

An Analysis of Retention & First Generation Students

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Executive Summary

This research brief focuses on two student populations: Non-Retained Students (NRS) and First Generation (FG) students. The data used comes from two sources: the Association of Independent Colleges and Universities of Pennsylvania (AICUP) First Year Student Survey (FYSS) and Holy Family University's (HFU) Registrar's Office. There was a 40% response rate after 124 HFU students identified as first year students completed the FYSS during the spring semester of 2011. Logistic Regression and Chi Square analyses are used to determine any relationships and/or differences within the two groups of students: NRS versus Retained Students (RS) and FG versus Non-First Generation (NFG).

FG students are defined as students who responded "Yes" to the question "Are you the first one in your family to attend a college or university?" and were identified for exploration because 35.8% of FYSS respondents were FG students. NRS are defined as students that completed the survey as first year students in the Spring of 2011 that were no longer enrolled at HFU in the Fall of 2012 (two-year retention) and were identified for exploration because 7.5% of FYSS respondents indicated that they were not returning or were uncertain in their intent to return to HFU the following fall. Often, the focus of student retention is from the first to second year without considering longer term retention into the third and fourth year. Based on FYSS responses, the impact of the first year experiences/perceptions on retention two years later is investigated which may or may not aid in identifying retention-risk students early in their undergraduate experiences.

One underlying theme from the findings was identified: FG students and NRS likely have trouble with time management skills. Several measures led to this conclusion: 69.4% of FG students and 82.6% of NRS reported having trouble adjusting to their increased time demands, 55.3% of FG students often felt overwhelmed, 42.1% FG students rarely felt in control, and 37.5% of NRS often felt unable to manage their time. Some direct impacts of these indicators of a lack of time management skills were high percentages of FG and NR students who felt like they were going to fail one or more course in their first year (57.9% and 73.9%, respectively) and rarely felt Happy (23.7% and 41.7%, respectively). As a result, it is recommended that HFU introduce effective time management programs to first year students. Currently there are no formal time management programs in place for first year students through New Student Orientation or the First Year Experience courses.

Specific to NRS, the Comfort factor was identified via high percentages of NRS who rarely felt happy (41.7%) or like they belonged (54.2%). From this, it is recommended that the University work to identify these students in order to understand why they are not happy and feel like they do not belong early enough to change those feelings.

Introduction

The Association of Independent Colleges and Universities of Pennsylvania (AICUP), conducts the First Year Student Survey (FYSS) bi-annually. The FYSS is typically administered during the spring semester across private colleges and universities in Pennsylvania. Participation in the survey is entirely voluntary for the institution and students. 124 Holy Family University (HFU) first year students completed the FYSS during the spring semester of the 2010-11 academic year giving an approximate response rate of 40%. The survey results received by the Office of Institutional Research and Assessment (OIRA) sparked the questions of this research brief.

FYSS respondents were asked if they planned to return to their institution the following fall. HFU came in second out of the comparison groups with 92.5% responding “Definitely Yes” or “Probably Yes”. Responses were generally positive across all institutions, with a majority of students in agreement that they would be returning to their respective institutions in the fall. However, 7.5% of HFU respondents answered this question with “Totally Undecided”, “Probably Not”, or “Definitely Not”. Because some first year students expressed uncertainty in their intent to return to HFU the following fall, part of this research brief focuses on responses from students who did not return as of Fall 2012 (Non-Retained Students). For instance, do NRS struggle making decent grades, are they First Generation students, do they report difficulty in the transition from high school, etc.? If commonalities are discovered among NRS, what are they and to what extent can HFU intervene to keep as many students enrolled as possible through graduation?

Of the FYSS respondents, 35.8% reported being a First Generation (FG) student (i.e., the first in their family, out of parents and siblings, to attend college). The percentage of FG students at HFU is a range of 15% - 20% higher than the comparable institutions that participated in the spring 2011 FYSS administration. Because there is a large population of FG students attending HFU, we were interested to see if our FG students responded to the FYSS similar to our NRS students and if our FG students are more likely to become NRS. In other words, we are interested to see if there are any identifiable trends uncovered in our NRS population that also appear in our FG students.

