

The Impact of School Climate and Teacher Efficacy on Teacher Effectiveness in Western Belize

Melva Guerra¹
Mathias R. Vairez Jr. ¹
Cordelia G. Requena¹
Janeen Quiroz¹

Abstract

Teacher efficacy has been shown to not only be intricately linked to teacher demographic factors and school climate but also to teacher effectiveness. This quantitative study examined the relationships between teacher demographic factors, school climate, and teacher efficacy and how teacher efficacy may predict teacher effectiveness. This study applied an exploratory correlational design with the target population of all secondary school teachers in the Cayo district, Belize. Data were collected via a three-part survey that included: 1) Demographic information including teacher effectiveness scores obtained from the Ministry of Education Performance Appraisal instrument, 2) The Ohio State University teacher's efficacy scale, and 3) The Alliance for the Study of School Climate-School Climate Assessment (ASSC) instrument. Data analyses including descriptive statistics and multiple regression analysis were conducted using IBM SPSS statistical software. Findings from this study revealed a positive correlation between overall teacher efficacy, efficacy in instructional practices, and efficacy in classroom management. Teacher effectiveness was also found to be predicted by teachers' experience and efficacy in instructional practices.

Keywords: Teacher efficacy, teacher effectiveness, school climate, Belize

¹ University of Belize

Corresponding Author: Melva Guerra, Faculty of Education and Arts, University of Belize, Belmopan, Belize. email: 2003110097M@ub.edu.bz.

Introduction

In recent years, there has been an upsurge in reforms worldwide to improve the quality of education and student success. Similarly, Belize suffers the same dilemma of improving the quality of education through reforms aimed at improving the teaching force. However, to effectively improve the education sector and significantly impact student achievement, more research is needed to determine the factors that influence teacher effectiveness in Belize. As described by Darling-Hammond (2010) and Habib (2017), teacher effectiveness is the collection of characteristics, competencies, and behaviors of teachers that enable students to reach desired outcomes. Teacher efficacy and teacher effectiveness have both been linked to student achievement and shown to produce better student outcomes. Teacher efficacy refers to an individual teacher's belief about their own capabilities to accomplish desired outcomes, to influence students and their belief in their own success (Alvarez-Nunez, 2012). The key to improving education is placing skilled and highly effective teachers in the classrooms (Darling-Hammond, 2010). Effective and self-efficacious teachers remain a critical factor in improving the quality of education and student learning outcomes. Teachers are considered to be the most significant factors influencing the quality of education (Rice, 2003), therefore understanding teacher effectiveness and finding ways to help teachers become more effective should be a primary focus across Belize if student achievement goals are to be met.

Karim et al. (2021) asserted that teacher self-efficacy relates to teacher effectiveness. Teacher efficacy, in turn, is influenced by the working environment where teacher development programs and professional programs boost self-efficacy (Begum et al., 2020; Karim et al., 2021). Batool and Shah (2018) and Begum et al. (2020) added that teacher efficacy was also affected by personal demographic characteristics such as gender, age, experience, and education. Nonetheless, Akram (2019) asserted that it is imperative to identify effective teachers to ensure quality teaching. However, Darling-Hammond (2010) indicated that current measures of teacher effectiveness rely exclusively on classroom observations, which are poor predictors of later effectiveness in the classrooms. The percentage of trained teachers in Belize is poor, which presents an immense concern as quality instruction comes from having pedagogical content knowledge and a deeper understanding of subject matters (Alvarez-Nunez, 2012).

A multilevel study of teacher effectiveness found a substantial relationship between teacher experience, a factor influencing teacher efficacy, and student achievement gains (Subedi et al., 2015). A more considerable teacher effect variance was noted in schools in communities of low socioeconomic status. This, in particular, is concerning for Belize, where in 2022, the Statistical Institute of Belize reported 35.7% of the population is multidimensionally poor (Statistical Institute of Belize, 2022). Darling-Hammond (2010) suggested that for the two decades of policymakers undertaking many and varied reforms to improve schools, the most critical lesson is that teachers are the fulcrum for determining school initiative toward success or failure.

