Student Welfare, Perseverance, and Grit:
An Analysis of First Time Full Time Student Survey (2018)
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The following data were obtained through a pilot study of First Time Full Time Students at IPFW conducted in the 2017 Fall Semester. The study combined items from two surveys. The following preliminary analysis is based on the items developed by and reported in "Organizational Assessment to Improve College Student Persistence" (Braxton and Francis, 2017). The second part of the analysis is based on analysis of responses to survey items replicating a 12 item "Grit Scale" developed by Duckworth, et al. (2007).

Student Perceptions of Institutional Commitment to Student Welfare and to Institutional Integrity

Braxton and Francis (2017) developed the survey items to examine student perceptions of the commitment of the institution to student welfare and student perceptions of the extent to which the institution demonstrates integrity. "Institutional Integrity demonstrates itself when the actions of a college or university's administrators, faculty, and staff are compatible with the mission and goals proclaimed by a given college or university (Braxton, et. al, 2014)" (Braxton and Francis, 2017). Institutional integrity is defined as "the extent to which a college or university is true to its espoused mission and goals" (Braxton and Francis, 2017; Braxton, et al., 2014).

The purpose of the study was to examine the extent to which students perceive IPFW is committed to student welfare and to examine the extent to which students perceive IPFW demonstrates institutional integrity. Braxton et al. (2014) posit student perceptions of these attributes "…function as antecedents to social integration", that social integration positively influences institutional commitment, and that institutional commitment positively influences first year student persistence (Braxton and Francis, 2017).

The population for the study was "Beginner Students" enrolled at IPFW in the 2017 fall semester. 1537 students were invited to participate in the survey. 321 students began the survey, and 240 students completed the survey. Incomplete surveys were treated as non-respondents and omitted from the analysis. The reported response rate (15.61) is calculated as Completed Surveys/Beginner Student Population.

Student Services Staff Interactions

Most Student Services staff (e.g. dean of students office, student activities, housing, etc.) with whom I have had contact with are genuinely interested in students.	Frequency	Percent
Strongly Disagree	10	4.2
Disagree	3	1.3
Agree	136	56.7
Strongly Agree	91	37.9
Total	240	100

I have experienced negative interactions with student services staff.	Frequency	Percent
Strongly Disagree	111	46.3
Disagree	104	43.3
Agree	15	6.3
Strongly Agree	10	4.2
Total	240	100.0

In general, student services staff treat students with respect	Frequency	Percent
Strongly Disagree	5	2.1
Disagree	7	2.9
Agree	139	58.2
Strongly Agree	88	36.8
Total	239	100.0

Other College University Staff Interactions

Most other college/university staff (e.g. registrar, student accounts, financial aid, etc.) with whom I have had contact with are genuinely interested in students.	Frequency	Percent
Strongly Disagree	7	2.9
Disagree	14	5.8
Agree	147	61.3
Strongly Agree	72	30.0
Total	240	100.0

I have experienced negative interactions with other college/university staff	Frequency	Percent
Strongly Disagree	105	44.1
Disagree	103	43.3
Agree	23	9.7
Strongly Agree	7	2.9
Total	238	100.0

In general, other college/university staff treat students with respect	Frequency	Percent
Strongly Disagree	2	.8
Disagree	11	4.6
Agree	148	61.9
Strongly Agree	78	32.6
Total	239	100.0

Faculty Interactions

I have experienced negative interactions with faculty	Frequency	Percent
Strongly Disagree	106	44.2
Disagree	104	43.3
Agree	20	8.3
Strongly Agree	10	4.2
Total	240	100.0

In general, faculty members treat students with respect	Frequency	Percent
Strongly Disagree	3	1.3
Disagree	7	2.9
Agree	140	58.3
Strongly Agree	90	37.5
Total	240	100.0

Institutional Knowledge

In general, I know where to go if I need more information about a policy	Frequency	Percent
Strongly Disagree	10	4.2
Disagree	42	17.5
Agree	130	57.2
Strongly Agree	58	24.2
Total	240	100.0

While the overall student perception of the institution's commitment to student welfare and of the institution's mission integrity were positive, some responses to specific survey items suggest potential areas for concern. Specifically, given the timing of the survey prior to the midpoint of the completion of their first semester, more students than might be reasonably expected had already experienced negative interactions with student services staff, other university staff, and faculty.

Student Services Staff Interactions

Most Student Services staff (e.g. dean of students office, student activities, housing, etc.) with whom I have had contact with are genuinely interested in students.

    Disagree - Strongly Disagree -   5.4%

I have experienced negative interactions with student services staff.

    Agree- Strongly Agree   10.5%

In general student services staff treat students with respect

    Disagree - Strongly Disagree   5.0%

Other University Staff Interactions

Most other college/university staff (e.g. registrar, student accounts, financial aid, etc.) with whom I have had contact with are genuinely interested in students.

