

Executive Summary: 5 Types of Non-retained Students: A Cluster Analytic Examination of the First-Time Full-Time Non-Retained from the last 3 Years.

Institutional Effectiveness and Accreditation

January 2019

Journey through Prototypes



Executive Summary:

An examination of the First-Time, Full-time non-retained from the previous 3 years (n=943) was examined to suggest core subtypes of non-retained students. The purpose was to identify common concerns for each sub-group to assist in focusing intervention efforts. This approach is different from the more common attempts to differentiate this group from the retained. A review of the literature suggests that many of the key variables needed to most effectively discriminate these two groups are not regularly collected by universities. A five Cluster model accounted for more of the total variance (explanatory power) and appeared to be easily interpretable. ***The rerecommended intervention strategies for all 5 clusters suggested a proactive approach was likely to be most effective. However, the focus of these interventions' strategies would likely need to be tailored to some degree to the specific concerns of each cluster. The general strategy, and goal, for these intervention refinements is provided in the cluster narrative.***

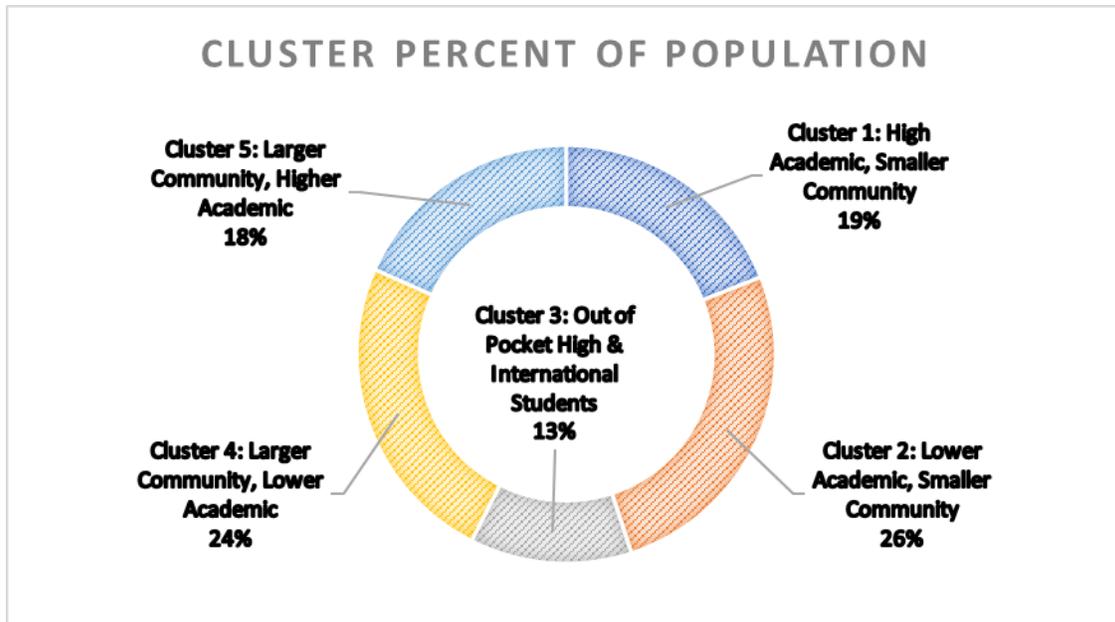
Development

This cluster analytic examination suggested there are 5 subtypes best represented the subgroups of FTFT non-retained students. These data account for just under 50% of the total variance (~45%), which is substantial. However, this data suggests that 50% to 55% of the variance remain unaccounted for by the model. *A review of the literature suggests that a large portion of the unaccounted-for variance probably resides in student non-cognitive areas and how they fit with, and are related to, the university processes and/or the wider community* (Bean & Eaton, 2001; Collier & Morgan, 2007; Demetriou & Schmitz-Sciborski, 2012; Luke, 2009; Richardson, Abraham & Bond, 2012; Rodgers & Summers, 2008).

