



Teaching Effectiveness and Academic Performance as Moderated by Gender

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Abstract

This research was undertaken to determine the moderating effect of gender on the relationship between teaching effectiveness and the academic performance of university students. It utilizes descriptive correlational design using survey questionnaires to a sample of three hundred twenty-two students in the Bachelor of Science in Business Administration (BSBA) during their first- and second-year as the main participants. Results showed that a significant comparative difference existed between female students who performed better than the male students. A significant relationship exists between teaching effectiveness as well as gender as primary determinants in determining the academic performance of students. Findings revealed that the academic performance proved to be predicted by teacher effectiveness and gender notwithstanding the interrelatedness of its relationships. To determine the moderating effect of gender, the logistic hierarchical regression analysis was employed. When moderated, gender did not show any interactive effect on the relationship between teaching effectiveness and academic performance. With the on set of outcomes-based approach in the higher education system, notable findings of this study may pave the way for academic and administrative sectors to unceasingly develop innovative methodologies in improving the management of learning of the millennial generation.

Introduction

College life seems to be demanding and stressful for the freshmen although the transition from secondary education to tertiary is not anymore new (Eddaif et al., 2017). The academic achievement of university students, which is commonly measured by their Cumulative Grade Point Average (CGPA), is one of the 28 markers that highlights the students' qualification (Valli Jayanthi et al., 2014; Yogendra & Andrew, 2017). What affects the academic performance of students continues to be a

lingering issue among academic practitioners, 30 experts, policymakers, and educators (Ampofo & Owusu, 2015). Al-Zoubi and Younes (2015) noted the biggest problem that modern academic institutions are facing is the low academic achievement of students which challenges them from attaining the institution's mission. Reality speaks that high school students who desire to proceed to the tertiary education lack the essential knowledge, skills, and habits of mind to succeed (Jaeger, 2013).

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Objective

Studies reveal that a notable interrelationship exists between the teacher's behavior and the academic achievement of students (Rashid & Zaman, 2018). Cited by Muema, Mulwa, and Mailu (2018), Adunola argued that poor academic performance of the majority of the students is fundamentally associated to ineffective teaching methods of the teachers and that various teaching strategies should take place to articulate the knowledge to the learners. For example, if teachers lack motivation and commitment (Michael & Wumi, 2016), these may result to poor attendance and unacceptable behavior towards the students which ultimately affect their academic performances. If teachers possess the abilities to understand (Mvula, 2020) and interpret specific objectives, both the teaching and the learning processes are carefully undertaken in such a manner then the teachers can decide on what the appropriate strategies and resources are best suited to the students. Although there are a number of theories of teacher evaluation in the body of knowledge that take into account the agreement which behaviors lead to learning, this perspective on how teachers are evaluated according to the student performance as a laying ground for educational reforms is still unsubstantiated (Biunno, 2019). Gender, on the other hand, is considerably assumed to have an effect on students' academic performances (Adigun et al., 2015; Christopher et al., 2019; Parajuli & Thapa, 2017) where differences of their academic achievements have been noticed but still need further scientific confirmation (Hdii & Fagroud, 2018).

In some studies gender was treated as a moderating variable. In their study, Ye et al. (2018) concluded that gender moderated the relationship between the academic stress and academic self-efficacy where a stronger evidence was seen for females than that of males. Gender proved to be a significant moderating variable when it was associated between the content quality and perceived ease of use in the utilization of the learning management system in higher educational institutions in Saudi Arabia as discussed in the study of Binyamin et al. (2020). In the study of Lei et al. (2018) the interaction of gender was significantly evident between teacher support and students' academic emotions. In the study conducted by To et al. (2018), female gender and higher age were significantly associated with the academic performances of the Norwegian occupational therapy students in terms of the grade point average. Similarly, (Parajuli & Thapa, 2017)

also concluded in their study that gender differences proved to be substantially associated with the academic performances of the students.

