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ABSTRACT

The purpose of this study is to investigate the connection that exists between students' perceptions of their professors' effectiveness and their attitudes toward the educational process. The research was conducted at four different universities, and it included 348 faculty respondents and 646 student respondents. The researchers used a customized questionnaire to collect data, and the surveys were conducted both online and in-person. A survey questionnaire was used to assess teachers' levels of efficacy, and a Likert scale was utilized to evaluate students' perspectives on the value of education. The study indicated that teachers had high levels of self-efficacy in all elements of teaching, and that students had mainly positive attitudes toward learning. However, several aspects of students' attitudes vary depending on factors such as their age, gender, the dialect spoken at home, and whether or not they had access to the internet. The study makes a number of suggestions for educational leaders or managers, institutions, teachers, and future academics to consider when formulating policies on learning and self-efficacy in the future.

Keywords: attitude, instructional strategies, motivational strategies, self-efficacy

INTRODUCTION

Children are taught fundamental academic information, learning skills, and cultural standards within the context of the institution of education, which is a social institution. The trend toward higher accountability is becoming the norm, and with it comes an ongoing number of reform efforts in the education sector. Many people have mandated school improvement as a means of responding to the request for higher accountability. This improvement is to be accomplished by the leadership, teachers, culture, resources, and pedagogy of the school as a whole, all of which must work in concert to alter school practices in ways that result in improved student results.

Related Literature

Self-efficacy is the amount of energy, determination, and perseverance an individual is willing to work toward is considered self-efficacy (Pajares, 1997). It is a self-belief of teachers on their capabilities and trust they have on their methodologies to accomplish the tasks. Self-efficacy guarantees teachers that they are able to transfer their knowledge to the students successfully. Teachers with a better sense of self-efficacy beliefs are more willing to try new methods of teaching to meet the requirements of their students.

Woolfolk (1998) articulates that self-efficacy is also related to the result of activities used in the classrooms. According to him, the most influential source of self-efficacy information is said to be the mastery level experiences of an individual, which one experiences directly. If a person accomplishes a given task, it means that self-efficacy beliefs are being promoted positively. On the other hand, failure displays a low level of self-efficacy. If teachers accomplish the task successfully, self-efficacy will increase while low level of teachers' self-efficacy leads to failure.

Bandura (1997) characterized self-efficacy as an individual's thoughts, feelings, behaviors, and motivations that developed into personal efficacy. In addition, he emphasized cognitive concepts in social experiences and how these cognitions influenced behavior and development. The factors which affect self-efficacy include physiological emotions like stress, excitement or joy. While performing a particular task, physiological and emotional conditions like anxiety, enthusiasm or joy affect individuals' beliefs about their capabilities. He affirmed that the force of physical and emotional reactions is not so crucial as the beliefs of these reactions.

Throughout the career of an educator, self-efficacy can be a source of inspiration and obligation (Tschannen-Moran & Woolfolk Hoy, 2001), as well as a strong predictor of effectiveness (Reilly, Dhingra, & Boduszek, 2014).

Continuing to find ways to improve upon self-efficacy will benefit both the educator and the school. As stressed by Barkley (2006), the high and low efficacy effect predicts the individual's performance level, whether he or she will be persistent or surrender all efforts. High efficacy teachers confront educational challenges and

willingly experiment with newly developed teaching strategies while low efficacy teachers view strategies, such as differentiation, as an unmanageable challenge. Overall, teachers of high efficacy spend more time monitoring their students overall and are able to maintain student engagement in artful ways whereas low efficacious teachers tend to seek out reliable students to answer, allow outbursts, or even answer themselves, all to avoid the uncertain or incorrect answers. This behavior further depletes the confidence, engagement, and risk-taking efforts of students who may be unsure of themselves. Over time, these unsure students concede all efforts to engage in learning and resort to disruptive behavior. Often, low efficacious teachers label these students as difficult and pursue outside assistance, such as Special Education, rather than believe that they are able to meet the child's needs inside the classroom; this is a belief common to high efficacy teachers.

According to Klem & Connell (2004), the success of the success, directly associated to teacher efficacy, requires certain conditions such as: (a) high standards; (b) meaningful and engaging curriculum; (c) professional learning communities; (d) personalized learning environments; and above all else, (e) support from both teachers and administrators. From the perspective of students, they must sense that: (a) their teachers care, (b) they are free to make their own decisions, (c) they are provided with relevant work, (d) the expectations are appropriate, and (e) the consequences are fair and predictable. If the students perceive that they are participants in a caring learning environment, they are more likely to be engaged in school. Higher levels of engagement produce increased attendance and higher test scores. This demonstrates the link of teacher efficacy to student achievement on standardized tests (Barkley, 2006). With increased student engagement, students are more likely to complete school and pursue postsecondary education which will better ensure their economic independence.

Factors that can influence academic performance are demonstrated by many researchers showing that poor performance is a function of cross-factors related to students, teachers and schools. Among the students' factors, attitude is regarded by many researchers as a key contributor to higher or lower performance. Attitude refers to a learned tendency of a person to respond positively or negatively towards an object, situation, concept or another person (Sarmah & Puri, 2014). Attitudes can change and develop with time (Syeda, 2016), and once a positive attitude is formed, it can improve students' learning (Akinsola & Olowojaiye, 2008; Mutai, 2011). Conversely, a negative attitude hinders effective learning and consequently affects the learning outcome henceforth performance (Joseph, 2013). Therefore, attitude is very vital to the learning process and it is a fundamental factor that cannot be ignored. The effect of attitude on students' performance might be positive or negative depending on the individual student.

The concept of attitude is generally explained as positive or negative emotions and thoughts related to a specific social object such as humans, objects, facts or events (Bilgin, 2007). Attitude is a state of mental or neural readiness both as the premise and the consequences of behavior as a result of tendencies of emotions, thoughts, behaviors emerged due to previous experiences (Richardson, 1996). While attitudes, which are not directly seen but can be observed through behaviors, give direction to human behaviors, they are a phenomenon that can differentiate decision making, problem solving processes, in other words all interactions, and that can lead to bias. Simply, just as a positive response in a situation with a positive attitude can affect the approach to the events and phenomenon differently, negative reaction with a negative attitude can affect differently as well (Ajzen & Fishbein, 2005). At this juncture, the effort of the student to show the expected behaviors in terms of teaching objectives, as a positive or negative attitude towards learning, is regarded as a predictor of the academic success of the student (Simon, & Collins, 2003; Hong-sheng, 2005; Tandogan & Orhan, 2007; McAuley, Leskovec, & Jurafsky, 2012).

A student displays feelings and thoughts in terms of learning environment and learning processes with appropriate or inappropriate behaviors in accordance with the expectations of the environment. He or she tends to explain ones' self with positive or negative attitudes. When students are provided with real world learning experiences, they find meaning in what they do, a foundational principle of student engagement (Klem & Connell, 2004). Learning efforts continue as students: (a) pay more attention, (b) show more interest, (c) are more persistent, and (d) thereby receive even more teacher support.

Teacher support, in the form of positive feedback, intensifies the experience of the student within the learning environment which empowers them to become better learners. They hunger for challenging tasks that sharpen the skills of strategic thought and experimentation. These high expectations, in combination with a personalized learning environment, are powerful mediators of high student achievement.

Related Studies

Numerous studies had been conducted to determine how teachers and students' characteristics, teacher efficacy and student attitude towards learning contribute to the students' academic achievement.

Waitshega, T and S. Dibapile (2012) reviewed the literature on teacher efficacy and classroom management based on the theories of Rotter (1966). and Bandura (1977). The review of literature indicated that teacher efficacy helps teachers plan effective instructional strategies, increases performance, and enhances teacher effectiveness and productively. On the other hand classroom management helps teachers to control students

who have behavioral problems. Teacher efficacy researchers used and modified instruments to measure teacher efficacy construct. In conclusion, culture was identified as a variable that impacts upon teacher efficacy.

Freeman (2008) the opined that teachers truly are the core to school reform and must be valued as such. It is suggested that more time should be spent in pursuit of strategies and methodologies that seek to support efficacious teachers so that their talent and skills are retained. Policy makers and school administrators must work to mediate the change our educational system needs. They must confront the realities of the difficulties that teachers face daily and provide concrete solutions rather than scrutiny and penalties. Teachers should embrace and pursue professional development in order to increase their internal belief, the belief that they have the power to impact all students. They should seek positive professional relationships of encouragement and accountability. Finally, they must be brave and take risks in the classroom daily. All in all, they must do whatever it takes.

According to Achurra (2012), the teacher's perception of their teaching self-efficacy includes a whole set of beliefs about their own ability to teach and to exert a positive effect on student learning. These beliefs are linked to behavior patterns that teachers show in the classroom, and that establish marked differences in the type of teaching and in the strategies and methodologies used by teachers in their daily practice. This paper examines the results of a study in which 71 teachers and over 200 students from the University of Deusto (Spain) and the Catholic University of Temuco (Chile) took part. The aim of this study was to analyse teachers' beliefs and their relationship to students' perceived learning.

Shahza, K. and S. Naurean (2005) conducted a study on the impact of teacher self-efficacy on secondary school students' academic achievement and found out that teacher self-efficacy has a positive impact on the students' academic achievement.

ŞenayŞen, H. (2013) affirmed that attitudes towards learning are important factors on the learners' levels of goal setting, problem solving abilities, their beliefs towards learning, their inner and external motivations in the process of learning and all the academic performances they perform. In this study, it is aimed to analyze the attitudes of university students in terms of different variables by using screening model. The attitudes of university students towards learning are evaluated from the points of four sub-dimensions (the nature of learning, anxiety, expectation, and openness), their genders and academic achievements. It has been seen that prospective engineers and technical teachers have positive attitudes towards learning.

Blazar, D., & Kraft, M. A. (2017) whose research has focused predominantly on how teachers affect students' achievement on tests despite evidence that a broad range of attitudes and behaviors are equally important to their long-term success found out that that upper-elementary teachers have large effects on self-reported measures of students' self-efficacy in math, and happiness and behavior in class. Students' attitudes and behaviors are predicted by teaching practices most proximal to these measures, including teachers' emotional support and classroom organization. However, teachers who are effective at improving test scores often are not equally effective at improving students' attitudes and behaviors. These findings lend empirical evidence to well-established theory on the multidimensional nature of teaching and the need to identify strategies for improving the full range of teachers' skills.