Variable importance was assessed using R-square. The higher the *R-square* value the more important. This indicated that there were 4 key markers within these data: Class/Community Size ($R^2= 0.65$), High School GPA ($R^2= 0.52$), Out of Pocket Costs ($R^2= 0.46$) and U of I Cum GPA at UI ($R^2= 0.44$). The next largest set of *R-square* values were 0.09 or lower.

The most recent 3 years of non-retained are effectively groups into 5 Clusters. The summary label which was applied to these groups is provided below. There is a graphic of these which follows.

- **Cluster 1: High Academic, Smaller Community -** 19% of the population
- **Cluster 2: Lower Academic, Smaller Community -** 26% of the population
- **Cluster 3: Out of Pocket High & International Students -** 13% of the population
- **Cluster 4: Larger Community, Lower Academic -** 24% of the population
- **Cluster 5: Larger Community, Higher Academic -** 18% of the population



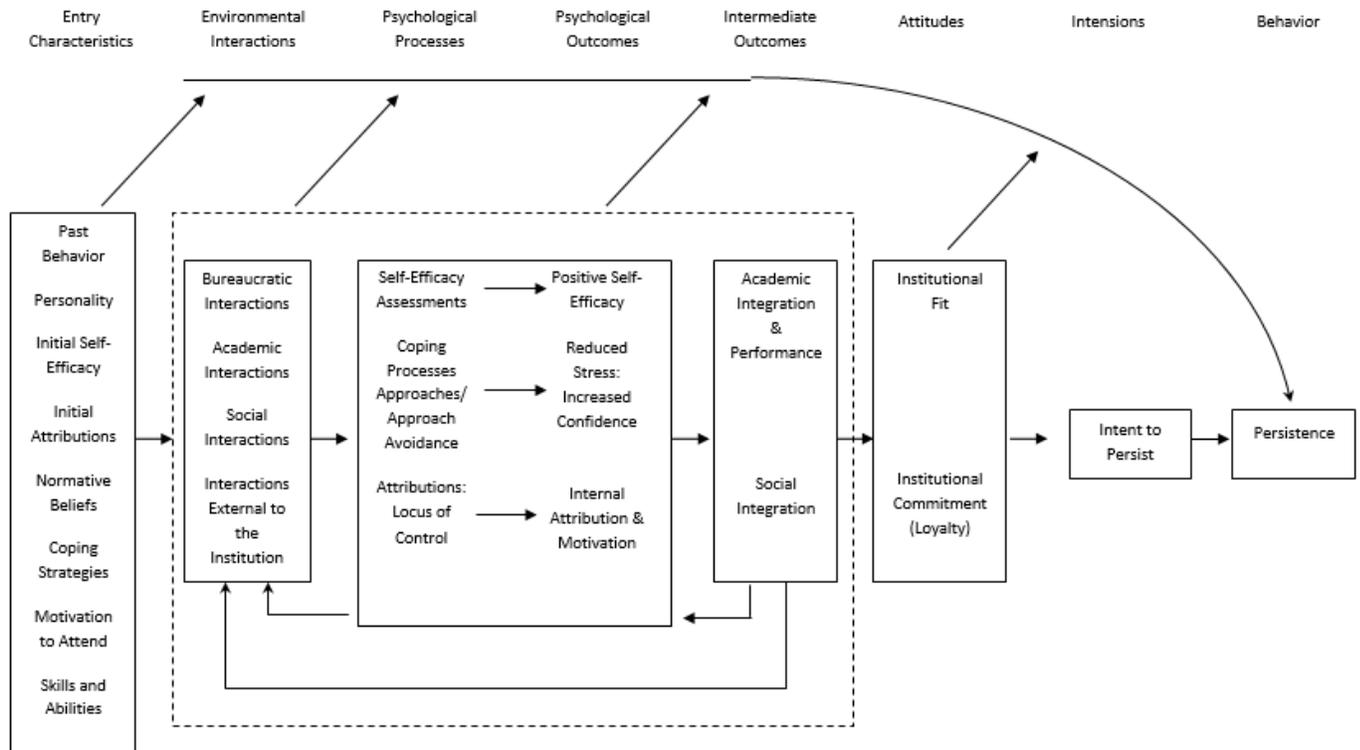
Possible Implications and Actions:

