

Research Article

GENDER DIFFERENTIATION ON ACADEMIC ENGAGEMENT AND ACHIEVEMENT OF BSED-MATH STUDENTS OF CBSUA-PASACAO

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Received 09th December 2023; Accepted 10th January 2024; Published online 28th February 2024

ABSTRACT

This undertaking analyzed the Level of Academic Engagement and Achievement of Bachelor of Secondary Education major in Mathematics (BSEd-Math) students at the Central Bicol State University of Agriculture-Pasacao Campus AY 2021-2022. Specifically, it examines the: 1) Profile of the respondents along gender; 2) Level of Academic Engagement of the respondents across gender along; a). Program Outcomeb). General Educationc). Course Challenged). Flexible Learning and, e). Internationalization; 3) Significant difference in the Level of Academic Engagement of the respondents across gender; 4) Level of Academic Achievement of the respondents across gender; 5) Significant difference in the Level of Academic Achievement of the respondents across gender; and 6) Significant relationship between the Level of Academic Engagement and Achievement of the respondents. This study utilized a quantitative method. Descriptive-Evaluative-Correlational design was used in this study. Many of the respondents are female. The respondents have a high level of academic engagement in program outcomes, general education, course challenges, flexible learning, and internationalization. There is a significant difference in the respondents' Academic Engagement level. Students have very satisfactory academic achievement. There is no significant difference in the Level of Academic Achievement of the respondents. There is no significant relationship between the respondents' level of academic engagement and academic achievement.

Keywords: Academic Engagement, Academic Achievement.

INTRODUCTION

The widespread influence of contemporary technology is evident in numerous fields of human endeavor, including education, which is essential to corporate operations and professional duties. The COVID-19 epidemic that started in 2020 has highlighted the importance of technology even more. Organizations abandoned conventional practices and embraced new ones in response to the pandemic's obstacles, which led to the widespread adoption of remote work. The pandemic carried along previously uncommon circumstances, including social alienation and economic stagnation, which called for prompt action from the government and the higher education sector. Teachers and students had to reconsider how they used technology to guarantee that high-quality educational services would continue to be delivered. Nonetheless, a thorough analysis of this new educational paradigm's efficacy is necessary.

Putting a new teaching strategy into practice took work; many obstacles must be addressed. Despite these challenges, postsecondary educational establishments have a fundamental duty to maintain and provide high-quality instruction. The pandemic's outbreak and the related technology problems should not compromise the dedication to offering top-notch training. Central Bicol State University of Agriculture (CBSUA), an agricultural university in the Philippines, included in the institutions of higher learning, must also strive to deliver high-quality education. As an institution offering education courses, it will be necessary to implement assessment and evaluation of pedagogies in teacher education to ensure the quality of instruction. Every campus of CBSUA must take necessary measures and initiatives to uphold high-quality instructions.

CBSUA –Pasacao Campus, as an arm of the entire university, must also take any specific measures to maintain and establish optimum quality of instructions. Thus, examining the academic engagement and achievement of students at Central Bicol State University of Agriculture –Pasacao Campus will be deemed necessary.

Thus, this undertaking analyzed the Level of Academic Engagement and Achievement of Bachelor of Secondary Education major in Mathematics (BSEd-Math) students at the Central Bicol State University of Agriculture-Pasacao Campus AY 2021-2022. Specifically, it sought answer to the following questions: 1) What is profile of the respondents along gender?; 2) What is the Level of Academic Engagement of the respondents across gender along; a). Program Outcomeb). General Educationc). Course Challenged). Flexible Learning and, e). Internationalization?; 3) Is there a significant difference in the Level of Academic Engagement of the respondents across gender?; 4) What is the Level of Academic Achievement of the respondents across gender?; 5) Is there a significant difference in the Level of Academic Achievement of the respondents across gender?; and 6) Is there a significant relationship between the Level of Academic Engagement and Achievement of the respondents?