In the articles of Adegbola (2019), upon investigating teachers' pedagogical competence as determinant of students' attitude towards Basic Science in South-West Nigeria, it was found out that teachers' pedagogical competence can significantly influence students' attitude towards Basic Science. It was recommended that, emphasis should be laid on teachers' qualifications while employing Basic Science teachers. Teachers should also intensify efforts in using various teaching styles which could influence students' attitude. It was also recommended that adequate measures should be taken by the teachers to ensure that students benefit from their teaching. In addition, the

government and other educational stakeholders should arrange for seminars and workshops for their teachers to boost their levels of competence in the classroom. Teac

Tastan, et al (2018) observed an increasingly awareness of a series of global, technological and scientific advancement that create a need of good performance in science education at all levels of schooling. These challenges, among them are rapid science and technological changes, a rise of information technology use, and continuing movement towards a knowledge-based society all highlight the need for deep education in science including biology, chemistry, environmental science, physics, and sustainability. In fact, the impact of teacher characteristics of self-efficacy level is important for science education and students' learning outcomes in science. In an effort to highlight this, this study investigated the impacts of teacher efficacy and motivation on students' academic achievement in science education in secondary and high schools located in Iran and Russia using motivation for academic performance scale ($\alpha = 0.89$) and teacher self-efficacy scale ($\alpha = 0.91$) as measuring instruments and achievement test in science education. Two hypotheses were tested using the statistical programmer. For evaluating the demographical differences of the students in terms of their academic achievement, comparative analyses were performed using t-test. Results showed that gender difference was not significant but nationality difference was significant in terms of students' academic achievement in science education. Also other findings reported significant impact of teacher self-efficacy and motivation on academic

achievement in science education. Implications, suggestions and recommendations for students, teachers, school administrators, parents, government, education counselors, etc. were discussed and presented.

Sarac and Tutak (2017) investigated the relationship between teacher efficacy to student trigonometry self-efficacy and student trigonometry achievement. Findings showed that no significant relationship was found between general teaching efficacy or mathematics teaching efficacy and student-related variables. The t-test results show that students of teachers who had high trigonometry teaching efficacy got higher scores on the trigonometry self-efficacy scale than students of teachers with low trigonometry teaching efficacy. Between these two groups of students' achievement test scores, on the other hand, no significant difference was found. The results underline the importance of teachers' trigonometry teaching efficacy for students' trigonometry self-efficacy, as well as the importance of measuring self-efficacy in a task-specific way.

Marjolein Zee, Helma M. Y. Koomen (2016) conducted a study integrating 40 years of teacher self-efficacy (TSE) research to explore the consequences of TSE for the quality of classroom processes, students' academic adjustment, and teachers' psychological well-being. Via a criteria-based review approach, 165 eligible articles were included for analysis. Results suggest that TSE shows positive links with students' academic adjustment, patterns of teacher behavior and practices related to classroom quality, and factors underlying teachers' psychological well-being, including personal accomplishment, job satisfaction, and commitment. Negative associations were found between TSE and burnout factors. Last, a small number of studies indicated indirect effects between TSE and academic adjustment, through instructional support, and between TSE and psychological well-being, through classroom organization. Possible explanations for the findings and gaps in the measurement and analysis of TSE in the educational literature are discussed.

Alrefaei, Nouf Abdullah (2015) investigated which teachers' characteristics have an impact on teachers' sense of efficacy. In addition, the relationship between mathematics and science fifth grade teachers' sense of efficacy and student achievement was examined. Two characteristics related to teachers were examined: teachers' years of teaching experience and teachers' highest degree. When comparing fifth grade mathematics and science teachers' efficacy beliefs based on their highest degree, a significant difference in teachers' efficacy beliefs was found based on their degrees. Teachers with a Bachelor degree have higher total efficacy than teachers who hold Master's degrees. Moreover, an investigation to determine if there is a difference in mathematics and science teachers' efficacy beliefs in the three subscale of teachers' efficacy (for classroom management, for student engagement, and for instructional strategies) revealed a significant difference in teachers' efficacy for two of the three constructs. However, when examining teachers' sense of efficacy based on their teaching experience, no differences in teachers' efficacy were found. A correlation was conducted and the results indicated that there was no significant relationship between fifth grade teachers' sense of efficacy and students' achievement in the benchmark test in mathematics and science. The recommendations from this study should be used to inform other scholars and administrators of the importance of teachers' sense of efficacy in order to improve students' achievement gains.

Wanzung, Karen Lynn (2000) tested the hypothesis that the combination of teachers' sense of efficacy, and teacher motivation predicts student participatory behavior, and that teacher behaviors mediate this relationship which consisted of two parts: surveying community college instructors and observing instructors' lectures and student participation. Results indicated that the hypothesized model was supported and that it was the best fitting model for the data.

Blazar, David (2016) studied teacher and teaching effects on students' academic performance, attitudes, and behaviors and confirmed that teachers have substantial impacts on their students' academic and life-long success. However, little is known about specific dimensions of teaching practice that explain these relationships or whether these effects differ between academic and "non-cognitive" outcomes. Likewise, he found out that upper-elementary teachers have large effects on a range of students' attitudes and behaviors in addition to their academic performance. These teacher effect estimates have moderate to strong predictive validity. Furthermore, student outcomes are predicted by teaching practices most proximal to these measures (e.g., between teachers' math errors and students' math achievement, and between teachers' classroom organization and students' behavior in class). However, teachers who are effective at improving some outcomes often are not equally effective at improving others. Together, these findings lend important empirical evidence to well-established theory on the multidimensional nature of teaching and student learning and, thus, the need for policies that account for and incentivize this complexity.

Al-Alwan and Mahasneh (2014) conducted a study wherein teachers' self-efficacy was examined as determinant of students' attitudes toward school. Results indicated that the level of teachers' self-efficacy is moderate. Also, there is a significant correlation between teachers' self-efficacy and students' attitudes toward school. On the other hand, teachers' self-efficacy a good predictor of students' attitudes toward school. Finally, the results showed that no significant differences between male and female teachers in their level of self-efficacy.

Sadia Batool and Syed Mubarak Abbas Shah on their study, "Causative Factors behind an Efficacious Teacher: Evaluating Teacher Efficacy", asserted that in the third world school dropout rates are the highest, which is

largely attributable to a dearth of efficacious teachers. As per the results of their study, subject specialization affects teacher efficacy the most whereas, institution type influences teacher efficacy the least. The less experienced teachers have a greater self-efficacy than the experienced teachers, teachers teaching uncrowded classes are more efficacious than those teaching crowded classes.

In 2018, Badrie ELDaou explored the relationship of the perceived teacher's self-efficacy related to ICT usefulness and attitudes after training and the student's science education performance. Findings of this study revealed that teacher's self-efficacy in the level of technology use, and attitudes have significant effects on the grades and interaction of students with special needs. The results indicated that participants of group one, who were trained, were able to better define and apply technology in the science classroom than group two which was not being trained. The findings suggest that knowledge and beliefs can influence teacher's intent to use technology in the classroom, especially as evidenced by the integration of ICT in their lesson plans. Moreover, results indicate a significant positive Pearson correlation $r=0.6$ between teacher's self-efficacy, knowledge, attitudes and special education students' science results. Recommendations, implications and future research were discussed.

Ngeche (2017) examined the relationship between student attitudes and performance in Mathematics in secondary schools in Cameroon. The study generally revealed a significant relationship between student attitudes and performance in Mathematics. Specifically, it revealed that the cognitive, affective and behavioural attitudes of students influence their performance in Mathematics. Based on the findings of the study, it was recommended that students should endeavour to build new mathematical knowledge through problem solving and apply and adapt a variety of appropriate strategies to solve problems. Considering that teachers' attitude predicts student attitudes toward performance in mathematics, it was recommended that the subject "Didactics of Mathematics" be taught as a compulsory subject for all teacher training institutions. Also, routine capacity building workshops should be organised at the national, regional and school levels to develop the cognitive, affective and behavioral attitudes of in-service teachers.

Das, Samit & Halder, Ujjwal & Mishra, Bapi. (2014) stressed that attitude is the belief that one has towards people and surroundings. In case of education, students' positive attitude may influence their academic achievement. From their study, they highlighted that there are some prime factors like anxiety, socio-economical status etc. which may create barrier for academic achievement. Likewise, the result also showed that there is no significant difference between boys and girls students in attitude towards education and academic achievement scores. It was also found that attitude towards education and academic achievement have very low negative relation (-0.10) which is not statistically significant.

Dagneu, Asrat (2017) investigated the relationship between students' attitudes towards school, values of education, achievement motivation and academic achievement. The results obtained from grade 9 students indicated that students have positive and significant attitudes towards school, values education and achievement motivation. There was positive and significant relationship between students' attitude towards school, values of education, achievement motivation and academic achievement. Finally, the independent variables were found to be significant predictors of the criterion variable. On the basis of these results it was suggested that principals, supervisors, teachers, parents and educational practitioners should give attention to students' attitude towards school, values of education and achievement motivation in secondary schools and during instruction besides the cognitive factors.

Abu Bakar et al (2010) studies that relationships between university students' achievement motivation, attitude and academic performance in Malaysia to which they highlighted that student achievement problems are often highlighted in academic literature and the mass media and therefore, it is pertinent for educators to be aware and to study the factors related to student achievements such as achievement motivation and attitude. The results of their study indicated a positive significant correlation between students' attitude towards learning and achievement motivation ($r = 0.53, p < .001$), and between students' attitude and academic achievement ($r = 0.16, p < .001$). However, a negative and low correlation ($r = -.038, p > .05$) was observed between students' achievement motivation (nAch) and their academic achievement. The implications of the findings were also discussed in the paper.

Liddell (2004) examined the relationship between students' attitudes to consultation skills, their confidence in performing those skills and their academic results. Final-year medical students completed a questionnaire before and after the year 6 general practice attachment, which teaches holistic, patient-centred clinical management and emphasizes core verbal and non-verbal communication skills. When underlying academic ability was taken into account only pre-attachment attitudes regarding the importance of consultation skills remained significantly correlated with at least one measure of performance. Student confidence in performing a skill was not associated with academic measures of performance. These results show that students perform better on those skills that they value and this may be influenced by underlying motivation to master the skill. In contrast, students' confidence in performing a skill is not related to their assessed performance and using confidence as a performance measure may misrepresent the quality of learning being assessed.

Kpolovie, Joe and Okoto (201) conducted a prediction analysis of academic achievement with role of interest

in learning and attitude towards school as the predictor variables. The investigation revealed overwhelming preponderance of data-based evidence that students' interest in learning and attitude towards school jointly and separately predict academic performance in the Senior Secondary Certificate Examination conducted by the West African Examination Council, particularly in English Language, Mathematics, Biology and Economics (the subjects that operationally constituted academic performance in this study). The prediction of academic performance implies the great need for both teachers and parents to be actively involved in the improvement of students' interest in learning and attitude to school for possible amelioration of the students' academic performance in the SSCE. They made the following recommendations: (1) Teachers should device modern methods of teaching to arouse students' interest in learning each of the various subjects. Inadequacy and inappropriateness of the instructional methods and materials used for teaching-learning interactions may only handicap academic performance by blocking students' interest in learning and worsening their attitude to school; (2) Teachers and parents should try and build self-confidence in their wards/students as it could boost students' interest in learning and improve their attitude towards school; (3) Igniting a spark of energy and fervor in children to learn and succeed in academic and life pursuits is a fundamental role of teachers and parents alike. It is recommended that students should be adequately motivated in their studied do well not only in examinations but in the setting and attainment of excellent life-long goals and (4) Since interest in learning plays irresistible role in significantly predicting academic performance, psychologists need not delay in unambiguously accepting and adding interest as an indisputable psychological construct; and in according the trait the desired attention by investigating the relative influence that it wields over several other psychological attributes. Such inclusion and attention could help greatly in psychological praxis that essentially deals with ascertainment of why people act the way they do and the imminent consequences.