    Disagree - Strongly Disagree   8.8%

I have experienced negative interactions with other college/university staff

    Agree- Strongly Agree   12.5%

In general, other college/university staff treat students with respect

    Disagree-Strongly Disagree   5.4%

Faculty Interactions

I have experienced negative interactions with faculty

    Agree-Strongly Agree   12.5%

In general, faculty members treat students with respect

    Disagree - Strongly Disagree   4.2%

Student Self Evaluation of Grit

The second section of the survey replicated the 12 questions from the Duckworth, et.al, (2007) Grit Scale. 204 students participating in the survey completed all 12 items. The five point scale has a maximum possible score of 5 (extremely gritty) and a minimum score of 1 (not at all gritty). Six items in the scale are reverse coded. These items were adjusted and a composite variable created to provide individual grit scores for the participants. Scores for participants that did not complete all twelve items were omitted from analysis. The mean score across all participants was 3.4, median score was 3.42, minimum calculated score was 1.83, and maximum calculated score was 4.75. The distribution approached multi-modal. 25% of scores fell between a calculated score of 3.0 and the median calculated score of 3.42. 25% of scored fell between the Median calculated score of (3.42) and a calculated score of 3.73. Because of the distribution pattern, a Kurtosis Test was run which suggested the responses were not normally distributed. The positive kurtosis with a peak above what was expected in a normal distribution is illustrated in the Histogram. Frequency Distributions and the Histogram are provided in Appendix A.

It is important to note that the intent of the scale is for use as a diagnostic at the individual level. However, the scale has been used at an institutional level to examine its potential for predicting student success attributes. Bowman, et al (2015) examined grit as a predictor of educational achievement and satisfaction for students in two diverse institutional settings. Their study found that while responses to both the perseverance survey items and the consistency of interest survey items were positively correlated with college education outcomes, perseverance items tended to exhibit stronger relationships. IPFW student responses to these items are summarized in the table below:

Survey Item	5* N %	4 N %	3 N %	2 N %	1 N %
I have overcome setbacks to conquer an important challenge	45 21.7%	82 39.6%	67 32.4%	12 5.8%	1 .5%
Setbacks don't discourage me	20 9.7%	65 31.6%	75 36.4%	39 18.9%	7 3.4%
I am a hard worker	88 42.5%	80 38.6%	35 16.9%	3 1.4%	1 .5%
I finish whatever I begin	52 25.2%	80 38.8%	63 30.6%	10 4.9%	1 .5%
I am diligent	52 25.1%	81 39.1%	68 32.9%	3 1.4%	3 1.4%
I have achieved a goal that took years of hard work	63 30.4%	54 26.1%	61 29.5%	24 11.6%	5 2.4%

*5 = very much like me….1 = not at all like me

Student responses suggest that students perceive themselves as hardworking. However, the data also suggests that setbacks could discourage many of our students. This response to setbacks is potentially concerning as it appears students might become discouraged in the face of setbacks in their college experience. It suggests that early identification of student setbacks (e.g. early first

semester academic challenges) to plan and implement specific interventions could provide opportunities to improve the likelihood students persist through the first year.

Future Direction for Study Focused on Improving Student Success as Defined as Persistence to Degree

Grit is important from a retention perspective as it suggests that, given a clear superordinate goal of completing a degree, achieving new insight, producing a high quality paper, or any host of other longer term goals requiring tenaciously working in the face of obstacles and setbacks (Duckworth and Gross, 2014), a "gritty" student is more likely to achieve goals than the a less "gritty" student. However, "grittiness", to some extent, might be moderated by "self-control" in the face of potentially conflicting actions where self-control is defined as effectively resolving conflicts between competing goals (Duckworth and Gross, 2014).

This complex relationship between grit and self-control is particularly challenging in the context of First Generation College Students. The initial study did not account for this relationship and given the composition of our student body should be a consideration in future research. For example, while a student might have the "grit" to persist through a degree, the student might also be resolving conflict between an opportunity to work full time and attend college part-time or to earn less money or to attend college full-time and work part time.. Assuming the long term value proposition of completing a degree is greater, long term earning potential might be a lever for an option to attend full time while working part time. In this case, the value proposition favors full time attendance. However, this proposition might work in opposition to a shorter term proposition of earning enough income to meet immediate needs or, alternatively, to fund short term desires. In this case, a student might choose the goal of working and earning income over completing a degree. In this case, the value proposition becomes more challenging as it is further moderated by the amount and composition of aid available to help fund the superordinate goal of degree completion.

Understanding these dynamics should help inform targeted financial aid policies that address some of the challenges faced by our students. This is especially true given the relatively large proportion of our students that are Pell eligible. Understanding how financial need interacts with dynamics of grit and self-control will be important to increasing the likelihood students persist.

It is also important to look at matriculation in light of student response to challenges. The first year of college is particularly challenging for first generation students and even more challenging for first generation students with financial need. Further research is needed to examine how we might best plan interventions for students who face challenges in their first semester. Determining the best strategies from the general toolkit of early warning systems, intrusive advising, course sequencing, etc. is important and should be examined further.