Both aspects of this research brief should be viewed as exploratory in nature. Each aspect will provide useful insight and knowledge into two intriguing student populations; Non-Retained Students and First Generation students. The aspects explored here are those of student perceptions, performances, and activities, not of demographics or other background information. For instance: How do these students respond to questions regarding their transition from High School, how they spent their time, the feelings experienced, first semester grades, etc. The more we can learn about these two groups of students now, the more HFU can work toward ensuring their successes early in their experiences and keep them coming back until graduation.

Methodology

The FYSS was administered for completion via the web through an initial request sent from the OIRA and multiple follow-ups requesting participation. This project received an expedited review by the chair of HFU's Institutional Review Board (IRB) given the nature of the assessment project. We received 124 completed surveys from HFU's first year students. The FYSS consists of 8 sections (self assessment, academic advising effectiveness, transition from high school, use of time, preparation for first year classes, skills assessment, overall impressions, and background information) and 25 "local questions". Most of the response options in the FYSS are presented as a scale or multiple choice. The survey totals 62 questions and includes space for free comments to be left by the respondent.

Both portions of this investigation (Retention and First Generation) utilize four groups of measures from the FYSS: Transition from High School (4 possible changes), First Year Feelings (9 feelings), Use of Time (15 activities), and Miscellaneous (3 individual questions: "Do you intend to return next fall", "Did you feel like you were going to fail one or more courses in your first year", and "What was your first semester grade"). Due to the planned analyses for this research, a majority of the variables are re-coded in order to reduce the response options to 2 or 3 choices. For example, one set of questions used a response scale of: Never, Occasionally, Frequently, and All the Time and the responses were reduced to two options: Rarely (Never & Occasionally) and Often (Frequently & All the Time).

Two types of analyses are conducted on the sample data: Logistic Regression and Chi Square. Each analysis is conducted through the lens of each student type: Retained verses Non-Retained and First Generation verses Non-First Generation student comparisons. The Logistic Regression test is used to see if there are any variables that predict either type of student. For example, are those who report more difficulty transitioning from high school, more time studying, and less time partying more likely to be NRS and/or FG students? The Chi Square test is used to determine what, if any, variables are significantly associated with either type of student.

Internal retention data from the HFU Registrar's Office was aligned with the FYSS data to determine, per respondent, if the student is still enrolled at HFU. Since the FYSS survey was administered in the Spring of 2011 (2010-11 academic year), the retention data is based on whether or not the respondents are enrolled at HFU as of this Fall (2012) for the academic year 2012-13 which should be their Junior year. This data does not tell us at what point in time the students did not return to HFU (i.e., Fall 2011, Spring 2012, or Fall 2012), but is the most up to date retention data available. Two-year retention data was also used because only 11 survey respondents did not return for their sophomore year. Since it was a small number of students that did not return their Sophomore year, we decided to use the total number of students that did not return for their Junior year as our Non-Retained sample (n = 21).

Findings

Before going into the specific findings based on student type, Table 1 highlights one important finding: There is not a relationship, or a significant difference, between being a First Generation student and becoming a Non-Retained Student.

Table 1. First Generation by Retention

Are you the first in your family to attend college?	Non-Retained	Retained	Total
Non-First Generation	19.1% (n = 13)	80.9% (n = 55)	100% (n = 68)
First Generation	21.1% (n = 8)	78.9% (n = 30)	100% (n = 38)
Total	19.8% (n = 21)	80.2% (n = 85)	100% (n = 106)

$p \geq .05$

Retained Students (RS) versus Non-Retained Students (NRS)

No significant findings (i.e., predictive variables for retention) resulted from the Logistic Regression tests conducted. Meaning there were no variables out of the 4 groups of measures that could predict a NRS student. However, a few significant results did emerge from the Chi Square analyses conducted. Five significant findings and three that approached significance are discussed below.

Two of the four possible changes from the Transition from High School measures approached significance: Increased Demands on Time and Increased Academic Freedom. Table 2 presents these results. In both instances, NRS reported having trouble more than RS with the transition from High School. For Increased Demands on Time, more NRS (82.6%) reported having trouble than RS (63.4%), $\chi^2 = 3.08$, $p = .079$. For Increased Academic Freedom, more NRS reported having trouble (60.9%) than RS (38.9%), $\chi^2 = 3.63$, $p = .057$.