Janssen, Susan and O'Brien, Maureen (2014) observed that interplay among motivation, ability, attitudes, behaviors, homework, and learning is unclear from previous research, hence, they analyzed data collected from 687 students enrolled in seven economics courses. A model explaining homework and exam scores is estimated, and separate analyses of ability and motivation groups are conducted. They found out that motivation and ability explain variation in both homework and exam scores. Attitudes and behaviors, such as procrastination and working with others directly, affect homework score, but not exam score. These effects are not the same within all motivation and ability groups. Given that homework is the strongest predictor of exam score, we conclude that graded homework is beneficial to learning, and attitudes and behaviors related to homework may have an indirect benefit for exam performance. Suggestions are made as to how homework and course design might be managed to help students at different ability and motivational levels maximize learning.

Synthesis of the Review of Related Literature and Studies

Researchers on related literature and studies ascertained that teacher efficacy and students' attitude towards learning are vital factors in the academic performance of the learners.

The aforementioned review of related literature and studies made are similar to the direction set by the researcher as all are concerned on the improvement of students' academic performance. Some dealt on teacher efficacy while others on students' attitude towards learning which the variables considered in the present study. The dissimilarity, however lies in the setting of the study as well as the variables considered for analysis. This study will specifically determine, not only the relationship between the teachers' self- efficacy and students' attitude towards learning but will also how these differed according to their respective profiles. The differences in the self-efficacy of teachers will also be tested according to their age, gender, civil status, highest educational attainment and number of years in the service. In the same manner, this study will also seek to determine how the attitude of the students differ according to their age, gender, number of sibling in the family, language spoken at home, monthly family income, accessibility to internet, and availability of ICT tools at home. It can be noted further that, in this study, extent of teacher's efficacy self-efficacy score evolved task-specific teacher efficacy beliefs, particularly on Teacher Sense of Efficacy (Efficacy for instruction, motivation, and classroom management; Behavior management strategies; Instructional strategies; and Motivational strategies.

The abovementioned literature motivated the researcher to come up with a study that was quantitative investigation of the relationship between the teachers' self-efficacy and the students' attitude towards learning in one or more State Universities and Colleges in the Philippines.

METHODS

The research was carried out using a quantitative research design, which is a technique of research that focuses on the collecting of numerical data that can be examined using statistical methods. The research was carried out using a quantitative research design. In order to investigate the connections that exist between a wide range of variables, this design incorporated both descriptive and correlational components.

The major purpose of the research was to investigate the extent to which there is a correlation between students' attitudes toward learning and their levels of academic success. The second objective of the study was to evaluate the connection between instructor profile and teacher self-efficacy. Self-efficacy can be defined as an

individual's belief in their capacity to accomplish particular objectives or responsibilities.

The research was carried out at Cagayan State University, Isabela State University, Nueva Vizcaya State University, and Quirino State University, all of which are located within Region 02 in the Philippines. The number of people who took part in the study was counted with a level of confidence of 99% and a margin of error of 5%. The research was based on the opinions of 348 individuals, the majority of whom were students at the ISU-Echague Campus.

For the purpose of data collection, the study made use of a questionnaire that contained multiple scales. The Teacher Sense of Efficacy Scale was utilized in order to determine the teacher's overall sense of efficacy. This scale is comprised of three subscales, which are as follows: efficacy for instruction, efficacy for motivating, and efficacy for classroom management. In addition to that, the scales for Behavior control strategies, Instructional strategies, and Motivational strategies were incorporated. The Attitude Towards Learning Scale, which was designed by Kara (2009) and was based on the Likert scale of attitudes towards learning, was utilized in order to measure the attitudes that students have towards learning. The nature of learning, expectations from learning, openness to learning, and anxiety about learning were the four subscales included in this scale.

Statistical Package for the Social Sciences (SPSS) was used to perform the steps of categorizing, tallying, and tabulating the acquired data in preparation for statistical analysis. For the purpose of elaborating on the data that was collected, descriptive statistics such as frequency, percentage, and mean were utilized. Both the Mann-Whitney U Test and the Kruskal-Wallis H-test were utilized in order to analyze the differences between the groups. In order to assess the way in which the variables in the study are related to one another, Kendall's tau-b was utilized.

Finally, the research offered new understandings into the connections between students' perspectives on learning and their levels of academic success, as well as the connections between the characteristics of a teacher's classroom environment and their sense of their own professional competence. The findings of this study could be valuable for teachers and educational institutions in the process of developing effective teaching strategies to improve students' attitudes toward learning and academic accomplishment.

RESULTS AND DISCUSSIONS

A. Profile of the Respondents

Table 1: Population and sample size of teacher and student-respondents by SUC in R02.

Name of SUC	Teacher-respondents			Student-respondents		
	N	n	%	N	n	%
CSU- Andrews Campus	185	88	25.29	5623	159	24.61
ISU- Echague Campus	236	112	32.18	7784	219	33.90
QSU- Diffun Campus	113	54	15.52	2466	70	10.84
NVSU- Bayombong Campus	197	94	27.01	7006	198	30.65
Total	731	348	100.00	22879	646	100.00

Table 1 presents the distribution of faculty and student-respondents per SUC, wherein out of 348 respondents, majority of the respondents came from ISU- Echague Campus with a sample size of 112 or 32.18 percent, followed by NVSU- Bayombong Campus with 94 respondents or 27.01 percent. There were also 88 or 25.29 percent teacher-respondents from CSU- Andrews Campus and 54 or 15.52 percent were from QSU- Diffun Campus. Furthermore, it shows the population and sample size of student-respondents from the different SUC's in R02. It can be gleaned that majority of the student-respondents came from ISU- Echague Campus with a sample size of 219 or 33.90 percent, followed by NVSU- Bayombong Campus with 198 or 30.65 percent. There were also 159 or 24.61 percent from CSU- Andrews Campus and 70 or 10.84 percent from QSU- Diffun Campus.

B. Perceived Extent of Teachers' Self Efficacy

Table 2: Perceived Extent of Teachers' Self-efficacy

Sense Of Efficacy Scale	Mean	Description
Sense of Efficacy		
a. Efficacy for instruction		
1. Respond to difficult question from students.	4.43	Often
2. Provide appropriate challenges for very capable students.	4.37	Often
3. Implement alternative strategies in the classroom.	4.35	Often

4. Provide an alternative explanation or example when students are confused.	3.43	Often
b. Efficacy for motivation		
1. How well can you help your students value learning?	4.38	Often
2. How well can you motivate students who show low interest in schoolwork?	4.32	Often
3. How well can you improve the understanding of a student who is failing?	4.37	Often
4. How well can you get through to the most difficult students?	4.42	Often
c. Efficacy for classroom management		
1. Make expectations clear about student behavior.	4.25	Often
2. Get students to follow classroom rules.	4.26	Often
3. Control disruptive behavior in the classroom.	4.32	Often
4. Keep a few problem students from ruining an entire lesson.	4.42	Often
Behavior management strategies		
1. Establish specific rules and consequences for student misbehavior.	4.75	Most of the time
2. Monitor the entire classroom.	4.7	Most of the time
3. Correct misbehavior immediately.	4.75	Most of the time
4. Reward (e.g., praise) good behavior.	4.8	Most of the time
5. Use consistent disciplinary practices.	4.72	Most of the time
6. Discourage misbehavior.	4.85	Most of the time
7. Discuss behavioral problems with students to get their perspectives.	4.75	Most of the time
Instructional strategies		
1. Present new material in small steps.	4.74	Most of the time
2. Explain difficult ideas in a simple way.	4.79	Most of the time
3. Rephrase when the student does not understand the question.	4.82	Most of the time
4. Check that the students understand the lesson	4.8	Most of the time
5. Well prepared before going to class.	4.77	Most of the time
6. Systematically review previously taught materials.	4.76	Most of the time
7. Give the students feedback on their exams or tests.	4.75	Most of the time
Motivational strategies		
1. Make a special effort to give students work that is creative and imaginative.	4.79	Most of the time
2. Make a special effort to give students work that has meaning in their everyday lives.	4.82	Most of the time
3. Make the subject really interesting to the students.	4.8	Most of the time
4. Stress to students the need to understand the work rather than just memorize it.	4.84	Most of the time

The table above presents a study on the extent of teacher self-efficacy in State Universities and Colleges (SUCs) in Region 02. The study analyzed the mean ratings of teachers' self-efficacy in various areas, such as instructional practices, classroom management, behavior management, instructional strategies, and motivational strategies. The results showed that the teachers generally had high levels of self-efficacy in all areas, with mean ratings ranging from "often" to "most of the time." The information on the table also cites previous studies that have highlighted the importance of differentiation in instructional practices, effective classroom management practices, and the correlation between self-efficacy and positive student behavior. Overall, the study suggests that high levels of teacher self-efficacy are associated with successful teaching practices and positive student outcomes.

C. Perceived Attitude of the Students towards Learning

Table 3: Perceived Attitude of the Students towards Learning

Attitude Scale	Mean	Description
Nature of Learning		
1. The clever ones learn more easily.	3.83	Partly agree
2. Intelligence is vital for learning.	3.92	Partly agree
3. Learning goes on life-long	4.46	Partly agree
Openness to Learning		
1. I enjoy learning difficult subjects.	4.27	Partly agree
2. Learning has always interested me.	4.67	Agree
3. I still have a lot to learn.	4.23	Partly agree
4. I know how to make use of my experiences.	4.23	Partly agree
5. I enjoy learning new subjects.	3.9	Partly agree
6. I am always ready to learn new things.	4.36	Partly agree
Expectations from Learning		
1. Learning new things changes my thoughts.	4.26	Partly agree
2. What I learn changes my opinion of life.	4.23	Partly agree
3. I have to go on learning in order to make sound decisions about the problems encountered in daily life.	4.25	Partly agree
4. I want to develop my communication with people through learning new things.	4.58	Agree
5. Learning new things makes me successful in what I do.	4.41	Partly agree
6. The more I learn the fewer wrong decisions I make.	3.64	Partly agree
7. Learning new things motivates me more about my career.	4.47	Partly agree
8. The more I learn, the larger the aims I pursue.	4.44	Partly agree
Anxiety about Learning		
1. Forgetting what I learn in a short time makes me anxious.	3.93	Partly agree
2. Learning is a difficult job; I experience difficulties while I learn.	3.8	Partly agree
3. Losing too much time while learning disheartens me.	3.39	No Opinion
4. I am bored while listening to new subjects.	2.78	No Opinion
5. I feel anxious when I start a new subject.	3.59	Partly agree

The study found that students had mixed views about the nature of learning, with some believing that intelligence is important and others feeling that learning is a lifelong process. They also had a moderate level of openness to learning and were generally interested in developing their communication skills. However, they sometimes felt anxious about learning and forgot what they learned quickly. The study suggests that a student's attitude towards learning can affect their academic success. Students may display positive or negative attitudes towards learning based on their experiences and environment.

