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### The Impact of Frequent Student-Faculty Interactions on Repeater Students

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Data show that half of all students who have dropped/failed Survey of Calculus or Finite Mathematics at the University of Arkansas will drop/fail again. These students face a lack of motivation and a fair amount of anxiety toward mathematics. To make connections and create an environment in which they are comfortable discussing any issues with the professor, repeater students were asked to meet with the professor to complete a personalized academic improvement plan. This plan establishes the need for regular contact with the instructor and should increase the student's level of comfort with the instructor.

Utilizing the "Academic Improvement Plan" serves as a catalyst for students to meet face to face with their professor and provides a roadmap for continuing that contact on a consistent and regular basis, regardless of the course. Preliminary data shows that frequent and regular faculty/student interactions will result in increased academic success for this group of at-risk students. We believe this success will allow these students to develop a deeper understanding of course materials and to cultivate skills applicable to other courses/situations.

Finite Mathematics					
	Total AIP	AIP DFW	Total Non- AIP	Non-AIP DFW	
SPRING 2019	9	29%	18	56%	
FALL 2018	7	43%	9	67%	
TOTAL	16	31%	27	59%	

Survey of Calculus						
	Total AIP	AIP DFW	Total Non- AIP	Non-AIP DFW		
SPRING 2019	11	9%	0	N/A		
FALL 2018	6	33%	8	50%		
TOTAL	17	17.60%	8	50%		

Our primary research interest is to assess whether or not it is reasonable to claim that the population proportions of D/F/W outcomes are equal for AIP versus non-AIP groups given our experimentation and the data we have collected. Student outcomes are grouped into A/B/C (passing outcomes) and D/F/W (not passing outcomes) to form a binary data set from which we can determine the proportion of students in each group with each outcome. The analysis of this collected data utilized a 2-sample z-test (binary 2-proportion) to compare sample proportions.

For the Finite AIP and non-AIP samples with D/F/W proportions of .31 and .59 respectively, n of 16 and 27 respectively,  $\alpha = .05$ , a one-tailed test returns a <u>P-value of 0.0379</u> which is significant.

For the Survey AIP and non-AIP samples with D/F/W proportions of .176 and .500 respectively, n of 17 and 8 respectively,  $\alpha = .05$ , a one-tailed test returns a P-value of 0.0461 which is significant.

For the combination of all AIP and all non-AIP samples with D/F/W proportions of .242 and .571 respectively, n of 33 and 35 respectively,  $\alpha = .05$ , a one-tailed test returns a <u>P-value of 0.0029</u> which is significant.

For the combination of all AIP and all non-AIP samples with D/F/W proportions of .242 and .571 respectively, n of 33 and 35 respectively,  $\alpha = .05$ , a two-tailed test returns a P-value of 0.0059 which is significant.



# Academic Improvement Plan

Student Name:	Student ID:		
Course Name:	Course Meeting Day(s)/Time:		
Faculty Name:	Today's Date:		
•			
My academic success in previous semesters was hindere	d by the following:		
I did not ask questions when I did not understand the mate	rial.		
I did not do well on one or more exams.			
I fell behind in class assignments.			
I did not have time for class due to work.			
I did not have time for class due to family obligations.			
I registered for extra courses so that I could withdraw from	n one.		
I did not have the background the course required.			
I missed too many days of class.			
I missed too many quizzes.			
Other:			
For immuners and another monton man in this class I wi	Il implement the following strategies.		
Γο improve my academic performance in this class, I wi			
I will spend at least minutes per day working on h	iomework.		
I will meet with my instructor during office hours at least of the state of the sta			
I will email my instructortimes per week to talk a	bout now I am doing/feeling in		
the class.	1-		
I will attend Supplemental Instruction (SI) sessions each w			
I will spendminutes per week working on o	course assignments in the Math		
Spot.	hafana tha main in than I mill and		
For each quiz, I will use my first attempt at least 24 hours	<u> </u>		
questions to clarify any mistakes before I take the quiz aga			
I will meet with my instructor after each exam to go over a understand the material.	iny mistakes and to make sure i		
	thefere telving the smit areas		
I will earn a score of 100% on my homework for each unit	before taking the unit exam		
Other:			
I hereby agree to abide by the terms of	this Academic Improvement Plan.		
Student Signature Date	Faculty Signature		