It is clear from Brew et al. (2021) that a more thorough examination of the factors influencing college students' academic success is required. Researchers Arora and Singh (2017) and Islam and Tasnim (2021) have revealed a variety of links that have an impact on students' academic success. However, research into the role of gender as a moderator in the relationship between teacher appraisal and student academic achievement is still ongoing, and further research is needed (Parajuli & Thapa, 2017). Both male and female students interact the existing bivariate correlations, therefore the findings of this study have implications for policy formulations in the educational sphere, where gender plays a central role as a moderator between teachers' effectiveness and students' academic results. In particular, a full explanation of what determines teacher effectiveness in terms of dedication, topic knowledge, teaching for independent learning, and learning management to students in tertiary education must be provided. Students' perceptions of a teacher's efficacy may differ from one another. The goal of this study is to see if gender differences have a moderating effect on the link between teaching effectiveness and student academic performance. This fills in the gaps and makes a significant contribution to the body of knowledge. The research investigated some of the most intriguing aspects that influence academic success that have yet to be uncovered.

Methods for generating the results of this academic endeavor provide an essential base for the academic council to review its policies on enforcing the academic learning mechanisms to the students as well as for the administrative council to utilize the budget intended for the improvement of the institution's infrastructure projects. The findings could aid in decision-making in pursuing further the philosophy of the university as well as the goals and objectives of the Business Administration program. The findings in this study will aid in the development of methodologies to improve the quality of instruction and structural reforms catered to the students and to validate these methodologies for a more comprehensive policy use relative to curriculum and instruction.

Conceptual Framework

Anchored from the theory of teacher self-efficacy, its theoretical foundation was authored by Albert

Bandura in view of the social cognitive theory as cited by (Nabavi, 2012). Berman et al. cited by Kiamba et al. (2017) contended that teacher efficacy pertains to how a teacher believes that one has the capability to affect the academic achievements of students.

Under the self-determination theory, it purports that people become self-driven when competence, connection, and autonomy (Ryan & Deci, 2000) are achieved. The self-determination theory concentrates fundamentally on the internal sources of motivation such as to gain knowledge or independence (Cherry, 2019).

In Figure 1, the conceptual paradigm of the study linking the constructs to the academic performance of students is presented. As proposed, this paradigm consists of three variables each of which manifests a relationship with each other. Teaching effectiveness, an independent variable, pertains to the performance of faculty members at the university level. The academic performance is perceived to be influenced by teaching effectiveness of the teacher. Gender, on the other hand, moderates the relationship between teaching effectiveness and academic performance.

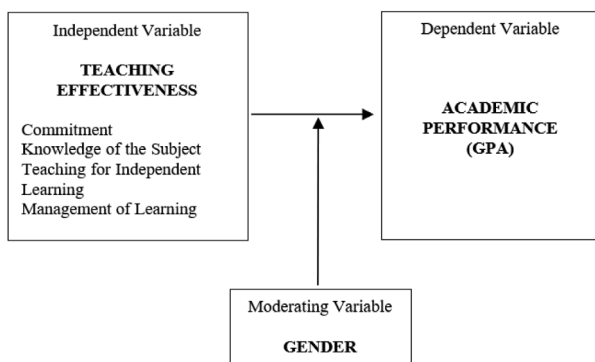


Fig. 1 Conceptual Framework

Research Methodology

1. Population and Samples

This research was conducted at the North Eastern Mindanao State University – Tagbina Campus. The university is situated in the northeastern part of Mindanao in the province of Surigao del Sur, Philippines. The study employed the universal sampling technique since the participants were the business administration students under the College of Business and Management during their first year and second year in the first semester of academic year 2019-2020 of which 101 were

males and 221 were females. As an inclusion to the criteria of selection, all participants were included in the study so there was no need to calculate the sample size. The administration of the survey was conducted during classroom instruction where the researcher sought permission from the faculty handling the class. Prior to the survey, the researcher was advised to follow all necessary research protocols and ethical considerations especially on the welfare of the respondents.