D. Relationship between the Perceived Extent of Teachers' Self-efficacy and the Students' Attitude towards Learning

Table 4: Relationship between the Perceived Extent of Teachers' Self-efficacy in terms of Efficacy, Motivation and Classroom Management and the Students' Attitude towards Learning in terms of Openness to Learning.

SENSE OF EFFICACY SCALE	OPENNESS TO LEARNING											
	1		2		3		4		5		6	
	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.
Efficacy for instruction												
1. Respond to difficult	0.01 ns	0.9	0.03 ns	0.5	0.06 ns	0.2	0.05 ns	0.3	-0.03 ns	0.56	0.01 ns	0.8

question from students.												
2. Provide appropriate challenges for very capable students.	-0.00 ns	0.96	0.03 ns	0.5	0.09 ns	0.1	0.06 ns	0.2	-0.03 ns	0.50	-0.01 ns	0.86
3. Implement alternative strategies in the classroom.	-0.06 ns	0.18	-0.01 ns	0.82	0.02 ns	0.7	0.01 ns	0.8	-0.06 ns	0.22	-0.03 ns	0.59
4. Provide an alternative explanation or example when students are confused.	-0.10* ns	0	-0.02 ns	0.70	0.04 ns	0.5	0.01 ns	0.8	-0.08 ns	0.10	-0.07 ns	0.17
Efficacy for motivation												
1. How well can you help your students value learning?	-0.04 ns	0.40	0.06 ns	0.2	0.09 ns	0.1	0.08 ns	0.1	-0.03 ns	0.60	0.04 ns	0.4
2. How well can you motivate students who show low interest in schoolwork?	-0.05 ns	0.31	0.01 ns	0.8	0.07 ns	0.2	0.05 ns	0.3	-0.04 ns	0.43	0.01 ns	0.9
3. How well can you improve the understanding of a student who is failing?	-0.05 ns	0.29	0.06 ns	0.2	0.13* ns	0	-0.03 ns	0.53	-0.03 ns	0.58	-0.00 ns	0.97
4. How well can you get through to the most difficult students?	0.04 ns	0.4	0.02 ns	0.7	0.05 ns	0.3	0.06 ns	0.2	-0.02 ns	0.68	-0.04 ns	0.38
Efficacy for classroom management												
1. Make expectations clear about student behavior.	-0.06 ns	0.18	0.07 ns	0.2	0.04 ns	0.4	-0.02 ns	0.70	-0.05 ns	0.34	0.02 ns	0.7
2. Get students to follow classroom rules.	-0.05 ns	0.29	0.05 ns	0.3	0.05 ns	0.3	0.02 ns	0.6	-0.04 ns	0.41	0.06 ns	0.2
3. Control disruptive behavior in the classroom.	0.01 ns	0.8	0.08 ns	0.1	0.12* ns	0	0.03 ns	0.5	-0.06 ns	0.25	0.04 ns	0.4

4. Keep a few problem students from ruining an entire lesson.	0.04 ns	0.4	0.12*	0	0.12*	0	0.06 ns	0.2	0.03 ns	0.5	0.12*	0
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*Significant ns Not Significant

Table 4 examines the relationship between teachers' self-efficacy (efficacy for instruction, motivation, and classroom management) and students' attitude towards learning (openness to learning). There are significant associations between some aspects of teachers' efficacy and students' attitude towards learning, but not all. For example, teachers' efficacy in controlling disruptive behavior and keeping problem students from ruining a lesson is significantly associated with some aspects of students' openness to learning. However, teachers' efficacy in responding to difficult questions, providing appropriate challenges, and implementing alternative strategies has no bearing on students' level of enjoyment in learning difficult subjects. Overall, some aspects of teachers' efficacy are related to students' attitude towards learning, but not all.

Table 5: Relationship between the Perceived Extent of Teachers' Self-efficacy in terms of Behavior Management, Instructional and Motivational Strategies and the Students' Attitude towards Learning in terms of Openness to Learning

SENSE OF EFFICACY SCALE	OPENNESS TO LEARNING											
	1		2		3		4		5		6	
	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.
Behavior management strategies												
1. Establish specific rules and consequences for student misbehavior.	-0.01 ns	0.90	0.05 ns	0.3	0.02 ns	0.7	0.01 ns	0.8	0.04 ns	0.4	-0.01 ns	0.77
2. Monitor the entire classroom.	0.07 ns	0.2	0.08 ns	0.1	0.01 ns	0.8	0.05 ns	0.3	0.03 ns	0.5	0.06 ns	0.2
3. Correct misbehavior immediately.	0.02 ns	0.7	0.03 ns	0.6	0.00 ns	1	0.03 ns	0.6	-0.01 ns	0.91	0.03 ns	0.6
4. Reward (e.g., praise) good behavior.	0.01 ns	0.9	0.08 ns	0.1	0.00 ns	1	0.04 ns	0.4	0.07 ns	0.2	0.04 ns	0.4
5. Use consistent disciplinary practices.	0.01 ns	0.8	0.02 ns	0.7	0.00 ns	0.9	0.05 ns	0.3	-0.01 ns	0.77	0.01 ns	0.8
6. Discourage misbehavior.	0.08 ns	0.1	-0.04 ns	0.46	-0.06 ns	0.28	0.03 ns	0.5	0.02 ns	0.7	0.04 ns	0.5
7. Discuss behavioral problems with students to get their perspectives.	0.02 ns	0.7	0.07 ns	0.2	0.01 ns	0.8	0.05 ns	0.4	0.02 ns	0.7	0.02 ns	0.7
Instructional strategies												
1. Present new material in small steps.	0.03 ns	0.5	0.11*	0	0.05 ns	0.3	0.11*	0	0.03 ns	0.5	0.09 ns	0.1

2. Explain difficult ideas in a simple way.	0.04 ns	0.4	0.01 ns	0.8	0.03 ns	0.5	0.08 ns	0.1	0.03 ns	0.6	0.02 ns	0.7
3. Rephase when the student does not understand the question.	-0.01 ns	0.91	-0.02 ns	0.73	0.03 ns	0.6	-0.02 ns	0.65	-0.01 ns	0.86	0.03 ns	0.6
4. Check that the students understand the lesson	-0.02 ns	0.65	0.03 ns	0.5	-0.05 ns	0.35	0.05 ns	0.4	-0.03 ns	0.52	0.04 ns	0.4
5. Well prepared before going to class.	0.05 ns	0.3	0.08 ns	0.1	0.03 ns	0.5	0.01 ns	0.9	0.03 ns	0.6	0.03 ns	0.6
6. Systematically review previously taught materials.	-0.02 ns	0.76	0.01 ns	0.8	-0.01 ns	0.80	0.05 ns	0.4	-0.04 ns	0.41	-0.02 ns	0.74
7. Give the students feedback on their exams or tests.	-0.03 ns	0.51	0.04 ns	0.5	-0.00 ns	0.96	0.06 ns	0.2	0.01 ns	0.8	-0.01 ns	0.81
Motivational strategies												
1. Make a special effort to give students work that is creative and imaginative.	0.03 ns	0.6	-0.01 ns	0.81	-0.04 ns	0.41	0.01 ns	0.8	-0.01 ns	0.79	0.02 ns	0.7
2. Make a special effort to give students work that has meaning in their everyday lives.	-0.05 ns	0.29	-0.00 ns	0.95	-0.03 ns	0.57	0.01 ns	0.9	-0.07 ns	0.18	-0.00 ns	0.99
3. Make the subject really interesting to the students.	-0.03 ns	0.59	-0.00 ns	0.95	-0.01 ns	0.84	-0.01 ns	0.90	0.01 ns	0.9	0.06 ns	0.2
4. Stress to students the need to understand the work rather than just memorize it.	0.03 ns	0.6	0.05 ns	0.4	0.01 ns	0.8	0.08 ns	0.1	0.01 ns	0.9	0.03 ns	0.5

*Significant ns Not Significant

Table 5 examines the relationship between teachers' self-efficacy in behavior management, instructional and motivational strategies, and students' attitude towards learning in terms of openness to learning. The results show that teachers' efficacy in behavior management strategies did not have a significant relationship with students' attitude towards learning. However, teachers' efficacy in instructional strategies, such as presenting new material in small steps, was found to be directly associated with students' interest in learning and their ability to make use of their experiences. Teachers' efficacy in implementing other instructional and motivational strategies, such as explaining difficult ideas in a simple way and making the subject interesting to students, did not have a significant relationship with students' attitude towards learning.

Table 6: Relationship between the Perceived Extent of Teachers' Self-efficacy and the Students' Attitude towards Learning in terms of Expectations from Learning

