; Farrington et al., 2012; Hurford et al., 2017; Jackson et al., 2015; Moffitt et al., 2011, Naemi et al., 2012; Yeager & Walton, 2011).

Besides, a combination of an internal locus of control that consists of the ability, motivation, and perseverance (grit or drive to achieve long-term goals)(Alarcon & Edwards, 2013; Bowman et al., 2019; Farrington et al., 2012; Saunders-Scott et al., 2018) and an external locus of control, such as environmental stressors (increase in work demand, interacting with new social networks, living in a new location, and financial impact) motivates students to succeed in college (Alarcon & Edwards, 2013). These factors, as well as others, have been evaluated throughout research to determine what helps students remain in college and complete their degree.

External influences are also predictors of retention including support systems, university programs, and community resources available to each student (McCulloh, 2020). Baker and Robnett (2012) discussed factors that benefited racial and ethnic minority students including an incorporation into the college environment consisting of the development of on-campus social support and off-campus ties. Additionally, faculty supports, campus social groups, and other campus resources can help to provide support for a student to remain in school (Fischer, 2007). Moreover, urban areas have more resources and support services available than for students attending college in a rural area with fewer accessible services (McCulloh, 2020; Ratcliff et al., 2016). Thus, students with less services and limited support systems may experience different challenges that shapes their motivation to continue attending school.

The Experience of Rural College Students

According to the United States Census Bureau, the term rural is considered any town or countryside not located near an urban area (Ratcliff et al., 2016). College student enrollment rates vary between rural and non-rural students aged 18-24, 29% and 42%, respectively (NCES< 2015). Moreover, students from rural backgrounds also tend to enroll and complete college at lower rates than non-rural peers (Crain & Newlin, 2021). These students often struggle with access to finances, ability to navigate the college environment, and experience as first generation student. Consequently, the lack of college education

shakes opportunities for desired employment, a higher socioeconomic status, and financial stability (Thering, 2012).

Students, who attend rural area universities, frequently come from lower socioeconomic backgrounds, experience difficulty transitioning from high school to college, lack support systems, and have limited resources available in the area. Students who struggle with aforementioned factors eventually drop out of school, leaving them with large debt and no degree (Ratcliff et al., 2016). Likewise, some students in rural universities are first-generation students who qualify as low-income and are less prepared to attend school (Hurford et al., 2017). These students are considered at-risk for leaving the university because of the lack of resources in rural areas and having previous parents who did not attend college (Byun et al., 2012). Moreover, rural students deal with family conflicts, lack of proper preparation, limited financial resources, and personal commitments (McCulloh, 2020).

Since rural college students navigate diverse retention challenges including lack of social and cultural capital, inadequate support, and personal commitments (Wilson & Kittleson, 2013; Goldman, 2019) universities must consider factors that can affect their overall performance and retention and identify ways to address any potential concerns. In this research, the impact of non-cognitive categories, such as academic locus of control, vocational identity, and social support potential impact on student retention in a rural university will be evaluated. Specifically, this research explores the correlation of a latent relationship between student alienation, vocational identity, locus of control, and social support at university as well as the influence of student alienation and social support on the anticipated retention of students at a rural university.

Material and Methods

Sample Characteristics

Participants for this study were students enrolled in a Southeastern rural university in the United States. In this study, 181 students completed the survey. The majority of the respondents self-identified as Caucasian/White (122 or 67.8%), 31 students identified as Black or African American (17.2%), 21 as Hispanic or Latin@ (11.7%), four students as Asian (2.2%) and two students as Native American or Pacific Islander (1.1%). Most of the

respondents identified as female (170 or 94.4%) with only ten participants identifying as males. The age range among participants was 18 to 21 with a mean of 23.17 with 82.5% of respondents being 24 or younger. All responders majored in a Human and Health Sciences related field (i.e., Communication Sciences, Nutrition, and Rehabilitation Services) with 55.6% Seniors, 40.5% Juniors, 2.8% Sophomore, and 1.1% in their first year in college.

Instruments

Student retention was measured with a question to determine whether students were planning to come back to the same school the following semester. Any student, who graduated the following semester or intended to continue their graduate education at the same school, were considered as returning students in this study. Students chose a yes or no to express their desire to continue at their current institution at the time of survey completion.