2. Research Instrument

This is a standardized instrument adopted from the National Budget Circular (NBC) 461 for State Universities and Colleges (SUC's). The teaching effectiveness instrument is composed of four assessment areas where a faculty member is periodically rated every semester by the students, peers, supervisor, and self. In this study, students' ratings were utilized. These include commitment, knowledge of the subject, teaching for independent learning, and management of learning. Having teachers with a high level of commitment (Shu, 2022) will have a more accurate understanding of their workplace's capabilities and successfully support student achievement. Effective teacher preparation directly connects to the question of whether the capacity to demonstrate their knowledge in the classroom may be regarded as concrete or abstract in nature (Jeschke et al., 2021). Cited by Žydzūnaitė et al. (2015), independent learning according to Chan pertains to the capacity of the students to fully accept their responsibilities for the decisions they make regarding their learning. Management of learning refers to the classroom management (Chalak & Fallah, 2019) as a fundamental component in education where students acquire knowledge for an effective teaching – learning study, gender is also hypothesized as the moderating variable to determine its interaction effect between teaching effectiveness and academic performance of students. The academic performance being the dependent variable of the study is measured in terms of the grade point average (Reda & Mulugeta, 2018) of the students for the semester. This consisted of all the subjects enrolled during the previous semester. A student who receives a GPA of 1.0 – 1.2 is considered excellent. A very satisfactory remark is given if a student receives a GPA between 1.3 – 1.5; satisfactory remark between 1.6 – 2.0; good remark between 2.1 to 2.5; and a fair remark between 2.6 – 3.0. The university's administrators, deans, and the office of the academic affairs were asked to examine the questionnaire's content before it was sent

out. This was done to ensure that all of the appropriate procedures for establishing validity had been adhered to. Thirty students from other colleges were invited to participate in the pilot testing of the study. This was to test and retest whether or not these questions proved to be consistent. The questions proved to be acceptable after obtaining Cronbach's alpha of 0.892.

Table 1 Numerical Grade Equivalent

GRADE	EQUIVALENT	CLASSIFICATION	
1	95 - 100%	Excellent	11
1.1	94	Excellent	12
1.2	93	Excellent	13
1.3	92	Very Satisfactory	
1.4	91	Very Satisfactory	
1.5	90	Very Satisfactory	15
1.6	89	Satisfactory	16
1.7	88	Satisfactory	
1.8	87	Satisfactory	
1.9	86	Satisfactory	17
2	85	Satisfactory	
2.1	84	Good	
2.2	83	Good	18
2.3	82	Good	
2.4	81	Good	19
2.5	80	Good	
2.6	79	Fair	
2.7	78	Fair	20
2.8	77	Fair	
2.9	76	Fair	
3	75	Fair	
5	74 and below	Failed/Dropped	

3. Collection of Data

Due to the transition of the educational system orienting to the K-12 program in basic school, an extra milestone in the Philippine educational system, there were only two-year levels in tertiary education at the time this survey was done. During the execution of the K-12 program, the study's respondents completed senior high school. The secondary level senior high school academic curriculum provided as additional building blocks in leveraging the competencies of the students, with the first batch of students graduating in 2018. The study's exclusion criteria included graduates of the Alternative Learning System (ALS), returnees, and continuing students. In accordance with academic institution research ethics, the researcher requested permission from the campus director, as indicated by the program coordinator and formally authorized by the head of research, to formulate the study. This was done to guarantee that the research project aligned with the university's research program. The researcher distributed and retrieved the survey 38 instruments throughout the

week where classes were held, with the help of the faculty handling the subject, after receiving consent from the campus director. The survey was completed in seven working days, taking into account the characteristics of the respondents.

4. Data Analysis

The approach of this study is quantitative in nature as it utilizes descriptive correlational techniques to describe the variables and its relationships. In the correlational research method, McLeod (2020) opined that the examination of the study identifies the variables and looks for its relationships. To test the relationship whether teaching effectiveness and gender predict the academic performance of students, the Multiple Linear Regression (MLR) analysis was utilized. The regression analysis was the statistical tool for this study to analyze the relationship between a dependent variable and two or more independent variables (Kumar, Talib & Ramayah, 2017).

After the regression analysis of the variables involved in the study, the researcher investigated further the conditioning effect of gender between the teaching effectiveness and academic performance of students through the causal-comparative research design. Moderated Multiple Regression (MMR) analysis was employed to establish whether or not gender moderates have a causal relationship (Maheshwari, 2018) between teaching effectiveness and academic performance of students. Survey questionnaires were the main instruments in the data gathering. In conclusion, the descriptive-correlational and causal-comparative methods of the research are the most appropriate designs to conduct this study.

Result (s)

Level of Teaching Effectiveness

Table 2 presents the summary table of teacher effectiveness as perceived by the students in the business administration program. The results showed that indicators generated a very high level of teaching effectiveness with an overall mean of 4.53 and a descriptive level of very high. This means that all indicators of teaching effectiveness of the faculty members in the business program were always manifested. Based on the individual perspective, teaching for independent learning generated a very high descriptive level of 4.59 among other indicators. Knowledge of the subject ($\bar{x} = 4.54$), and commitment ($\bar{x} = 4.51$) both indicated as very high level of teaching effectiveness.