SENSE OF EFFICACY SCALE	EXPECTATIONS FROM LEARNING			
	1		2	
	Corr.	Sig.	Corr.	Sig.
Efficacy for instruction				
1. Respond to difficult question from students.	0.06 ^{ns}	0.26	-0.06 ^{ns}	0.23
2. Provide appropriate challenges for very capable students.	0.02 ^{ns}	0.62	-0.05 ^{ns}	0.33
3. Implement alternative strategies in the classroom.	-0.08 ^{ns}	0.12	-0.13*	0.01
4. Provide an alternative explanation or example when students are confused.	-0.05 ^{ns}	0.34	-0.08 ^{ns}	0.11
Efficacy for motivation				
1. How well can you help your students value learning?	-0.01 ^{ns}	0.88	-0.03 ^{ns}	0.60
6. How well can you motivate students who show low interest in schoolwork?	-0.02 ^{ns}	0.68	-0.10*	0.04
7. How well can you improve the understanding of a student who is failing?	0.02 ^{ns}	0.73	0.03 ^{ns}	0.55
8. How well can you get through to the most difficult students?	-0.02 ^{ns}	0.66	-0.07 ^{ns}	0.15
Efficacy for classroom management				
1. Make expectations clear about student behavior.	-0.01 ^{ns}	0.78	-0.09 ^{ns}	0.06
2. Get students to follow classroom rules.	0.11 ^{ns}	0.03	-0.00 ^{ns}	0.93
3. Control disruptive behavior in the classroom.	-0.01 ^{ns}	0.91	-0.05 ^{ns}	0.30
4. Keep a few problem students from ruining an entire lesson.	0.06 ^{ns}	0.20	0.03 ^{ns}	0.55
Behavior management strategies				
1. Establish specific rules and consequences for student misbehavior.	-0.03 ^{ns}	0.58	0.01 ^{ns}	0.78
2. Monitor the entire classroom.	0.05 ^{ns}	0.29	0.02 ^{ns}	0.72
3. Correct misbehavior immediately.	-0.02 ^{ns}	0.65	-0.00 ^{ns}	0.98
4. Reward (e.g., praise) good behavior.	0.01 ^{ns}	0.85	-0.01 ^{ns}	0.78
5. Use consistent disciplinary practices.	-0.04 ^{ns}	0.40	-0.04 ^{ns}	0.48
6. Discourage misbehavior.	-0.02 ^{ns}	0.72	-0.01 ^{ns}	0.81
7. Discuss behavioral problems with students to get their perspectives.	0.01 ^{ns}	0.80	-0.04 ^{ns}	0.45
Instructional strategies				
1. Present new material in small steps.	0.04 ^{ns}	0.49	-0.00 ^{ns}	0.97
2. Explain difficult ideas in a simple way.	0.05 ^{ns}	0.34	0.02 ^{ns}	0.68
3. Rephase when the student does not understand the question.	0.02 ^{ns}	0.71	-0.01 ^{ns}	0.80
4. Check that the students understand the lesson	-0.05 ^{ns}	0.31	-0.06 ^{ns}	0.25
5. Well prepared before going to class.	0.03 ^{ns}	0.50	-0.01 ^{ns}	0.87
6. Systematically review previously taught materials.	-0.02 ^{ns}	0.63	0.02 ^{ns}	0.67
7. Give the students feedback on their exams or tests.	-0.06 ^{ns}	0.21	-0.05 ^{ns}	0.31
Motivational strategies				
1. Make a special effort to give students work that is creative and imaginative.	0.01 ^{ns}	0.87	-0.05 ^{ns}	0.36
2. Make a special effort to give students work that has meaning in their everyday lives.	0.01 ^{ns}	0.91	0.01 ^{ns}	0.84
3. Make the subject really interesting to the students.	0.07 ^{ns}	0.15	-0.05 ^{ns}	0.28
4. Stress to students the need to understand the work rather than just memorize it.	-0.01 ^{ns}	0.88	-0.02 ^{ns}	0.64

*Significant ^{ns} Not Significant

Table 6 in the study examines the relationship between teachers' self-efficacy and students' attitudes towards learning. The results show that there is a significant correlation between teachers' efficacy for instruction and students' perceptions that learning new things changed their opinions of life, but this correlation is indirect. The study also found a significant correlation between teachers' efficacy for motivation and students' understanding that what they learned changed their opinions of life. However, there was no significant relationship between teachers' efficacy in behavior management, instructional and motivational strategies, and students' expectations from learning. Overall, the study suggests that teachers' self-efficacy can have an impact on students' attitudes towards learning, but the relationship is complex and indirect.

Table 7: Relationship between the Perceived Extent of Teachers' Self-efficacy and the Students' Attitude towards Learning in terms of Expectations from Learning (3 & 4).

SENSE OF EFFICACY SCALE	EXPECTATIONS FROM LEARNING			
	3		4	
	Corr.	Sig.	Corr.	Sig.
Efficacy for instruction				
1. Respond to difficult question from students.	0.05 ^{ns}	0.30	0.07 ^{ns}	0.17
2. Provide appropriate challenges for very capable students.	0.07 ^{ns}	0.15	0.04 ^{ns}	0.41
3. Implement alternative strategies in the classroom.	-0.05 ^{ns}	0.27	0.03 ^{ns}	0.56
4. Provide an alternative explanation or example when students are confused.	-0.05 ^{ns}	0.37	0.04 ^{ns}	0.48
Efficacy for motivation				
1. How well can you help your students value learning?	0.07 ^{ns}	0.15	0.08 ^{ns}	0.13
6. How well can you motivate students who show low interest in schoolwork?	0.05 ^{ns}	0.29	-0.01 ^{ns}	0.84
7. How well can you improve the understanding of a student who is failing?	0.01 ^{ns}	0.89	0.06 ^{ns}	0.20
8. How well can you get through to the most difficult students?	-0.00 ^{ns}	1.00	0.02 ^{ns}	0.73
Efficacy for classroom management				
1. Make expectations clear about student behavior.	-0.02 ^{ns}	0.72	-0.03 ^{ns}	0.56
2. Get students to follow classroom rules.	0.02 ^{ns}	0.72	-0.04 ^{ns}	0.41
3. Control disruptive behavior in the classroom.	0.04 ^{ns}	0.43	0.03 ^{ns}	0.59
4. Keep a few problem students from ruining an entire lesson.	-0.10*	0.03	0.10*	0.04
Behavior management strategies				
1. Establish specific rules and consequences for student misbehavior.	0.01 ^{ns}	0.78	0.02 ^{ns}	0.72
2. Monitor the entire classroom.	0.07 ^{ns}	0.17	0.04 ^{ns}	0.45
3. Correct misbehavior immediately.	0.01 ^{ns}	0.79	0.05 ^{ns}	0.33
4. Reward (e.g., praise) good behavior.	0.00 ^{ns}	0.98	-0.01 ^{ns}	0.82
5. Use consistent disciplinary practices.	0.04 ^{ns}	0.41	0.10*	0.05
6. Discourage misbehavior.	0.00 ^{ns}	0.98	-0.01 ^{ns}	0.80
7. Discuss behavioral problems with students to get their perspectives.	0.03 ^{ns}	0.62	0.05 ^{ns}	0.33
Instructional strategies				
1. Present new material in small steps.	0.09 ^{ns}	0.09	0.08 ^{ns}	0.10
2. Explain difficult ideas in a simple way.	0.01 ^{ns}	0.90	0.04 ^{ns}	0.45
3. Rephase when the student does not understand the question.	-0.02 ^{ns}	0.62	0.04 ^{ns}	0.41
4. Check that the students understand the lesson	-0.01 ^{ns}	0.92	-0.01 ^{ns}	0.83
5. Well prepared before going to class.	0.07 ^{ns}	0.19	0.04 ^{ns}	0.40
6. Systematically review previously taught materials.	0.02 ^{ns}	0.67	-0.04 ^{ns}	0.46
7. Give the students feedback on their exams or tests.	-0.01 ^{ns}	0.77	-0.06 ^{ns}	0.25
Motivational strategies				
1. Make a special effort to give students work that is creative and imaginative.	-0.02 ^{ns}	0.75	-0.06 ^{ns}	0.21
2. Make a special effort to give students work that has meaning in their everyday lives.	-0.08 ^{ns}	0.12	-0.07 ^{ns}	0.17

3. Make the subject really interesting to the students.	0.05 ^{ns}	0.31	-0.04 ^{ns}	0.40
4. Stress to students the need to understand the work rather than just memorize it.	0.06 ^{ns}	0.24	0.02 ^{ns}	0.69

*Significant ^{ns} Not Significant

Table 7 shows that the perceived extent of teachers' self-efficacy in various areas has varying degrees of association with the students' attitudes towards learning. The study found that teachers' efficacy for instruction, motivation, instructional strategies, and motivational strategies have no significant association with the students' drive to learn and develop their communication with people. However, teachers' efficacy for classroom management and behavior management strategies were found to have some association with the students' attitudes towards learning. Specifically, teachers who are more effective in managing problem students and consistently using disciplinary practices are more likely to have students who are positive about the need to continue learning and developing their communication skills. Overall, the study suggests that teachers' efficacy in some areas of teaching and classroom management can impact students' attitudes towards learning, but it is not the only determinant, and other factors may also play a significant role.

Table 8: Relationship between the Perceived Extent of Teachers' Self-efficacy and the Students' Attitude towards Learning in terms of Expectations from Learning

SENSE OF EFFICACY SCALE	EXPECTATIONS FROM LEARNING			
	5		6	
	Corr.	Sig.	Corr.	Sig.
Efficacy for instruction				
1. Respond to difficult question from students.	0.05 ^{ns}	0.35	0.04 ^{ns}	0.39
2. Provide appropriate challenges for very capable students.	-0.00 ^{ns}	0.99	0.10*	0.03
3. Implement alternative strategies in the classroom.	-0.02 ^{ns}	0.65	-0.00 ^{ns}	0.99
4. Provide an alternative explanation or example when students are confused.	0.02 ^{ns}	0.68	-0.02 ^{ns}	0.66
Efficacy for motivation				
1. How well can you help your students value learning?	0.05 ^{ns}	0.34	0.05 ^{ns}	0.26
6. How well can you motivate students who show low interest in schoolwork?	0.02 ^{ns}	0.66	0.03 ^{ns}	0.52
7. How well can you improve the understanding of a student who is failing?	0.06 ^{ns}	0.19	0.05 ^{ns}	0.34
8. How well can you get through to the most difficult students?	-0.02 ^{ns}	0.75	0.05 ^{ns}	0.33
Efficacy for classroom management				
1. Make expectations clear about student behavior.	-0.05 ^{ns}	0.33	-0.10*	0.04
2. Get students to follow classroom rules.	-0.01 ^{ns}	0.85	0.01 ^{ns}	0.83
3. Control disruptive behavior in the classroom.	0.05 ^{ns}	0.33	0.05 ^{ns}	0.26
4. Keep a few problem students from ruining an entire lesson.	0.11*	0.02	0.09 ^{ns}	0.06
Behavior management strategies				
1. Establish specific rules and consequences for student misbehavior.	0.04 ^{ns}	0.46	-0.05 ^{ns}	0.35
2. Monitor the entire classroom.	0.01 ^{ns}	0.85	0.02 ^{ns}	0.75
3. Correct misbehavior immediately.	0.02 ^{ns}	0.70	0.09 ^{ns}	0.06
4. Reward (e.g., praise) good behavior.	0.02 ^{ns}	0.73	-0.02 ^{ns}	0.62
5. Use consistent disciplinary practices.	0.05 ^{ns}	0.32	0.04 ^{ns}	0.42
6. Discourage misbehavior.	0.03 ^{ns}	0.61	0.05 ^{ns}	0.31
7. Discuss behavioral problems with students to get their perspectives.	0.07 ^{ns}	0.19	-0.02 ^{ns}	0.73
Instructional strategies				
1. Present new material in small steps.	0.07 ^{ns}	0.15	-0.01 ^{ns}	0.80
2. Explain difficult ideas in a simple way.	0.05 ^{ns}	0.37	0.01 ^{ns}	0.81
3. Rephrase when the student does not understand the question.	-0.00 ^{ns}	1.00	-0.01 ^{ns}	0.84
4. Check that the students understand the lesson	-0.05 ^{ns}	0.34	-0.05 ^{ns}	0.29
5. Well prepared before going to class.	0.04 ^{ns}	0.43	0.07 ^{ns}	0.16
6. Systematically review previously taught materials.	0.04 ^{ns}	0.48	0.07 ^{ns}	0.13
7. Give the students feedback on their exams or tests.	-0.04 ^{ns}	0.44	-0.08 ^{ns}	0.10

Motivational strategies				
1. Make a special effort to give students work that is creative and imaginative.	-0.03 ^{ns}	0.62	-0.04 ^{ns}	0.41
2. Make a special effort to give students work that has meaning in their everyday lives.	-0.00 ^{ns}	0.98	-0.02 ^{ns}	0.62
3. Make the subject really interesting to the students.	0.05 ^{ns}	0.30	-0.01 ^{ns}	0.88
4. Stress to students the need to understand the work rather than just memorize it.	0.07 ^{ns}	0.16	-0.04 ^{ns}	0.36

*Significant ^{ns} Not Significant

Table 8 presented the relationship between teachers' self-efficacy and students' attitude towards learning, particularly their belief that learning new things makes them successful and reduces their wrong decisions. The efficacy of teachers in providing appropriate challenges, making expectations clear, and keeping problem students from ruining a lesson had a significant and positive association with students' attitude towards learning. However, teachers' efficacy in responding to difficult questions, implementing alternative strategies, providing explanations or examples, behavior management, instructional and motivational strategies, and controlling disruptive behavior had no significant association with students' attitude towards learning.