Table 3 presents three of the nine First Year Feelings that were significant (or approaching): Happy, Belong (e.g., feel like I belong), and Unable (to manage time well). The positive feelings, Happy and Belong, yielded significant results with more NRS reporting Rarely compared to RS. For Happy, 41.7% of NRS while only 20.8% of RS reported rarely feeling happy, $\chi^2 = 4.44$, $p = .035$. For Belong, 54.2% of NRS and 32.7% of RS reported rarely feeling like they belong, $\chi^2 = 3.83$, $p = .050$. Unable (to manage time well) approached significance with more NRS (37.5%) reporting Often feeling Unable to manage their time well compared to RS

(20.4%), $\chi^2 = 3.11$, $p = .078$. Please note that only the percentages and the n for Rarely responses are presented in the table below.

Table 2. Transition from High School by Retention

Transition Item	Response	Non-Retained	Retained	Percentage Difference
Increased Time Demands	Had Trouble	82.6% (n = 19)	63.4% (n = 59)	19.2%
Increased Academic Freedom	Had Trouble	60.9% (n = 14)	38.9% (n = 14)	22%

$p \geq .05$

Table 3. First Year Feelings by Retention

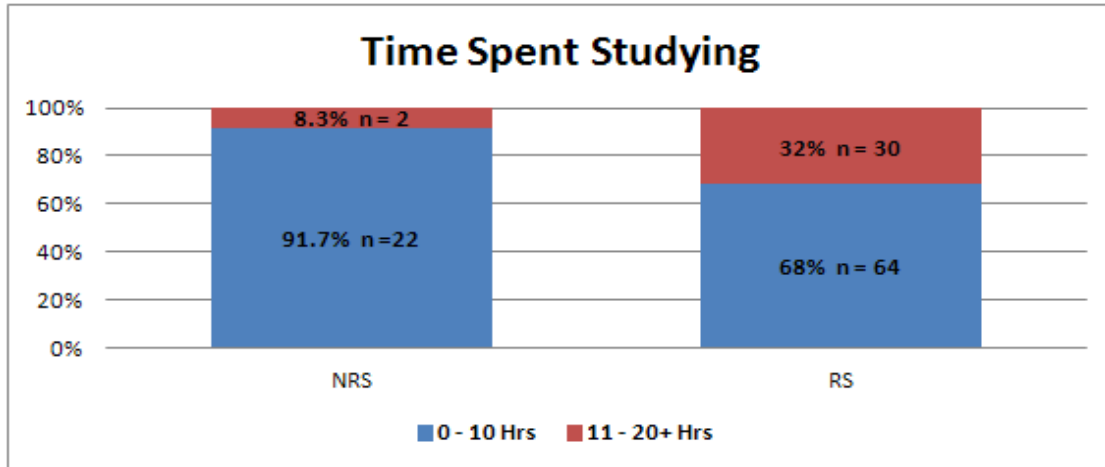
Feeling	Response	Non-Retained	Retained	Percentage Difference
Happy*	Rarely	41.7% (n = 10)	20.8% (n = 20)	20.9%
Belong*	Rarely	54.2% (n = 13)	32.7% (n = 32)	21.5%
Unable	Rarely	62.5% (n = 15)	79.6% (n = 78)	17.1%

*Significant at $p \leq .05$

Figure 1 depicts the only significant Use of Time activity: Time spent studying. More NRS (91.7%) reported spending 0 – 10 hours studying during a typical week than RS (68.1%), $\chi^2 = 5.38$, $p = .020$.