Management of learning yielded the lowest mean of 4.47 but still on a very high level of teaching effectiveness.

Table 2 Level of Teaching Effectiveness

Indicator	SD	Mean	Descriptive Level
Commitment	0.41	4.51	Very High
Knowledge of the Subject	0.39	4.54	Very High
Teaching for Independent Learning	0.38	4.59	Very High
Management of Learning	0.40	4.47	Very High
Overall	0.40	4.53	Very High

T-test Comparison of the Academic Performance of Students when grouped according to Gender

The Grade Point Average (GPA) is utilized in this study to measure the academic performance of the students as exhibited in Table 3. A statistical significant difference is unveiled in the academic performance of students when grouped according to their gender orientation. This is evidenced between the males ($M = 2.22$, $SD = 0.33$) and the females ($M = 2.02$, $SD = 0.25$), $t(320) = -5.92$ where $p < 0.05$ (assuming equal variances), $CI.95$ -2.265943 , -1.33352 . The study, therefore, fails to reject the null hypothesis. Reaching its statistical significance, the actual difference in mean scores between groups is close to medium effect. The effect size of 0.67 is calculated using Cohen's d . A noticeable GPA mean of female college students proved to be greater or equivalent to "satisfactory" than the GPA mean for males having classified as "good". Apparently, female students perform better than the males in their academics in relation to business administration.

Table 3 T-test Comparison of the Academic Performance of Students when grouped according to Gender

Academic Performance	Gender	N	Mean (GPA)	SD	t	Sig. (2-tailed)
Grade Point Average (GPA)	Male	101	2.22	0.33	-5.92	0.000
	Female	221	2.02	0.25		

Correlation between Teaching Effectiveness and Academic Performance

The overall r -value of $-.119$ demonstrated a significant link at $p < 0.05$, as shown in Table regarding the correlation between teaching effectiveness and student academic performance. As a result, the null hypothesis was rejected. This result showed that the effectiveness of a teacher is strongly linked to a student's academic achievement. The r -values varied from $-.084$

to $-.132$ when looking at markers of teaching effectiveness that were linked to academic success. When the factors are connected with academic performance, commitment has the highest r -value ($r = -.132$, $p > 0.05$). As a result, there is a considerable link between commitment and academic performance. When the remaining measures, such as topic knowledge ($r = -.095$, $p > 0.05$), instruction for autonomous learning ($r = -.095$, $p > 0.05$), and learning management ($r = -.084$, $p > 0.05$), were associated to academic performance, they revealed insignificant associations.

Table 4 Correlation between Teaching Effectiveness and Academic Performance

Teaching Effectiveness	Academic Performance (GPA)
Commitment	-.132*
	.018
Knowledge of the Subject	-.095
	.087
Teaching for Independent Learning	-.095
	.089
Management of Learning	-.084
	.134
Overall	-.119*
	.033

* $p < 0.05$ (Correlation is significant at 0.05 level (2-tailed)).

Association between Gender and Academic Performance

The findings presented in Table 5 showed the association between gender and the academic performance of the business administration students. Since gender is a categorical variable and could not illustrate a linear relationship, the Eta coefficient test was utilized. This measured the strength of association between gender having two categories (male and female) and the academic performance of students which was a scale or interval variable. The result of Eta coefficient test revealed 0.314, a weak association between gender and academic performance based on the Pearson's Correlation Coefficient scale for use with the Eta Coefficient.

Table 5 Association between Gender and Academic Performance

Eta Coefficient Test	
Academic Performance as Dependent Variable	.314

Multiple Regression Analysis on the Influence of Teaching Effectiveness and Gender on Academic Performance

Reflected in Table 5 is the regression analysis of teacher effectiveness and gender to the academic

performance of the business administration students. The multiple regression analysis was utilized to assess the strength of the relationship whether teaching effectiveness and gender predict academic performance. Findings unveiled that teaching effectiveness and gender were significant predictors of the academic performance of students as evidenced by $R = .333$, $R^2 = 0.111$, adjusted $R^2 = 0.105$ and $\{F(2,319) = 19.878, p < 0.05\}$. The R-squared of .111 manifests that 11% variation in academic performance of students is explained by the variation in teaching effectiveness and gender. Although the R-squared is low, it does not negate the importance of these variables since the p-value continues to be statistically significant and these coefficients have the same as interpretation indicated in this study (Frost, n.d.). Evidently, the obtained R-value of 0.333 signifies a relationship among the variables. This significant influence is proven by F-value of 19.878 with a $p < 0.05$ signifying model fit.