Table 9: Relationship between the Perceived Extent of Teachers' Self-efficacy and the Students' Attitude towards Learning in terms of Expectations from Learning

SENSE OF EFFICACY SCALE	EXPECTATIONS FROM LEARNING			
	7		8	
	Corr.	Sig.	Corr.	Sig.
Efficacy for instruction				
Respond to difficult question from students.	0.05 ^{ns}	0.30	0.08 ^{ns}	0.10
Provide appropriate challenges for very capable students.	0.02 ^{ns}	0.62	0.07 ^{ns}	0.18
Implement alternative strategies in the classroom.	0.01 ^{ns}	0.77	0.04 ^{ns}	0.36
Provide an alternative explanation or example when students are confused.	0.01 ^{ns}	0.83	0.00 ^{ns}	0.95
Efficacy for motivation				
How well can you help your students value learning?	0.08 ^{ns}	0.12	0.10*	0.04
How well can you motivate students who show low interest in schoolwork?	0.02 ^{ns}	0.67	0.05 ^{ns}	0.29
How well can you improve the understanding of a student who is failing?	0.06 ^{ns}	0.22	0.10*	0.05
How well can you get through to the most difficult students?	-0.02 ^{ns}	0.67	0.04 ^{ns}	0.43
Efficacy for classroom management				
Make expectations clear about student behavior.	-0.03 ^{ns}	0.51	-0.03 ^{ns}	0.54
Get students to follow classroom rules.	0.03 ^{ns}	0.50	0.06 ^{ns}	0.25
Control disruptive behavior in the classroom.	0.06 ^{ns}	0.20	0.11*	0.03
Keep a few problem students from ruining an entire lesson.	0.12*	0.01	0.13*	0.01
Behavior management strategies				
Establish specific rules and consequences for student misbehavior.	0.04 ^{ns}	0.38	0.05 ^{ns}	0.33
Monitor the entire classroom.	0.09 ^{ns}	0.08	0.07 ^{ns}	0.17
Correct misbehavior immediately.	-0.00 ^{ns}	0.93	0.02 ^{ns}	0.76
Reward (e.g., praise) good behavior.	0.05 ^{ns}	0.29	0.03 ^{ns}	0.55
Use consistent disciplinary practices.	0.07 ^{ns}	0.20	0.04 ^{ns}	0.38
Discourage misbehavior.	-0.01 ^{ns}	0.84	0.01 ^{ns}	0.79
Discuss behavioral problems with students to get their perspectives.	0.02 ^{ns}	0.66	0.04 ^{ns}	0.47
Instructional strategies				
Present new material in small steps.	0.09 ^{ns}	0.09	0.03 ^{ns}	0.60
Explain difficult ideas in a simple way.	-0.01 ^{ns}	0.81	0.01 ^{ns}	0.82
Rephrase when the student does not understand the question.	-0.02 ^{ns}	0.72	-0.01 ^{ns}	0.82
Check that the students understand the lesson	0.02 ^{ns}	0.72	0.02 ^{ns}	0.75
Be well prepared before going to class.	0.08 ^{ns}	0.14	0.09 ^{ns}	0.07
Systematically review previously taught materials.	0.01 ^{ns}	0.90	0.01 ^{ns}	0.83
Give the students feedback on their exams or tests.	0.01 ^{ns}	0.79	-0.06 ^{ns}	0.26
Motivational strategies				

ake a special effort to give students work that is creative and imaginative.	-0.00 ^{ns}	0.93	0.00 ^{ns}	0.96
ake a special effort to give students work that has meaning in their everyday lives.	-0.04 ^{ns}	0.46	0.01 ^{ns}	0.90
ake the subject really interesting to the students.	-0.01 ^{ns}	0.89	-0.02 ^{ns}	0.67
ress to students the need to understand the work rather than just memorize it.	0.06 ^{ns}	0.23	0.05 ^{ns}	0.34

*Significant ^{ns} Not Significant

Table 9 examined the relationship between teachers' self-efficacy and students' attitudes towards learning. The results showed that teachers' efficacy for instruction, behavioral management, instructional and motivational strategies were not significantly associated with students' beliefs about the motivating aspects of learning. However, teachers' efficacy for motivation and classroom management were found to be positively associated with students' beliefs that learning new things motivates them more about their careers and the more they learn, the larger the aims they pursue. The efficacy of teachers in making their expectations clear about student behavior and getting students to follow classroom rules were not associated with students' attitudes towards learning.

Table 10: Relationship between the Perceived Extent of Teachers' Self-efficacy in terms of Efficacy for Instruction, Motivation and Classroom Management and the Students' Attitude towards Learning in terms of Anxiety about Learning

SENSE OF EFFICACY SCALE	1		2		3		4		5	
	Corr	Sig	Corr	Sig	Corr	Sig	Corr	Sig	Corr	Sig
Efficacy for instruction	.	.	.	.	.	.	.	.	.	.
1. Respond to difficult question from students.	0.00 ^{ns}	0.97	0.00 ^{ns}	0.97	-0.06 ^{ns}	0.23	0.02 ^s	0.7	0.01 ^{ns}	0.82
2. Provide appropriate challenges for very capable students.	-0.01 ^{ns}	0.81	-0.01 ^{ns}	0.78	-0.07 ^{ns}	0.16	0.12 [*]	0.01	0.08 ^{ns}	0.09
3. Implement alternative strategies in the classroom.	-0.02 ^{ns}	0.68	-0.02 ^{ns}	0.72	-0.08 ^{ns}	0.09	0.05 ^{ns}	0.34	-0.01 ^{ns}	0.79
4. Provide an alternative explanation or example when students are confused.	-0.02 ^{ns}	0.63	-0.03 ^{ns}	0.48	-0.12 [*]	0.02	0.07 ^{ns}	0.12	-0.03 ^{ns}	0.59
Efficacy for motivation										
1. How well can you help your students value learning?	0.03 ^{ns}	0.53	0.03 ^{ns}	0.48	0.07 ^{ns}	0.13	0.02 ^{ns}	0.73	0.07 ^{ns}	0.15
6. How well can you motivate students who show low interest in schoolwork?	0.02 ^{ns}	0.74	0.02 ^{ns}	0.74	0.04 ^{ns}	0.36	0.02 ^{ns}	0.6	0.01 ^{ns}	0.84
7. How well can you improve the understanding of a student who is failing?	-0.01 ^{ns}	0.89	-0.06 ^{ns}	0.18	-0.02 ^{ns}	0.64	0.04 ^{ns}	0.41	-0.02 ^{ns}	0.65
8. How well can you get through to the most difficult students?	-0.06 ^{ns}	0.24	-0.01 ^{ns}	0.92	-0.02 ^{ns}	0.61	-0.06 ^{ns}	0.21	-0.02 ^{ns}	0.67
Efficacy for classroom management										
1. Make expectations clear about student behavior.	0.03 ^{ns}	0.49	0.04 ^{ns}	0.37	0.04 ^{ns}	0.38	0.03 ^{ns}	0.53	0.02 ^{ns}	0.64
2. Get students to follow classroom rules.	0.01 ^{ns}	0.77	0.00 ^{ns}	0.97	0.00 ^{ns}	0.98	0.01 ^{ns}	0.79	0.02 ^{ns}	0.66

3. Control disruptive behavior in the classroom.	0.01 ns	0.7 9	- 0.00 ns	0.9 2	- 0.00 ns	0.9 9	0.05 ns	0.3	0.04 ns	0.4 2
4. Keep a few problem students from ruining an entire lesson.	- 0.01 ns	0.8 9	- 0.01 ns	0.8 5	- 0.02 ns	0.6 6	0.04 ns	0.4 1	0.06 ns	0.2 2

*Significant ns Not Significant

Table 10 shows the summary of the results of the correlation analysis. Based on the information you provided, it seems that there are significant relationships between teachers' self-efficacy in certain areas and students' attitudes towards learning, while in other areas there is no significant association. Specifically, teachers' self-efficacy in providing appropriate challenges and alternative explanations or examples is positively correlated with students feeling less disheartened when they lose time while learning. However, there is no significant association between teachers' self-efficacy in these areas and students' anxiety about forgetting what they learned, feeling bored while listening to new subjects, or perceiving learning as a difficult job. Additionally, there is no significant association between teachers' self-efficacy in responding to difficult questions and implementing alternative strategies in the classroom and students' anxiety about learning. Finally, there is no significant association between teachers' self-efficacy in classroom management and students' anxiety about learning.

Table 11: Relationship between the Perceived Extent of Teachers' Self-efficacy in terms of Behavior Management, Instructional and Motivational Strategies and the Students' Attitude towards Learning in terms of Anxiety about Learning.