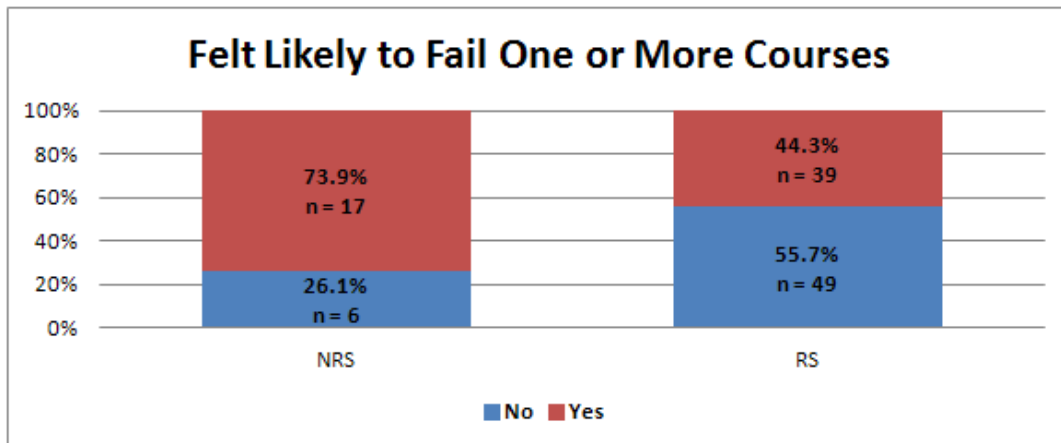
Two of the Miscellaneous measures yielded significant results: Felt likely to fail one or more courses and Intent to Return. Figure 2 illustrates the significant finding that more NRS (73.9%) felt likely to fail one or more courses than RS (44.3%), $\chi^2 = 6.39$, $p = .011$. Table 4 illustrates responses to the question: “Do you intend to return to this institution in the fall?” and whether or not the student was retained after two years. This is a significant result, $\chi^2 = 23.34$, $p = .000$, however, we are unable to say with accuracy where the significant differences are because there are several response options. Regardless, it is interesting to see the percentages of students that intended to return to HFU that became a NRS by Fall 2012.

Figure 1. Use of Time by Retention



* Significant at $p \leq .05$

Figure 2. Felt likely to Fail Responses by Retention



* Significant at $p \leq .05$

As an additional measure to thoroughly evaluate our retention sample, all measures were analyzed via standard T-Tests using the original response options, not the recoded options. Of relevance to this research brief and the story that has unfolded, two new significant results emerged that had not been observed in the Chi Square or Logistic Regression analyses. Two First Year Feelings, Overwhelmed and In Control, were significant. For both feelings, NRS had higher overall means than RS, indicating that NRS responded with “Occasionally” or “Never” more than RS on both measures. In other words, RS felt Overwhelmed more than NRS but NRS felt less In Control than RS. Since only two additional significant results emerged from the Retention T-Tests conducted this indicates that the Logistic Regression and Chi Square analyses conducted were appropriate and sufficiently identified significant differences based on the recoded response options.

Table 4. Intent to Return by Retention

Do you intended to return to this institution?	Non-Retained	Retained	Total
Definitely Yes	13.5% (n = 12)	86.5% (n = 77)	100% (n = 89)
Probably Yes	33.3% (n = 3)	66.7% (n = 6)	100% (n = 9)
Totally Undecided	75% (n = 3)	25% (n = 1)	100% (n = 4)
Probably Not	0% (n = 0)	100% (n = 1)	100% (n = 1)
Definitely Not	100% (n = 3)	0% (n = 0)	100% (n = 3)
Total	19.8% (n = 21)	80.2% (n = 85)	100% (n = 106)