It is also established from the result that both teaching effectiveness and gender were significant at 0.05 alpha level as evidenced by their respective p-value of 0.039 and 0.000 and are considered to be predictors of academic performance. This further implies that both teaching effectiveness and gender have significant amounts of unique variance to the academic performance. The amount of variance that teaching effectiveness and gender predicting or influencing the academic performance uniquely on its own is significant. As a result, the null hypothesis that no meaningful association exists between teaching effectiveness and student academic achievement is rejected.

Table 6 Multiple Regression Analysis on the Influence of Teaching Effectiveness and Gender on Academic Performance

Model	Summary of Regression	Unstandardized Coefficients	Standardized Coefficients	t	Sig
		B Std. Error	Beta		
1 (constant)		2.454 .211		11.658	.000
Teaching Effectiveness		-.096 .046	-.109	-2.072	.039
Gender		.198 .034	.311	5.889	.000
Multiple R	0.333				
R Square	0.111				
Adjusted R Square	0.105				
F	19.878				
p	0.000				

Moderating Effect of Gender on the relationship between Teaching Effectiveness and Academic Performance

To have the moderation hypothesis tested whether gender moderated the relationship between teaching effectiveness and academic performance, hierarchical regression analysis was employed for this purpose. Teaching effectiveness was the independent variable, gender was the moderating variable, and academic performance was the dependent variable. This is reflected in table 7 as the primary source of data for table 8 and table 9 which are all essential in the formulation of mod graph as illustrated in Figure 2. Following the standard procedures, teaching effectiveness was multiplied with the dummy-coded gender variable to yield an interaction effect. These two main effects and the interaction term (teaching effectiveness x gender) were utilized in a hierarchical regression to predict academic performance. When regressing teaching effectiveness and gender in step 2, the model manifested to be significant ($p < .05$) and demonstrated a change in R-square of .097. The R-square change described how much variance in the dependent variable these predictors explained in each step. The R-square change of 0.097 signified an additional variance of 9.7% to the variance of 1.4% in step 1 regression showing that 1.4% of the variance in academic performance of students was due to the teaching effectiveness. The interaction term explained about .1% new variance above and beyond the two main effects. This was marked less than the change in R-square in steps 1 and 2.

Table 7 Regression Results to assess the Moderating Effect of Gender on the relationship between Teaching Effectiveness and Academic Performance

Model	Unstandardized Coefficients	Standardized Coefficients	t	R Sig.	R Square Change
step	B	Std. Error	Beta		
(constant)					
Teaching Effectiveness	.554	.221		1.577	.014
Gender	.104	.049	.119	2.143	.033
(constant)					
Teaching Effectiveness	.454	.211		1.658	.000
Gender	.096	.046	.109	2.072	.039
GenderxTeaching	.198	.034	.311	5.889	.000
(constant)					
Teaching Effectiveness	.374	.275		.632	.000
Gender	.078	.061	.089	1.289	.198
GenderxTeaching	.392	.426	.617	.919	.359
Effec	.043	.094	.307	.457	.648

Note: Gender was dummy coded with 0 = female, 1 = male. This regression included an interaction term named gender x teaching effectiveness. This interaction is not significant, $t = -.457, p = .648$

Table 8 Statistical Output Necessary to Graph the Moderation Result of Gender on the Teaching Effectiveness-to-Academic Performance Relationship.