The Berlin Social Support Scales (BSSS; Schwarzer & Schulz, 2013) was used to measure the cognitive and behavioral aspects of social support involved in retention of students. Seventeen items from the BSSS scale were used for the subscales of Perceived Emotional Support, Perceived Instrumental Support, Need for Support, and Support Seeking. BSSS uses a four-point Likert-type scale, ranging from 1 = *Strongly Disagree* to 4 = *Strongly Agree*. Items were modified to emphasize a college environment. Example statements include: "When everything becomes too much for me to handle, others are there to help me at this university" and "Before making any important decisions, I absolutely need a second opinion." The internal consistency Cronbach's α for the BSSS was computed at .91.

Social support at university scale (SSU; Hughes, 2007) measured the qualitative aspects of social support in college experience. Participants rated their response to a brief five items scale using a 7-point: "I am getting on well with my fellow students", "There is a pleasant atmosphere at university", and "There is group cohesion at university." The internal consistency Cronbach's α for the scale was computed at .70.

Student Alienation (Johnson & Johnson, 1983) measured students' experience of being isolated in college. The 7-point Likert scale ranging from 1 (not at all) to 7 absolutely is a subscale of the Classroom Life Instrument (Johnson & Johnson, 1983) adapted for a

college sample. Statements included “I should get along with others better than I do”, “I get discouraged in school”, and “I feel upset at school. The internal consistency Cronbach’s Alpha for the scale was .85.

Vocational Identity Measure (VMI; Gupta et al., 2015) was used to measure how aware individuals are of their stable career goals. The 5-point Likert scale range from strongly agree to strongly disagree. Statements included “I know what occupational path I want to pursue when I get out of school” and “I have a clear sense of my occupational interests.” For this scale, the internal consistency of Cronbach’s Alpha was .87.

Academic Locus of Control- Revised (Curtis & Trice, 2013) was developed to assess locus of control in academic context. This 21-item scale uses a true-false format with items including “I would like to graduate from college, but there are more important things in my life” and “I can be easily talked out of studying.” The Cronbach’s Alpha internal consistency reliability coefficient was .79 for this scale.

Procedure

Since student retention is crucial for a successful degree completion in college, the purpose of this study was to evaluate factors that could potentially affect retention among college students in a rural university. Proper approval from the Institutional Review Board (IRB) was obtained prior to recruiting undergraduate students for this study. Students in multiple programs housed in the human services department were invited via email to complete an online survey with instrument items and demographic questions. Before proceeding with the survey, students had to review and agree to an informed consent. Participants were informed about the purpose of the study and their option to withdraw from the survey at any time. Additionally, students were informed that no personal information would be released and responses would be kept completely confidential.

Data Analysis

For this study, factors potentially affecting students’ retention at a rural university were analyzed with SPSS. Specifically, the impact of student alienation, vocational identity, locus of control and university social support were evaluated. An alpha level of .05 was used for all significance tests in this study. First, Spearman correlation analysis (Cohen et al., 2003) was performed between student alienation, vocational identity, locus of control

and university social support. Data was analyzed to verify normal distribution with acceptable skewness and kurtosis values for most of the variables according to a recommended cut-off value of twice the standard error. In order to answer the first question, only data from students who planned to stay or graduated from their current school was utilized. Second, a binary logistic regression analysis (Cohen et al., 2003) was conducted to explore the predictive relationship between independent variables (social support and student alienation) and the binary criterion variable, student retention. The four BSSS subscales were included in this analysis to evaluate different parts of social support at university. Statistics of leverage, Cook's distance, and DfBeta (Cohen, et al., 2003) were computed to identify potential outliers with high influences on model estimation. In addition, chi-square likelihood ratio test tested for the parallelism assumption in ordinal logistic regression (Ari, 2014). R², defined by Cox and Snell (1989), measured the success of the model in explaining the variations in the data (Peng et al., 2002). For the second question, data from all students was used in statistical analysis.

Results

This study aimed to assess factors that could affect students' retention at a rural university. The majority of students (92.78%) expressed a desire to continue or graduate from their current university. While the majority of students planned to continue at their current university, some students indicated a desire to transfer to another school or drop out of college. Students explained that being away from home, distance to home, negative college experiences, and personal passions were valid reasons to leave this university. Additionally, one student expressed a desire to pursue musical endeavors while another one described preferential treatment towards other students led to feelings of disgruntlement and alienation.