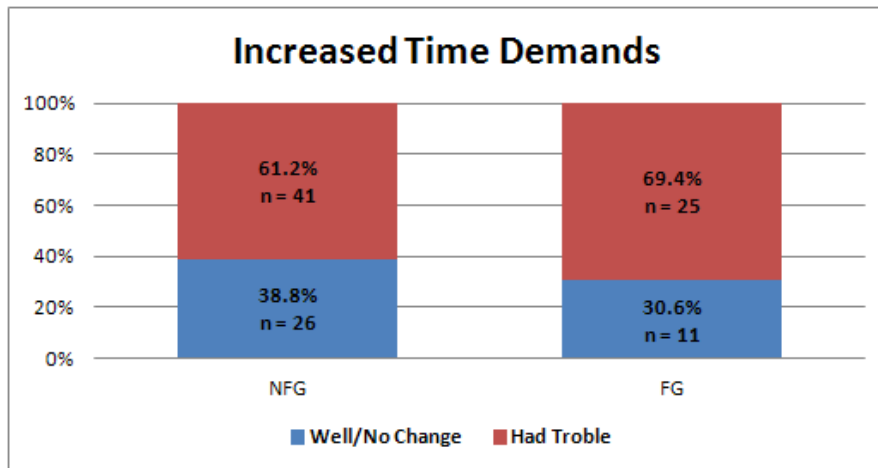
* Significant at $p \leq .05$

First Generation (FG) versus Non-First Generation (NFG) Students

The same statistical analyses were conducted on the same sets of questions based on FG and NFG student responses. This was done to see if FG and NFG comparisons were similar to those between RS and NRS. No significant findings (i.e., predictive variables) resulted from the Logistic Regression tests conducted. Meaning there were no variables out of the 4 groups of measures that could predict a FG student. Only one significant result emerged out of all of the Chi Square tests conducted (First Year Feeling: Lonely). The significant (or approaching significant) findings from our NRS population will guide this portion of the findings discussion since the purpose of analyzing our FG population was to determine if they responded similarly to our NRS population. Due to the lack of significant results, percentage differences of five percent or more will be presented when they are in line with the results of the NRS analyses.

Of the Transition from High School measures, one was in line with responses from our NRS population. Like our NRS students, more FG students (69.4%) reported having trouble adjusting to their Increased Demands on Time than NFG students (61.2%). Figure 4 illustrates this 8.2% difference between FG and NFG students.

Figure 4. Transition from High School by First Generation



$p \geq .05$

There were five First Year Feelings that had percentage differences of at least 5 percent and four of them were significantly different in the NRS analysis (this includes the In Control and Overwhelmed from the additional T-Tests). FG students had higher percentages of Rarely responses on all of the feelings except one, Overwhelmed. More FG students (55.3%) reported Often feeling Overwhelmed than NFG students (44.1%). The 5 feelings and percentage differences are presented in Table 5. Please note that only the percentages and the n for Rarely responses are presented in the table below.

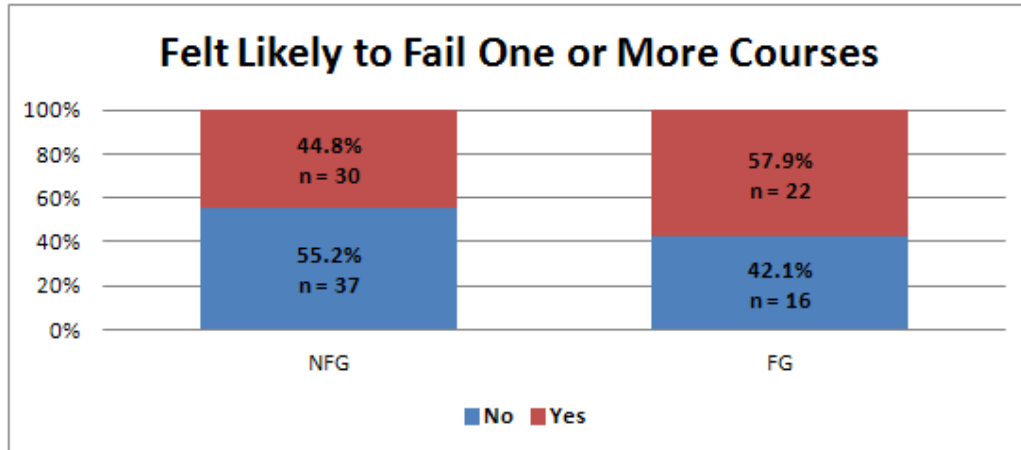
Table 5. First Year Feelings by First Generation

Feeling	Response	Non-First Generation	First Generation	Percentage Difference
In Control	Rarely	26.5% (n = 18)	42.1% (n = 16)	15.6%
Lonely*	Rarely	86.8% (n = 59)	100% (n = 38)	13.2%
Overwhelmed	Rarely	55.9% (n = 38)	44.7% (n = 17)	11.2%
Belong	Rarely	32.4% (n = 22)	39.5% (n = 15)	7.1%
Happy	Rarely	18.2% (n = 12)	23.7% (n = 9)	5.5%

*Significant at $p \leq .05$

No Use of Time measures are presented because there were no percentage differences between FG and NFG students in line with the NRS analysis. However, the Miscellaneous measure: Felt likely to fail one or more courses had a percentage difference in line with the NRS analysis. Similar to our NRS, more FG students (57.9%) felt like they were going to fail one or more courses than NFG students (44.8%) in their first year. This 13.1% difference between FG and NFG students is illustrated in Figure 5.