MATERIALS AND METHODS

This research used a descriptive-evaluative-correlational design using a quantitative methodology. During the academic year 2021–2022, the concentration was on BSEd–Mathematics students at CBSUA–Pasacao Campus. Using stratified random sampling, the sample size of 73 students, 42 females and 31 males, was established as participant of the study. The study tool, a validated questionnaire designed by Dr. Paterno Baguinat, was utilized to gather information on the profiles, gender, academic achievement, and level of academic engagement of the respondents. Academic achievement was evaluated using the final grades that teachers submitted.

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Calculating means for profile data along with gender, academic achievement, and level of academic engagement were all part of the data analysis process. Significant variations in the Level of Academic Engagement were found using Analysis of Variance. The Pearson Product Moment Correlation Coefficient was used to evaluate the link between the Level of Academic Engagement and Achievement; t-tests were used to determine the significance of the results. The study aimed to investigate and comprehend the relationships and variations in the participants' academic achievement and involvement.

RESULTS AND DISCUSSIONS

Profile Of The Respondents Along Gender

These undertakings examined the demographic profile of the respondents along with gender. In the profile of the respondent's gender, around 58% of the respondents are female, and only 42% are male.

Table 1. Profile of the Respondents along Gender

	n	%
Male	31	42.47
Female	42	57.53
Total	73	100

Level of Academic Engagement of The Respondents Across Gender

The findings revealed that the combined mean for Program Outcomes was 4.11 with verbal interpretation of High, a mean of 4.08 with verbal interpretation of High for male, 4.10 with verbal interpretation of High for female. The result revealed that the combined mean for General Education was 4.15 with verbal interpretation of High, 4.08 with verbal interpretation of High for male and 4.20 with verbal interpretation of High for female. The outcome showed that the combined mean for Course Challenge was 4.22 with verbal interpretation of Very High, 4.09 with verbal interpretation of High for male and 4.30 with verbal interpretation of Very High for female. The results show that the combined mean for Flexible Learning was 4.05 with verbal interpretation of High, 4.06 with verbal interpretation of High for male and 4.00 with verbal interpretation of High for female. The results showed that the combined mean for Internationalization was 2.75, with verbal interpretation of Moderate, 2.99 with verbal interpretation of Moderate for male and 2.60 with verbal interpretation of Low for female.

Table 2. Level of Academic Engagement of the Respondents

Academic Engagement	Male		Female		Combined	
	Mean	Int.	Mean	Int.	Mean	Int.
1. Program Outcome	4.08	High	4.10	High	4.11	High
2. General Education	4.08	High	4.20	High	4.15	High
3. Course Challenge	4.09	High	4.30	Very High	4.22	Very High
4. Flexible Learning	4.06	High	4.00	High	4.05	High
5. Internationalization	2.99	Moderate	2.60	Low	2.75	Moderate

Significant Difference in the Level Of Academic Engagement Of The Respondents Across Gender

The computed F-value was 3.727 against the F-Critical Value of 1.357 for Rows, and the computed F-value was 114.675 against the F-Critical Value of 2.647 for Columns. Since the computed value for rows and columns is greater than the critical value, there is a significant difference in the level of Academic Engagement of the respondents across gender.

Table 3. Significant Difference in the Level of Academic Engagement of the Respondents Across Gender

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	83.1149	71	1.17063	3.7273683	7.81E-01	1.3575
Columns	108.04624	3	36.0154	114.67526	3.17E-04	2.6469
Error	66.89571	213	0.31406			
Total	258.05694	287				

Level Of Academic Engagement of The Respondents Across Gender

Results indicated that the combined mean for the academic achievement of the respondents was 91.58, with verbal interpretation of Very Satisfactory, 91.35 with verbal interpretation of Very Satisfactory for male and 91.75 with verbal interpretation of Very Satisfactory for female.

Table 4. Academic Achievement of the Respondents Across Gender

	Mean	Interpretation
Male	91.35	Very Satisfactory
Female	91.75	Very Satisfactory
Combined	91.58	Very Satisfactory

Significant Difference In The Level Of Academic Achievement Of The Respondents Across Gender

The computed F-Value was 0.248108 against the F-Critical value of 3.979807. Since the F-Computed Value is less than the F-Critical Value, this indicated no significant difference in the respondents' level of academic achievement across gender.