A Pearson's product-moment correlation (Table 1) was run to assess the relationship between student alienation, vocational identity, locus of control, and university social support among students who expressed plans to continue at their current school. There was a statistically significant, moderate negative correlation between student alienation and locus of control and a small negative correlation between vocational identity and student alienation. Vocational identity showed medium positive correlation with

university social support while a moderate negative correlation with locus of control. University social support correlated positively only with vocational identity.

Table 1. *Correlations between non-cognitive variables*

	1	2	3
1.Student Alienation			
2. Vocational Identity	-.176*		
3. Locus of Control	-.457**	-.336**	
4. Social Support	.022	.299**	-.066

* $p < .05$, ** $p < .01$

A binary logistic regression model was applied to answer the research question regarding the relationship between students' social support, alienation, and retention. The Scatterplots of leverage indicated that no case sharply distinguished from other cases. Based on Cook's distance statistics normal range of 1 (Jayakumar & Sulthan, 2015), no case with unusually high influence on the overall regression equation. DfBeta statistics were all within the normal range of ± 1 and indicated that the regression coefficient estimation was not skewed by any individual case.

Results of the binary logistic regression indicated that there was a significant association ($\chi^2(3) = 22.91$, $p < .005$). The model explained 36.5% (Nagelkerke R^2) of the variance of student anticipated retention and correctly classified 81.0% of cases. Of the six predictor variables only three were statistically significant: Social Support, Need for Support, and Support Seeking. Increasing social support and a need for support was associated with an increased likelihood of student retention.

Considerations for Rural Students' College Success

This study aimed to enhance the understanding of college retention among rural students. In this study, rural students were motivated to finish their undergraduate degree with some reporting interest in perusing graduate education. Additionally, this study suggested a potential impact of non-cognitive factors in the retention of rural college students. Therefore, rural students can obtain their undergraduate degree, with aspiration for graduate education, with adequate university support and motivation.

This study highlights the need for students to make meaningful connections and to have social support in college. The findings suggested a negative correlation between social alienation and locus of control that shapes students' perception of their ability to control their college environment. Negative interactions can lead to students wondering if they belong and should continue in college (Grau & Swain, 2020). Students' inability to connect in positive ways with others can have a major impact on retention and college student success.

Interactions with peers, faculty and staff need to be positive for students to feel a sense of belonging, which can increase the likelihood of positive outcomes in college. In fact, the lack of feeling like one belongs leads to marginality, which can contribute to feelings of depression, isolation, and ultimately impact success in college (Patton, 2016). This also underscores the need for students to get involved in organizations, residence hall events, and connect with others on campus since these connections can foster a sense of belonging and reduce feelings of isolation. Having social networks can help students improve their understanding of the university environment and resources (Israel, Koester & McKay, 2020).

Vocational Identity Supports

Similarly, college students continue shaping their vocational identity in their university experience. Vocational identity refers to understanding one's pattern of career goals, strengths, and potential shaping career related decisions (Holland et al., 1980). In this study, vocational identity was correlated with social alienation, university social support, and locus of control. Rural college students can enhance their vocational identity by connecting with other students, vocational services on campus, advisors, and organization. Vocational identity development can be supported by providing career exploratory and self-awareness activities. Students can benefit from learning how to effectively manage emotional capacities in their future careers (Castillo et al., 2019; Castillo & Fischer, 2017) as well as increasing their sense of control over their education. Moreover, rural students can boost their knowledge about self (personal interests, preferences, and values) as well as career related opportunities (career options, capacity building opportunities and occupations; Porfeli & Lee, 2012) to improve their vocational identity.

Rural students can also develop their vocational identity by decreasing their feelings of isolation and connecting with university supports. Colleges and universities can ensure programs, organizations, and in-class experiences foster a nurturing and safe environment to help students connect with peers, faculty, and staff in positive ways that enhance their educational success. Creating a supportive environment can go a long way in student retention efforts. Billett (2014) argued that students' perspectives on their vocational identity formation is often ignored leading to a need to listen to their voices. When serving rural students, who face multiple challenges, higher institutions should identify, assess, and meet their educational needs to foster a positive college experience leading to successful degree completion.