SENSE OF EFFICACY SCALE	1		2		3		4		5	
	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.	Corr.	Sig.
Behavior management strategies										
1. Establish specific rules and consequences for student misbehavior.	-0.10*	0.04	-0.06 ns	0.21	0.03 ns	0.59	-0.03 ns	0.56	0.00 ns	0.95
2. Monitor the entire classroom.	-0.03 ns	0.60	0.00 ns	0.99	-0.04 ns	0.47	0.01 ns	0.77	-0.04 ns	0.43
3. Correct misbehavior immediately.	-0.04 ns	0.45	-0.01 ns	0.90	0.00 ns	0.92	0.02 ns	0.68	-0.02 ns	0.69
4. Reward (e.g., praise) good behavior.	0.01 ns	0.77	0.06 ns	0.23	0.03 ns	0.51	-0.02 ns	0.62	0.00 ns	0.97
5. Use consistent disciplinary practices.	-0.00 ns	0.99	0.08 ns	0.08	0.02 ns	0.63	0.04 ns	0.40	-0.02 ns	0.62
6. Discourage misbehavior.	-0.01 ns	0.87	0.02 ns	0.62	0.01 ns	0.87	0.07 ns	0.18	0.03 ns	0.56
7. Discuss behavioral problems with students to get their perspectives.	-0.02 ns	0.70	0.00 ns	0.95	-0.04 ns	0.39	-0.02 ns	0.65	-0.02 ns	0.65
Instructional strategies										
1. Present new material in small steps.	0.00 ns	0.96	0.00 ns	0.94	0.00 ns	1.00	-0.03 ns	0.47	0.04 ns	0.46
2. Explain difficult ideas in a simple way.	-0.01 ns	0.82	0.04 ns	0.39	-0.03 ns	0.49	0.01 ns	0.89	0.01 ns	0.91
3. Rephase when the student does not understand the question.	-0.03 ns	0.59	-0.01 ns	0.91	-0.04 ns	0.38	0.04 ns	0.39	0.03 ns	0.49
4. Check that the students understand the lesson	-0.10*	0.04	0.02 ns	0.74	0.02 ns	0.68	0.05 ns	0.30	0.03 ns	0.61
5. Well prepared before going to class.	-0.02 ns	0.74	0.03 ns	0.49	-0.04 ns	0.38	0.04 ns	0.39	0.09 ns	0.08
6. Systematically review previously taught materials.	-0.04 ns	0.45	-0.03 ns	0.53	-0.04 ns	0.43	0.03 ns	0.54	0.06 ns	0.25
7. Give the students feedback on their exams or tests.	0.03 ns	0.52	-0.06 ns	0.25	0.00 ns	0.98	0.07 ns	0.13	0.02 ns	0.70
Motivational strategies										
1. Make a special effort to give students work that is creative and imaginative.	-0.00 ns	0.95	-0.03 ns	0.50	0.00 ns	0.94	0.04 ns	0.43	0.05 ns	0.34

2. Make a special effort to give students work that has meaning in their everyday lives.	0.02 ^{ns}	0.72	0.03 ^{ns}	0.48	-0.04 ^{ns}	0.47	-0.02 ^{ns}	0.63	0.00 ^{ns}	0.93
3. Make the subject really interesting to the students.	-0.03 ^{ns}	0.49	-0.02 ^{ns}	0.62	-0.03 ^{ns}	0.52	0.00 ^{ns}	0.99	-0.02 ^{ns}	0.73
4. Stress to students the need to understand the work rather than just memorize it.	0.03 ^{ns}	0.60	0.02 ^{ns}	0.68	-0.02 ^{ns}	0.68	-0.02 ^{ns}	0.74	-0.03 ^{ns}	0.49

Table 11 shows the relationship between teachers' perceived self-efficacy in behavior management, instructional and motivational strategies, and students' attitudes towards learning in terms of anxiety about learning. Table 11 showed that some aspects of behavior management and instructional strategies were related to students' anxiety about learning, while the use of motivational strategies was not significantly associated with anxiety. The efficacy of teachers in establishing specific rules and consequences for student misbehavior was correlated with greater anxiety in students when they forget what they learned. The efficacy of teachers in checking that students understand the lesson was correlated with lower anxiety in students when they forget what they learned. Other aspects of behavior management and instructional strategies were not significantly associated with anxiety in students.

CONCLUSIONS AND RECOMMENDATIONS

The study examines the relationship between teachers' self-efficacy and students' attitudes towards learning in four State Universities and Colleges (SUCs) in Region 02. The study includes 348 teacher-respondents and 646 student-respondents, and data were collected using an adapted questionnaire through online and face-to-face administration. The study found that teachers' self-efficacy was high in all areas of teaching, and students' attitudes towards learning were mostly positive, but some aspects of their attitudes differed based on their age, gender, dialect spoken at home, and internet access. The study suggests recommendations for educational leaders or managers, institutions, teachers, and future researchers in their future policy making related to learning and self-efficacy.

REFERENCES

- 1 Achurra, Cristina & Villardón, Lourdes. (2012). Teacher' Self-Efficacy And Student Learning. The European Journal of Social & Behavioural Sciences. 2. 366-383. 10.15405/FutureAcademy/ejsbs(2301-2218).2012.2.17. <https://epublications.regis.edu/theses/16>
- 2 Adegbola, Funmi Florence (2019). Teachers' pedagogical competence as determinants of students' attitude towards basic science in South West Nigeria. ERR. Vol. 14(18), Retrieved October 1, 2020 from DOI: 10.5897/ERR2019.3761 <https://academicjournals.org/>
- 3 Al Mahmud, A. (2011). Students' attitudes towards Internet: A study on private universities of Bangladesh. European Journal of Business and Management, 3(6), 9-19.
- 4 Al Otaibi, K. N. (2012). Attitudes towards the use of the Internet. Psychology Research, 2(3), 151-159.
- 5 Al-Alwan, Ahmed Falah & Ahmad Mohammed Mahasneh (2014) Teachers' Self-efficacy as Determinant of Students' Attitudes toward School: A study at the School Level. Review of European Studies; Published by Canadian Center of Science and Education Vol. 6, No. 1; 2014 ISSN 1918-7173 E-ISSN 1918-7181 17, doi:10.5539/res.v6n1p171. Retrieved October 1, 2020 from <http://dx.doi.org/10.5539/res.v6n1p171>.
- 6 Al-Arfaj, A. H. (2001). The perception of college students in Saudi Arabia towards distance Web-based instruction. Unpublished doctoral dissertation, Ohio University, Athens, Ohio, United States.
- 7 Alfaro, E. C., & Umaña-Taylor, A. J. (2010). Latino adolescents' academic motivation: The role of siblings. Hispanic Journal of Behavioral Sciences, 32, 549-570. doi:10/1177/0739986310383165
- 8 Aloka, P.J.O & Bojuwoye. (2013). Gender, age and teaching experience differences in decision making behaviours of members of selected Kenyan Secondary school disciplinary panels. Asian Social Sciences, 9(10), doi:10.5539/ass.v9n10p43
- 9 Alrefaei, Nouf Abdullah, "Teachers' Sense of Efficacy: Examining the Relationship of Teacher Efficacy and Student Achievement" (2015). Theses and Dissertations. 1192. Retrieved October 1, 2020 from <http://scholarworks.uark.edu/etd/1192>
- 10 Alufohai, P.J. & Ibhafidon, H.E. (2015). Influence of teachers' age, civil status and gender on students' academic achievement. Asian Journal of Educational Research, 3(4), 60-66.
- 11 Asrat, Dagnew (2017). The Relationship between Students' Attitudes towards School, Values of Education, Achievement Motivation and Academic Achievement in Gondar Secondary Schools,

- Ethiopia. *Research in Pedagogy*, v7 n1 p30-42 2017. Retrieved October 1, 2020 from ERIC. EJ1149328. ISSN: ISSN-2217-7337
- 12 Azano, A., Missett, T. C., Callahan, C. M., Oh, S., Brunner, M., Foster, L. H., & Moon, T. R. (2011). Exploring the relationship between fidelity of implementation and academic achievement in a third grade gifted curriculum: A mixed-methods study. *Journal of Advanced Academy*, 22(5), 693-719.
 - 13 Baecher, L., Rorimer, S., & Smith, L. (2012). Video-mediated teacher collaborative inquiry: Focus on English language learners. *The High School Journal*, 95(3), 49-61
 - 14 Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research*. Chicago, IL: Rand McNally & Co.
 - 15 Bardi, A., and Schwartz, S. H. (2003). Values and behavior: strength and structure of relations. *Pers. Soc. Psychol. Bull.* 29, 1207-1220. doi: 10.1177/ 0146167203254602
 - 16 Barni, D., Danioni, F., & Benevene, P. (2019). Teachers' self-efficacy: The role of personal values and motivations for teaching. *Frontiers in Psychology*, 10(JULY), 1-7. <https://doi.org/10.3389/fpsyg.2019.01645>
 - 17 Batool, Sadia and Syed Mubarak Abbas Shah (2015). Causative Factors behind an Efficacious Teacher: Evaluating Teacher Efficacy. *Journal of Human Psychology*. Volume No: 1 Issue No: 1, ISSN: 2644-1101.
 - 18 Berman, P., McLaughlin, M. W., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal Programs Supporting Educational Change, Vol VII: Factors Affecting Implementation and Continuation*. In *The Rand Corporation (Vol. 7, pp. 1-238)*. <https://doi.org/10.2172/1025774>
 - 19 Betts, J. R., Zau, A., & Rice, L. (2003). *Determinants of student achievement: New evidence from San Diego*. San Francisco, CA: Public Policy Institute of California.
 - 20 Blazar, D., & Kraft, M. A. (2017). Teacher and Teaching Effects on Students' Attitudes and Behaviors. *Educational evaluation and policy analysis*, 39(1), 146-170. Retrieved October 1, 2020 from <https://doi.org/10.3102/0162373716670260>
 - 21 Blazar, David. 2016. *Teacher and Teaching Effects on Students' Academic Performance, Attitudes, and Behaviors*. Doctoral dissertation, Harvard Graduate School of Education. Retrieved October 1, 2020.
 - 22 Bouchey, H. A., Shoulberg, E. K., Jodl, K. M., & Eccles, J. S. (2010). Longitudinal links between older sibling features and younger siblings' academic adjustment during early adolescence. *Journal of Educational Psychology*, 102, 197-211. doi:10.1037/a0017487
 - 23 Capuno, R., Necesario, R., Etcuban, J. O., Espina, R., Padillo, G., & Manguilimotan, R. (2019). Attitudes, Study Habits, and Academic Performance of Junior High School Students in Mathematics. *International Electronic Journal of Mathematics Education*, 14(3), 547-561. <https://doi.org/10.29333/iejme/5768>
 - 24 Crane, Beverley E. (2000). "Teaching With the Internet". Neal-Schuman Publishers, Inc. in New York.
 - 25 Das, Samit & Halder, Ujjwal & Mishra, Bapi. (2014). Study on relationship between Attitude towards Education and Academic Achievement in Secondary Level Minority Students. 4. Retrieved October 1, 2020.
 - 26 Davis-Kean PE. The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *Journal of family psychology*. 2005;19(2):294.
 - 27 Dornyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge. University Press.
 - 28 Esteron, JJ. (2020). Language Attitudes and Identity Construction of Trilingual Learners in a Rural School in the Philippines. *LLT Journal: A Journal on Language and Language Teaching* p-ISSN 1410-7201, Vol. 23, No. 1, April 2020
 - 29 Fabelico, F. L., & Afalla, B. T. (2020). Perseverance and passion in the teaching profession: Teachers' grit, self-efficacy, burnout, and performance. *Journal of Critical Reviews*, 7(11), 108-119. <https://doi.org/10.31838/jcr.07.11.17>
 - 30 Freeman, Carissa, "Teacher Efficacy and its Impact On Student Achievement" (2008). All Regis University Theses. 16.
 - 31 Gee, J.P.2011. *Language and learning in the digital age*. New York: Routledge.