Figure 5. Felt Likely to Fail Responses by First Generation



$p \geq .05$

Conclusions & Implications

Even though there was not a significant relationship between First Generation students and Non-Retained Students in terms of the likelihood of a FG student becoming a NRS, this research brief has uncovered many similarities between these two student types. Since we have not been told explicitly from our NRS why they have not returned to HFU, we can only speculate their reasons and use the results presented as a way to better understand the factors that may have contributed to their decision to not return to HFU. What is learned about our NRS population can be translated to our FG student population to identify areas where this student population can be better served early in their educational experiences and work towards ensuring their successes early which may keep them here through graduation.

From the data and results presented here, there appears to be an obvious area to focus: time management. Several measures have been discussed where our NRS and FG population responded very similarly that impact the overall concept of time management. From our NRS population we saw: 83% had trouble with Increased Demands on Time, 61% had trouble with Increased Academic Freedom, 91% spent 10 or less hours weekly studying, 41.7% Rarely felt Happy, 54.2% Rarely felt like they Belonged, 37.5% Often felt Unable to manage their time, and 73.9% felt likely to fail one or more courses during their first year. From our FG population we saw: 70% had trouble with Increased Demands on Time, 55% Often felt Overwhelmed, 42%

Rarely felt In Control, 24% Rarely felt Happy, and 58% felt likely to fail one or more courses during their first year.

All of these factors are interrelated and imply that HFU's FG students and NRS may need assistance with their time management skills. Particularly, tips on how to identify and prioritize responsibilities and the time it takes to satisfy them. There are several ways that time management skills can be taught to first year students. For instance, they can be presented once during new student orientation, periodically through workshops, or even on an ongoing basis by being incorporated into the Freshman Experience course which is required for all first year students. Currently, the Freshman Experiences courses do not have any formal time management skills built into the curriculum. Time management is only touched upon indirectly through discussions of using a planner, keeping calendars up to date, journals, etc. By incorporating time management skills into one or more of these avenues, the potential to benefit all first year students exists, and not just FG students.

There is no guarantee that time management programs will keep students here through graduation but it is apparent that the NRS and FG students from this sample experienced difficulties with their time management skills. Time management programs may help to get students more comfortable and better able to manage their time which has the potential to impact every aspect of the student experience. Of course the notion exists that if a student is seeking higher education, h/she should be capable of managing their time efficiently, but this is often not the case and not just at HFU. If our first year students, specifically our FG students, are better equipped to handle time demands, it is likely that they will feel less overwhelmed, more in control, may get better grades, and hopefully feel happy a little more often. In other words, our students may become more successful if provided effective time management guidance at the beginning of their undergraduate experience and we may see fewer students leaving HFU. If time management programs are integrated into a course or program than this important skill for students could be an objective or outcome of that course or program and the unit in charge of those activities could assess student's time management skills on a more direct basis.

A way to keep a better, or more consistent, pulse on our first year and first generation students would be to check in with them as they progress through their undergraduate experiences. The OIRA could poll HFU students annually or bi-annually to evaluate how their perceptions, performances, and activities change over time. Keeping a better pulse on our students may assist in identifying and addressing the needs of students that are likely at risk for not returning to HFU.

Two measures have shed light onto another factor that may be a very important retention indicator: the Comfort Factor via the measures of Happy and Belong. Comfort can play a significant role in a student's decision to return or not. If we can identify the students who are

not happy and do not feel like they belong early, we can attempt to change those feelings before it is too late. Of course, there are many factors that contribute to the overall feelings of happiness and belonging and we may not be able to address all or even any of them for each student. Until we get more direct insights on these items and/or from our NRS population, we can only speculate what might work which has the potential of costing the University time and money in failed initiatives. The OIRA could reach out to the students that have recently left HFU and ask the tough questions: why did you leave, were you unhappy and why, did you feel like you belonged, what can we do differently, etc. as a way to learn what aspects are controllable by the University (e.g., campus activities, campus environment, etc.) and what aspects are out of our direct control (e.g., family troubles, relationship issues, etc.). It is likely that responses would be few and far between, but it is the only way to get direct feedback from our NRS.

This research brief set out to investigate two important student populations at any higher education institution: Non-Retained Students and First Generation Students with the goal of simply learning more about them. That goal was met. We have learned these students have difficulty with their time management skills. There is also a Comfort factor playing a part in the retention equation. Several recommendations have been presented for the University and the OIRA to consider in order to serve all of our students better from day one through graduation day.