Examination/Interpretative Framework:

Non-retained are unlikely to be a single homogeneous group. However, the resources available to focus on each student individually can be somewhat prohibitive. The key utility of clustering is to develop a clearer data-based understanding of possible common issues (subgroups), and then look at how to best address their common issues. This should allow the key elements that impact/appear for the various subgroups of non-retained students to be addressed more globally. This is more likely to provide a framework to assist in targeting interventions to common needs thereby providing greater ROI for intervention efforts. Bean and Eaton’s retention model (2001; Rogers & Summer, 2008) conceptualizes how core student characteristics and core school characteristics interact with one another along key domains. The model contends that the type and degree of student need/attribute is overlaid on school characteristics and that student decides if there is satisfactory fit and support for them within a university/community. This determination is central to their retention decision, and the subsequent actions they take (stay or go). The interaction/fit of student within school/community is the focus of examination.

The Bean and Eaton Model (modified by Rodgers and Summer) is presented below. Across the top of the chart below we see student characteristics at entry begin to interact with the university system. The key student characterizes meet university bureaucracy, academic experiences (classroom and other), social interactions and interactions with the community outside the institution. The student processes these interactions through the key psychological processes of self-efficacy, coping strategies and locus of control. This processing results in a set of beliefs about self, the school and his/her fit (sense of engagement and community) which the student’s uses to decide how to proceed (intention to stay or leave). The student then acts based on this intention (Behavior: stay or go). Using this model as a lens

we can examine what areas to focus on to assist the student, or in absence of information focus attention to better understand the issues.



Application of Framework to Clusters:

Cluster 1 is primarily made up of those that show higher academic performance and come from smaller communities. This group also tends to have less out of pocket costs. As they came from smaller communities where they were high performers, they are likely to have a stronger sense of academic self-efficacy. They typically see themselves as able to thrive in an academic world but are more likely to view the U of I as a “big” school. When they view their educational horizon, they see a range of opportunities (including alternate school options). This group likely bases their decision about staying or going on how they perceive they fit socially within the university/community. The key for them is if they feel a sense of connection, belonging, and see the university system as approachable. Their assessment of university approachableness and academic opportunities (i.e., do we have desired majors, ability to navigate the system, etc.) form the basis of their intent to stay or go on. If there are struggles for them in dealing with the system, they are likely to view it as the university’s fault. When it is “convenient” they then enact their intention. They do not see a need for assistance. Research suggests there is a substantial percentage of these people that tend to be more introverted. They do not seek out engagement activities but anticipate these will simply emerge while they are on campus. For such students a proactive system to assist with social integration, both within the university and community, coupled with advising focused on identifying their U of I opportunities (i.e., majors and careers of interests, etc.) is likely to be most beneficial. This group generally believes they can succeed, they just need to know why U of I is where they should put the effort to do so.

Cluster 2 is made up largely of the lower academic performers that come from smaller schools. This group also tends to have less out of pocket costs. They are likely to have a lower sense of academic self-efficacy. They are likely to perceive the U of I as a “larger” school. They tend to doubt their academic ability and chance of academic success. They were able to “get by” in high school but are likely to find that U of I to be a more competitive academic environment. This group decides about staying or going based on how they view their likelihood of academic success coupled with their perception of social fit within the university/community. The key interventions for them are likely to those focused on helping them overcome their academic weakness and sense of “can’t do it.” Additionally, helping them find a sense of connection to U of I is important. They want to know we care and will help them out. As they feel less adequate in an educational environment, especially a larger one, they are not likely to seek out help. They tend to give up and leave, not wanting to call attention to their perceived inadequacies. A more proactive advising and intervention process is likely to be necessary. Helping them develop a sense that they can succeed through increased effort and persistence is important. In doing so helping them connect to U of I and perceive the university as caring about them is also important. The final determination may come down to their ability to find a single person of import to them at the university.