Variable	B	Mean	SD
Teaching Effectiveness	-0.078	4.52764	.337062
Gender	.392		
Interaction Term	-.043		
Constant	2.374		

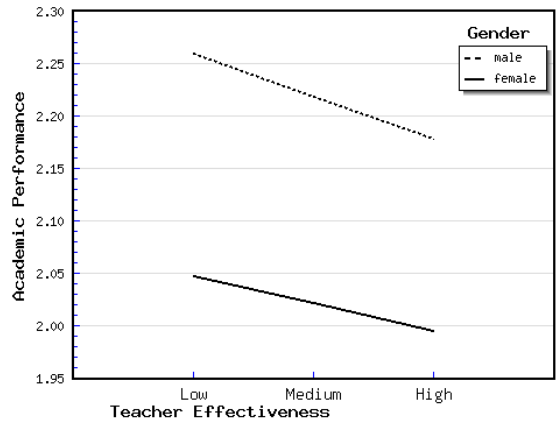
Table 9 Summary of Means on the Main Effects of Teaching Effectiveness on Academic Performance

Gender	Teaching Effectiveness		
	Low	Medium	High
Female	2.047135	2.020844	1.994553
Male	2.25894	2.218156	2.177371

The unstandardized coefficients, mean, and standard deviation of teaching effectiveness reflected in step 3 regression in table 7 were utilized and presented in table 8 supported with descriptive statistics and the computed values of the main effects of teaching effectiveness and gender to the academic performance in table 9. When the effect of one independent variable differs based on the extent of magnitude of another variable which is also the moderating variable, the interaction is said to take place. The interaction effect ($B = -.043$, $p > 0.05$) which was the product of gender and teaching effectiveness was not significant. No evidence was proven that gender moderated between teaching effectiveness and academic performance of students; hence, the null hypothesis is accepted. The interaction effect was not a contributor to the model variance. A modgraph is generated as illustrated in Figure 2 to validate the results of the regression. The graph shows two asymmetrical lines represented by male (heavy line) and female (broken line). One way to determine the presence of the interaction effect is when one slope is steeper than the other. As can be seen in the Figure 2, the male slope is steeper than the female slope. Simple slope analysis further unveiled that male students demonstrated a non-significant slope, -0.121 , $p > 0.05$. Females also generated a non-significant slope of -0.078 , $p > 0.05$. These slopes were calculated after obtaining the covariance matrix in regression analysis as presented in table 10. The results show that the effectiveness of teachers as perceived by both male and female students when moderated is not related to their individual academic performances. Hence, gender is not a contributing factor between teaching effectiveness and academic performance.

Table 10 ModGraph Output for Simple Slopes of Male and Female Groups

	Male	Female
Simple Slopes	-0.121	-0.078
Standard Errors	0.0707	0.0632
t-values	-1.7111	-1.2332
p-values	0.0880	0.2183

Moderating Effect of Gender on Teacher Eff and Acad Perf**Figure 2** Graphical depiction of the moderating effect of gender in the teaching effectiveness-to-academic performance relationship

Discussion

In relation to the commitment, the very high level as demonstrated by the faculty members in the business administration program is attributed with their preparedness in their assigned responsibilities. Faculty members have accurate records in determining the academic performance of students and are periodically submitted on time to the concerned authorities. This level of commitment corroborates the findings of previous research (Altun, 2017; Gupta & Verma, 2021) contending that students are motivated to comply with activities when teachers have a high level of commitment. Parallel to the findings of this study, Bashir and Gani (2020) contended that when instructors have the impression that their organizations have high level of involvement, they respond with a stronger level of dedication and view themselves as an essential component of the organization (Batugal, 2019).

The knowledge of the subject also signifies a very high level. This is remarkably manifested by faculty members who have innovative knowledge in articulating the integration of current issues and trends to the subject. They also explain the relevance of the present topics to the previous lessons demonstrating the mastery of the

subject matter. These findings are in congruent to the study of Kiamba et al. (2017) where the teacher's subject knowledge is an essential parameter of teaching effectiveness. Parallel to this study, Jeschke et al. (2021) opined that the provision of learning opportunities may not be sufficient to meet the needs of an experienced teacher of one subject if teaching that subject demands knowledge and the capacity to apply knowledge specific to that subject. The findings corroborate to the beliefs of Kirschner and Wopereis cited by Gandhi and Lynch (2016) who argued that instructors should have access to all of the information that they require in order to successfully transmit information to their pupils.