- 32 Goldhaber, D. D., & Brewer, D. J. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis*, 22(2), 129-145.
- 33 Grabe, Mark, et al. (2001). "Integrating Technology for Meaningful Learning" Houghton Mifflin Company in United States of America.
- 34 Guskey, T. R. (1998). Teacher Efficacy Measurement and Change. The Annual Meeting of the American Educational Research Association, 1-5. <http://files.eric.ed.gov/fulltext/ED422396.pdf>
- 35 Hemmings, B., & Kay, R. (2009). Lecturer self-efficacy: Its related dimensions and the influence of gender and qualifications. *Issues in Educational Research*, 19(3), 243-254.
- 36 Hong, K.-S., Ridzuan, A. A., & Kuek, M.-K. (2003). Students' attitudes toward the use of the Internet for learning: A study at a university in Malaysia. *Educational Technology & Society*, 6(2), 45-49.
- 37 Islahi, F. & Nasreen, D. (2013). Who make effective teachers, men or women? An Indian perspective. *Universal Journal of Educational Research*, 1(4): 285 - 293.
- 38 Janssen, Susan and O'Brien, Maureen (2014) "Disentangling The Effects Of Student Attitudes and Behaviors On Academic Performance," *International Journal for the Scholarship of Teaching and Learning*: Vol. 8: No. 2, Article 7. Retrieved October 1, 2020 from <https://doi.org/10.20429/ijstl.2014.080207>.
- 39 Kalmijn, M. and Kraaykamp, G. (2005) 'Late or later? A sibling analysis of the effect of maternal age on children's schooling', *Social Science Research*, Vol. 34, No. 3, pp. 634-650. <https://doi.org/10.1016/j.ssresearch.2004.04.008>
- 40 Kanazawa, S. & Still, M. C. (2000). Teaching may be hazardous to your marriage. *Evolution and Human Behavior*, Volume 21: 185 - 190.
- 41 Kanevsky, L. (2011). Differential differentiation: What types of differentiation do students want? *The Gifted Child Quarterly*, 55(4), 279-299.
- 42 Kara, A. (2009). The Effect of a 'Learning Theories' Unit on Students' Attitudes Toward Learning. *Australian Journal of Teacher Education*, 34(3). <http://dx.doi.org/10.14221/ajte.2009v34n3.5>
- 43 Karimi, M., & Nikbakht, E. (2019). Teachers' Efficacy, Identity and Motivational Strategies and their Effects on L2 learners' Achievement. *Advances in Language and Literary Studies*, 10(5), 20. <https://doi.org/10.7575/aiall.v.10n.5p.20>
- 44 Koc, M. 2005., Implications of learning theories for effective technology integration and preservice teacher training: A critical literature review, *Journal of Turkish Science Education*, vol. 2, pp.2-18.
- 45 Kpolovie, Peter James (2014). Academic Achievement Prediction: Role of Interest in Learning and Attitude towards School. *International Journal of Humanities Social Sciences and Education (IJHSSE)* Volume 1, Issue 11, November 2014, PP 73-100 ISSN 2349-0373 (Print) & ISSN 2349-0381. Retrieved October 1, 2020 from www.arcjournals.org.
- 46 Kreitner, R., Kinicki, A. and Buelens, M. (2007) *Organizational Behaviour*. McGraw Hill, New York.
- 47 Lantolf, J. P., & Poehner, M. E. (2010). Dynamic assessment in the classroom: Vygotskian praxis for second language development. *Language Teaching Research*, 15(1), 11-33. Return to ref 2010 in article
- 48 Lewin, L. M., Hops, H., Davis, B., & Dishion, T. J. (1992). Multimethod comparison of similarity in school adjustment of siblings and unrelated children. *Developmental Psychology*, 29, 963-969. doi:10.1002/cd.258
- 49 Machebe, C. H., Ezegebe, B. N., & Onuoha, J. (2017). The Impact of Parental Level of Income on Students' Academic Performance in High School in Japan. *Universal Journal of Educational Research*, 5(9), 1614-1620. <https://doi.org/10.13189/ujer.2017.050919>
- 50 McAuley, J., Leskovec, J., & Jurafsky, D. (2012, December). Learning attitudes and attributes from multi-aspect reviews. In 2012 IEEE 12th International Conference on Data Mining (pp. 1020-1025). IEEE. <https://doi.org/10.1109/icdm.2012.110>
- 51 Nie, Youyan & Lau, Shun & liau, albert. (2012). The teacher efficacy scale: A reliability and validity study. *Asia Pacific Journal of Education*. 21. 414-421.
- 52 Nyagah, G & Gathumbi, A. (2017). Influence of teacher characteristics on the implementation of non-formal basic education curriculum at the non-formal education centres

- in Nairobi, Mombasa and Kisumu Cities, Kenya. *International Journal of Education and Research*, 5(1), 207-221.
- 53 Odanga, S. J. O., Aloka, P. J. O., & Raburu, P. (2015). Influence of Civil Status on Teachers' Self-Efficacy in Secondary Schools of Kisumu County, Kenya. *Academic Journal of Interdisciplinary Studies*, 4(3), 115-124. <https://doi.org/10.5901/ajis.2015.v4n3p115>
 - 54 Okoye-Johnson, O. (2011). Intangible heritage of standard English learners: The "invisible" subgroup in the United States of America? Implications for closing the achievement gap. *United Kingdom: SAGE Open*, 1(2), 1-7. <https://doi.org/10.1177/2158244011408441>
 - 55 Rahida Aini, M. I., Rozita, A., & Zakaria, A. (2018). Can Teachers' Age and Experience influence Teacher Effectiveness in HOTS? *International Journal of Advanced Studies in Social Science & Innovation*, 2(1), 144-158. <https://doi.org/10.30690/ijassi.21.11>
 - 56 Reupert, A., & Woodcock, S. (2010). Success and near missing: Pre-service teachers' use, confidence, and success in various classroom management strategies. *Teaching and Teacher Education*, 26 (6), 1261-1268. doi:10.1016/j.tate. 2010.03.003
 - 57 Sadker, D. (2002). An educator's primer on the gender war. *Phi Delta Kappan*, 84(3), 235-240.
 - 58 Salmon, C. A. (2003) 'Birth order and relationships', *Human Nature*, Vol. 14, No. 1, pp. 73-88. <https://doi.org/10.1007/s12110-003-1017-x>
 - 59 Salmon, C. A., Cuthbertson, A. M. and Figueredo, A. J. (2016) 'The relationship between birth order and prosociality: An evolutionary perspective', *Personality and Individual Differences*, Vol. 96, pp. 18-22. <https://doi.org/10.1016/j.paid.2016.02.066>
 - 60 Sarac, Ayse and Fatma Aslan Tutak (2017). The Relationship between Teacher Efficacy, and Students' Trigonometry Self-Efficacy and Achievement. *International Journal for Mathematics Teaching And Learning*. Vol. 18 No. 1 (2017):
 - 61 ŞenayŞen, H. (2013). The Attitudes of University Students Towards Learning Procedia - Social and Behavioral Sciences. Volume 83, 4 July 2013, Pages 947-953. Retrieved October 1, 2020 from <https://doi.org/10.1016/j.sbspro.2013.06.177>.
 - 62 Shahzad, K. and S. Naureen (2005) Impact of Teacher Self-Efficacy on Secondary School Students' Academic Achievement *Journal of Education and Educational Development*. Retrieved October 1, 2020 from <https://files.eric.ed.gov/fulltext/EJ1161518.pdf>
 - 63 Steelman, L. C. (1985) 'A Tale of Two Variables: A Review of the Intellectual Consequences of Sibship Size and Birth Order', *American Educational Research*, Vol. 55, No. 3, pp. 353-386. <https://doi.org/10.3102/00346543055003353>
 - 64 Stoughton, E. (2007). "How will I get them to behave?" Preservice teachers reflect on classroom management. *Teaching and Teacher Education: An International Journal of Research and Studies*, 23(7), 1024-1037.
 - 65 Tandogan, R. O., & Orhan, A. (2007). The Effects of Problem-Based Active Learning in Science Education on Students' Academic Achievement, Attitude and Concept Learning. *Online Submission*, 3(1), 71-81. <https://doi.org/10.12973/ejmste/75375>
 - 66 Tannen, D. (2001). *You just don't understand: Men and women in conversation*. New York: Quill.
 - 67 Tastan, et al (2018). The Impacts of Teacher's Efficacy and Motivation on Student's Academic Achievement in Science Education among Secondary and High School Students. *Eurasia Journal of Mathematics Science and Technology Education*. Retrieved October 1, 2020 from 14(6):2353-2366, DOI: 10.29333/ejmste/89579.
 - 68 Tekynarslan, E. (2008). Faculty of education students' attitudes toward Internet and implications for online learning. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 8(1), 67-82.
 - 69 Topalä, I., Tomozii, S. (2014). Learning satisfaction: validity and reliability testing for SLSQ (Students' Learning Satisfaction Questionnaire). *Procedia-Social and Behavioral Sciences*. doi: 10.1016/j.sbspro.2014.03.175
 - 70 Tran, V. D. (2015). Effects of Gender on Teachers' Perceptions of School Environment, Teaching Efficacy, Stress and Job Satisfaction. *International Journal of Higher Education*, 4(4), 147-157. <https://doi.org/10.5430/ijhe.v4n4p147>
 - 71 Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248. Retrieved October 1, 2020 from <https://doi.org/10.3102/00346543068002202>.
 - 72 Wanzung, Karen Lynn, "An investigation of the effects of teachers' sense of efficacy on teacher motivation for predicting student participation: Do teacher behaviors mediate this relationship?"

- (2000). Theses Digitization Project. 1834. Retrieved October 1, 2020 from <https://scholarworks.lib.csusb.edu/etd-project/1834>.
- 73 Widmer, E. D., & Weiss, C. C. (2000). Do older siblings make a difference? The effects of older sibling support and older sibling adjustment on the adjustment of socially disadvantaged adolescents. *Journal of Research on Adolescence*, 10, 1-27. doi:10.1207/SJRA1001_1
- 74 Zee, Marjolein and Helma M. Y. Koomen (2016). Adjustment, and Teacher Well-Being: A Synthesis of 40 Years of Research. SAGE Journals. First Published December 1, 2016 Research Article. Retrieved October 1, 2020 from <https://doi.org/10.3102/0034654315626801>.