Cluster 3 appears to be largely the group of those that have high out of pocket expenses and includes a disproportionate number of the international students. The core issue of this this group is likely to be financial. They are not likely to qualify for a lot of aid, and do not see that they have the financial means to continue. They do not generally have the academic skills issues and fall in the average to slightly above range academically. Interventions focused on how to locate financial support are likely most beneficial.

While finances appear central, I would anticipate the International student population has additional concerns. I suspect this group may be more impacted by wider social issues based on policies of their home country, coupled with political issues within the USA. The literature is less clear about their unique concerns. This would be a group for which those with more expertise will probably be better able to provide guidance on how to intervene.

Cluster 4 is made up of lower academic performing students from larger communities. They do not view U of I as a large school but may have concerns about living in a smaller community. They may miss community options. They were able to “get by” in high school, and the more challenging U of I academic environment is likely to trigger insecurities about their academic ability (lower academic self-efficacy). As they come from a larger community and school system, they are also likely to have been more accustomed to being able to blend in when academic stress was encountered in high school. At U of I they are they are likely to seek out safer environments when academically challenged (i.e., withdraw from academic interactions). As they do not believe they can succeed academically they seek out ways to find success which are generally non-academic in focus. The key for intervening with them is helping them experience academic success and developing their belief that persistence and the additional effort will allow them to succeed. As they do not feel they are able to thrive in the academic environment and it is due to their “ability” (though they may blame others) they are likely to decide on staying or going based on university social fit (unless they are asked to leave for academic reasons). In making this determination they are likely to compare the ability to blend in back home against with the university environment. If they decide to go it is due to academic underperformance, or their perception that they are better able to blend in back home (or in another environment). As the weakness is perceived to be

within them, they are not going to seek out assistance as they do not believe it will help. An active approach to intervention is recommended.

Cluster 5 appears to be mostly those who are academically successful and who come from larger communities. Many of the interventions and issues suggested in cluster 1 apply to cluster 5. This group does tend to be more female. They tend to have less out of pocket costs. They likely do not view U of I as a large school but may have concerns about living in a smaller community. They may miss community options. They are likely to have a solid sense of academic self-efficacy. When they look at their scholastic horizon, they see options (i.e., other school options, etc.). Research suggests that there is likely a larger percentage of these students who are somewhat introverted. If they do not feel a connection to U of I or find issues with the U of I “system” they will view it as a U of I problem. As they have options and they do not see things as “their problem” they are not likely to seek out assistance beyond “first contact.” If the first contact is not viewed positively, they are likely to see the system as uncaring. They will make their decision to stay or go based more on their sense of connection and their perception of if any stress with the system is worth it relative to other options. A proactive intervention process focused on helping find reason to stay at U of I and develop a stronger sense of community at U of I is recommended.

References

- Bean, J. & Eaton, S. (2001). The psychology underlying successful retention practices. *Journal of College Student Retention*, 3(1) 73-89.
- Collier, P & Morgan, D. (2007). “Is that paper really due today?”: Differences in first-generation and traditional college students understanding of faculty expectations. *Higher Education*. DOI:10.1007/s10724-007-9065-5.
- Demetriou, C. & Schmitz-Sciborski, A. (2012). Integration, motivation, strengths and optimism: retention theories past, present and future. In R. Hays (Ed.) *Proceedings of the 7th National Symposium on Student Retention, 2011, Charleston* (pp. 300-312). Norman, OK University of Oklahoma.
- Luke, C. (2009), "An Examination of Psychological Factors That Predict College Student Success and Retention." PhD diss., University of Tennessee. https://trace.tennessee.edu/utk_graddiss/71.
- Richardson, M., Abraham, C. & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138(2), 353-387. DOI: 10.1037/a0026838.
- Rodgers, K. & summers, J. (2008). African American Students at predominately white institutions: A motivational and self-systems approach to understanding retention. *Educ Psychol rev*, 20, 171-190. DOI 10.1007/s10648-008-9072-9.