Engagement Opportunities for Students

Gosnell (2020) called attention to the benefits of being able to share positive events with other students, such as grades, to deepen connections, build support, and create a positive environment. Therefore, activities in classes, small groups in residence halls and engagement opportunities in university organizations can provide spaces to share positive accomplishments and opportunities to create a sense of connection to others and university. College professors can assign students group work, as part of course requirements, to create occasions for students to connect with each other while working on academic work. Chen (2020) found that students who were assigned to work in civil engagement activities improved their connections with each other. Community based learning opportunities lead to exposure in the community about various potential careers providing students with the chance to learn and grow with each other while developing a professional network. Community based opportunities can also create connections, build support networks, develop professional skills, and serve the students' communities.

Furthermore, faculty members can provide mentorship to students and aid their professional and personal growth and development. The primary focus of mentorship with freshman and transfer students is often to improve retention rates and to help with recruitment of students (Birkeland et al., 2019). New rural students often struggle with adjusting to college and may benefit from having a faculty or staff member as a mentor to offer additional support as students navigate the college environment. The use of

mentorship is not confined to just faculty or staff mentors and other students may mentor students. Universities can also implement peer-to-peer mentoring opportunities to increase rural student engagement and connection among students.

Organizations provide the perfect opportunity for students to connect with peers and to be mentored by peers. While some rural students may have limited time and financial resources, there are varieties of organizations that do not require members to pay dues or engage in activities that take up excessive time. Most peer mentors enjoy having the opportunity to give back, share their expertise and help another student (Beltman et al., 2019). Organizations and programs need to cautiously choose and support mentors so they can foster the growth of mentees.

Beyond mentorship, organizations provide numerous activities for members to connect and form friendships. Taking an active part in campus organizations has been shown to help increase social connections and improve academic performance for college students (Malette & Ismailzai, 2020). This in turn increases the likelihood that students will continue in college and graduate. Thus, new student orientation programs need to provide rural students with information regarding the various types of campus organizations and help students find one that fits for them. Students should be encouraged by faculty, staff, and peers to engage in positive organizational experiences.

The importance of involvement in campus organizations with providing social support cannot be overlooked. Involvement in organizations helps student make friends and find other students who can offer emotional support and help to solve personal problems (Malette & Ismailzai, 2020). Consequently, many benefits can occur when students are able to connect with each other, provide social support and receive faculty and college staff support. Having support is a critical factor in the retention of college students. Therefore, academic staff, administrators, and faculty working with rural students can identify mechanisms to support motivation, vocational development, and university connections.

Limitations and Future Considerations

This study found social support to be an important and significant factor in the retention of college students from rural areas. A large number of participants indicated the

need for connection and social support, this is indeed a consideration that colleges and universities should consider. Another strength was the fact that the study included students from diverse backgrounds demonstrating that the need for social support and meaningful connections is beneficial for rural students. The students were all from the same university, which enhanced internal validity; however, it limits the generalizability of the results. There were a few other limitations as well. There were few male participants and previous research by Enochs and Roland (2006) highlighted that females need connections more than males to succeed in college. The results might have been different if there were an equal number of participants based upon gender and gender expression. In addition, it could be helpful to compare participants in a larger sample based on different diversity factors. Accordingly, there are several recommendations for future studies.

Recommendations for future studies include having a greater age range and comparing groups based upon age, gender, socioeconomic status, and racial/ethnic background. Additionally, it would be beneficial to see if similar results would be found at different types of universities and universities in different geographic regions. This study was conducted at a regional comprehensive university. The results might be different at a larger research university or a small community college. It could be valuable to identify specific activities that can foster connection for rural students. Finding a place where one fits in seems to be a factor as demonstrated by this study and previous studies in college student retention and success.

Human connection is critical for rural college students' success. There might be differences in the effectiveness of programs based on the type of university along with the unique aspects of the study body. Higher education institutions must consider factors affecting students' performance, retention, and degree completion. From these findings, non-cognitive factors and university support can shape rural students' success in college. Colleges and universities need to consider which programs work well and which ones need to be adapted to meet the needs of current and future students.

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