Table 5. Significant Difference in the Level of Academic Achievement of the Respondents Across Gender

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4.51602	1	4.51602	0.248108	0.619995	3.979807
Within Groups	1255.93	69	18.20185			
Total	1260.44	70				

Significant Relationship Between Academic Engagement and Achievement Of Male and Female Respondents

The data revealed that the level of academic engagement along with Program Outcome got a correlation value of 0.083711, between academic engagement interpreted as a Negligible Relationship, 0.100036 as correlation value for General Education, interpreted as Negligible Relationship, 0.173884 as correlation value for Course Challenge interpreted as Negligible Relationship, 0.183349 as correlation value for Flexible Learning interpreted as Negligible Relationship, and 0.01514 as correlation value for Internationalization interpreted as Negligible Relationship.

Table 6.a Significant Relationship Between the Level of Academic Engagement and Achievement of Male Respondents

	Correlation		t-test for testing the significance of correlation		
	r	Interpretation	t-comp.	t-tabular	Interpretation
Program Outcome	0.08371	Negligible Relationship	0.70784 59	2.045	Not Significant
General Education	0.10003 5	Negligible Relationship	0.84716 787	2.045	Not Significant
Course Challenge	0.17388 3	Negligible Relationship	1.48783 814	2.045	Not Significant
Flexible Learning	0.18334 7	Negligible Relationship	1.57156 753	2.045	Not Significant
Internationalization	0.01513	Negligible Relationship	0.12758 653	2.045	Not Significant

Table 6.b Significant Relationship Between the Level of Academic Engagement and Achievement of Female Respondents

	Correlation		t-test for testing the significance		
	r	Interpretation	t-comp.	t-tabular	Interpretation
Program Outcome	0.08371 2	Negligible Relationship	0.70784 593	2.021	Not Significant
General Education	0.10003 8	Negligible Relationship	0.84716 787	2.021	Not Significant
Course Challenge	0.17388 6	Negligible Relationship	1.48783 814	2.021	Not Significant
Flexible Learning	0.18334 9	Negligible Relationship	1.57156 753	2.021	Not Significant
Internationalization	0.01515	Negligible Relationship	0.12758 653	2.021	Not Significant

The data revealed that the level of academic engagement for male along with Program Outcome got a correlation value of 0.083712 interpreted as a Negligible Relationship, 0.100038 as correlation value for General Education, interpreted as Negligible Relationship, 0.173886 as correlation value for Course Challenge interpreted as Negligible Relationship, 0.183349 as correlation value for Flexible Learning interpreted as Negligible Relationship, and 0.01515 as correlation value for Internationalization interpreted as Negligible Relationship. All the corresponding correlations had interpretation of non-significance.

Based on findings, the study concluded that most respondents are female, with a high level of academic engagement across various aspects such as program outcomes, general education, course challenges, flexible learning, and internationalization. However, there

is a significant difference in the overall level of academic engagement among the respondents. Despite this, students generally report very satisfactory academic achievement. Interestingly, there is no significant difference in the academic achievement levels among the respondents. Additionally, the study suggests no significant relationship exists between the participants' level of academic engagement and academic achievement.

The study recommends encouraging more male students to enroll in the BSEd-Mathematics program to balance the dominance of female students. The respondents showed a high level of academic engagement in various aspects of the program, and it is advised to encourage students to engage in internationalization programs and activities. A selection mechanism for exchange students should be created to represent the university properly. Faculty members should continuously enhance their teaching pedagogy, and the policy on blended learning should be re-evaluated to include necessary inputs relevant to the new normal context. Students should practice good study habits and attend seminars on proper time management and study tips. Further studies related to students' academic engagement should be undertaken, and the present study should be replicated in different respondents and contexts to validate the results.

ACKNOWLEDGEMENTS

The researcher would like to express his earnest gratitude to his supportive wife-Jocelyn N. Orogo, to the Campus Administrator of CBSUA-Pasacao Campus Prof. Carlo M. Cornejo, to the research coordinator of CBSUA-Pasacao Campus Dr. Jayson M. Dañas, to the research staff Ms. Ara Jill E. Umali and Ms. Louella Alarcon-Bongapat and to all of the respondents for making this study a reality and to Almighty for the strength and all unspeakable gifts.

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