Conclusion:

The pilot study was conducted to begin examining how affective dimensions might affect student success defined as matriculation through the degree. While the pilot study is limited by the
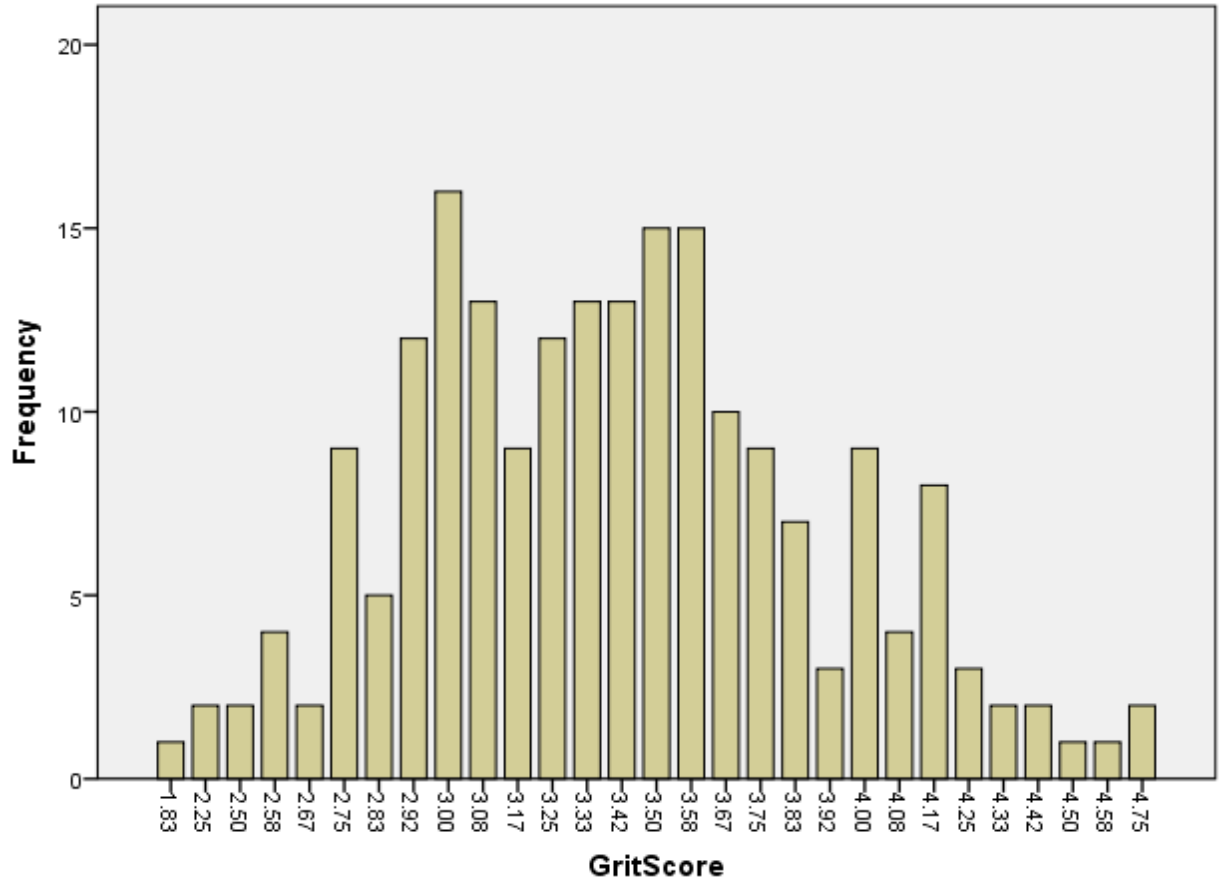
number of respondents, it does provide some valuable insight that could be considered with other sources of data to inform policies aimed at improving student success.

Appendix A:

Grit Score Frequency Table

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.83	1	.4	.5	.5
	2.25	2	.8	1.0	1.5
	2.50	2	.8	1.0	2.5
	2.58	4	1.7	2.0	4.4
	2.67	2	.8	1.0	5.4
	2.75	9	3.8	4.4	9.8
	2.83	5	2.1	2.5	12.3
	2.92	12	5.0	5.9	18.1
	3.00	16	6.7	7.8	26.0
	3.08	13	5.4	6.4	32.4
	3.17	9	3.8	4.4	36.8
	3.25	12	5.0	5.9	42.6
	3.33	13	5.4	6.4	49.0
	3.42	13	5.4	6.4	55.4
	3.50	15	6.3	7.4	62.7
	3.58	15	6.3	7.4	70.1
	3.67	10	4.2	4.9	75.0
	3.75	9	3.8	4.4	79.4
	3.83	7	2.9	3.4	82.8
	3.92	3	1.3	1.5	84.3
	4.00	9	3.8	4.4	88.7
	4.08	4	1.7	2.0	90.7
	4.17	8	3.3	3.9	94.6
	4.25	3	1.3	1.5	96.1
	4.33	2	.8	1.0	97.1
	4.42	2	.8	1.0	98.0
	4.50	1	.4	.5	98.5
	4.58	1	.4	.5	99.0
	4.75	2	.8	1.0	100.0
	Total	204	85.0	100.0	
Missing	System	36	15.0		
Total		240	100.0		

GritScore

Histogram

Mean = 3.40
Std. Dev. = .496
N = 204