Teaching for independent learning results showed at a very high level. This is apparent where students are encouraged to learn and are also guided beyond what is required for them to set concepts into practice. Since the practice allows them to think independently and to hold accountable in executing their decisions, these students are given due recognition of their academic performances which greatly enhances their self-esteem. These results aligned to the qualitative study of Susanti (2017) where independent learning was perceived by the informants in the higher education is very essential as they learn something new beyond the boundaries of the classroom. In conjunction with the results of this study, Alserhan's and Yahaya's (2021) findings concluded that in order to promote students' individual progress, teachers developed empathetic responses to their students' classroom participation and critical imitation of instructional strategies. Structuring and/or reconstructing the learning and teaching-learning context in order to improve the achievement of group learning objectives has an additional impact on student learning management. Consistent with the results obtained by Munna and Kalam (2021), an active learning environment promotes diversity and improves the efficiency of both teachers and students. Faculty members used their inventiveness to allow students to develop their mental powers throughout class activities. The findings support Magulod's (2019) findings that strong correlations exist between students' learning styles, study habits, and academic achievement.

There is a compelling support for the role of teaching effectiveness (i.e. commitment, knowledge of the subject, teaching for independent learning, and management of learning) in fulfilling the academic performance of students. Good educators should be experts in the subjects they teach and to have a teacher

who is an authority in his or her field is like having a gold mine in a classroom (D & Harcourt, 2019). Akram (2019) inferred that subject knowledge of teachers is a significant predictor of students' academic performances. Additionally, findings revealed that commitment rendered a significant relationship towards academic performance. The outcomes of this study coincided with the studies conducted by Bibiso et al. (2017), which asserted that a positive association can be seen between a teacher's level of commitment and the academic accomplishment of their students. Looking into the entire spectrum employed in this study, teacher effectiveness revealed to contribute a significant relationship to the academic performance. These findings are congruent from the study of Bird (2017) who espoused that significant relationships did exist between student achievement and teacher evaluation. Further, the results of this study also corroborate to other studies indicating the significant relationships between teaching effectiveness and academic performance of students (Akram, 2019). Moreover, parallel to the study of Akram (2019), teacher effectiveness proved to be a significant predictor to the academic performance and that effective teachers do produce better performing students (Akiri & Ugborugbo, 2017). Examining closely on the dimensions of teaching effectiveness used in this study, knowledge of the subject, teaching for independent learning, and management of learning did not show significant relationships to the academic performance of students.

Further, gender was not associated in the academic performance of students. However, female students perform better than males students as evidenced in their means. These results are in conjunction with other studies that females students outperformed the male in terms of their academic performances (Ahmad et al., 2018; Parajuli & Thapa, 2017). Regression results reveal that both teaching effectiveness and gender are significant predictors on the academic performance of students. However, results found to be unlikely the same during the interaction between teaching effectiveness and gender which did not predict the academic performance of the college students in the business administration program. The results show that gender, when moderated with teaching effectiveness, failed to predict the relationship in the academic performance of students. Changes in gender did not significantly affect the variation in the teaching effectiveness in an attempt to influence the academic performance. Regardless of gender, how students perceived the level of teaching

effectiveness remained the same. This result is consistent with other studies that the inclusion of gender to moderate the relationship between emotional engagement and academic achievement is not significant (Lei et al., 2018)

Suggestion

This quantitative study investigated the moderating variable's triangulated effect interacted with the antecedent variable to determine if the moderator had a significant impact on the result variable. In terms of the direct impacts of teacher effectiveness on academic performance, the correlations among variables revealed in this study were extremely wide and consistent with the assumptions. The factors used in the analysis were chosen to help the researcher to reach more specific conclusions. The effectiveness of teachers and student academic success as evaluated by the grade point average are closely associated, according to the regression research. There is no link between gender and academic success. Furthermore, gender had no influence on the connection between teaching effectiveness and academic achievement. To summarize, commitment, topic knowledge, instruction for autonomous learning, and learning management were shown to be critical variables in students' academic performance. Although it stressed out that teacher effectiveness is an influential factor in predicting the academic performance of the students in consideration with their genders, an intriguing question lies on which of the individual components of teacher effectiveness is the most substantial predictor of academic performance when moderated by gender. One limitation of this study is that the evaluation of teachers is mainly concentrated on the variables covered in this study. It is believed that there are more unexplored antecedents of teacher's effectiveness affecting the academic performance of students. Further research is suggested to provide a more comprehensive analysis in understanding the relationships of the variables especially the conditioning effects of gender issues in relation to other factors. Given these results, the academic council may periodically review the instructional platforms of the university in enhancing the teaching effectiveness of the faculty members considering the changing learning environment vis-à-vis the learners in the millennial generation.

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