Belize has long struggled with delivering high-quality education to its youth. To this end, The Ministry of Education has created initiatives in the Belize Education Sector Plan 2021 - 2025 to improve the quality of education in Belize (Ministry of Education, Culture, Science, and Technology, 2022). This strategic plan includes strategies to improve education, specifically by improving teacher effectiveness. Levine (2006) noted that tomorrow's quality would be no better than our teaching forces' quality, and Hanushek and Rivkin (2006) further noted that improving the quality of instruction remains a central component of raising school quality. Therefore, seeking ways to achieve teacher effectiveness should be a primary focus as this remains the most dominant factor affecting student achievement gains (Strong et al. as cited by Karim et al., 2021). Furthermore, with increased scrutiny of teachers and student achievement, the need to seek a deeper understanding of teacher effectiveness is prevalent across the globe as countries seek to provide quality education (OECD, 2012). Jupp (2009) noted that lasting improvements in student achievement and closing gaps could be achieved by increasing the number of effective teachers and placing

them in areas where they are in dire need. The development of teacher effectiveness can be achieved by understanding the relationships between factors influencing and predicting teacher effectiveness. Jupp (2009) further asserted that predicting and supporting teacher effectiveness can create an engine for stimulating greater teacher effectiveness in the system as a whole.

Therefore, the purpose of this study was to determine the impact of teacher demographic factors, school climate, and teacher efficacy on teacher effectiveness to teach in secondary schools in Western Belize. The following research questions were addressed in this study:

1. What are teachers' levels of efficacy & effectiveness?
2. Is there a significant relationship between teacher effectiveness and the combination of: teacher efficacy, school climate, teachers' age, gender, educational attainment, training, and experience?
3. Can teacher effectiveness be predicted from: teacher efficacy, school climate, teachers' age, gender, educational attainment, training, and experience?

Review of Relevant Literature

Teacher Efficacy

Stegall (2011) described teacher efficacy as having a sense of self-efficacy or belief about his or her own capabilities to accomplish desired outcomes and belief in their own abilities to influence student achievement. Stegall (2011) noted that teacher efficacy can be summarized as the bone-deep belief that teachers and leadership matter. While Butts (2016) described teaching efficacy as an accumulation, usage of current environmental factors of education and the response to stimuli around those factors. Karim et al. (2021), however, noted that teacher efficacy has a great impact on enhancing teaching effectiveness, with self-efficacy being significantly correlated with their teaching practice. Teachers' self-efficacy is vital to developing effective teachers, Chaco'n (2005, as cited in Karim, 2021) noted that teacher efficacy is one of the major components of effective teaching.

Factors that affect teacher efficacy

Egger (2006) explored the relationship between teachers' perceptions of teacher efficacy and collective efficacy through the examination of factors such as characteristics of age, gender, ethnicity, number of years teaching, highest degree received, teacher certification, and grade level taught. Egger found that individual teacher efficacy explained the largest variance in teacher efficacy followed by teaching experience. Similarly, Hubbard (2021) explored self-efficacy and demographic characteristics for education and found that school climate has a direct influence on teachers' sense of self efficacy. Additionally, Demo and Gibson (1985, as cited in Hubbard, 2021) asserted that there is a need to better understand teaching efficacy by considering variables such as teacher education, personal teacher variables, and school organization.

Subedi et al. (2015) used Hierarchical Linear Models to explore predictors of student achievement and truancy. This study utilized data from one of the largest urban school districts in the United States and yielded variance at the teacher level ranging from 12% to 15%. The demographic predictors at the teacher level found that teacher effectiveness explained the teacher level indicating that teacher education level and experience had a significant predictor impact on student achievement as well as attendance. Batool & Shah (2018) study on causative factors behind efficacious teachers found that gender, experience, and subject specialization were significantly and positively related to teacher efficacy. Additionally, it was noted that

subject specialization affected teacher efficacy the most while less experienced teachers were found to have greater efficacy.

Teacher Demographic factors: Experience

Adeymi (2008, as cited in Inegbedion, 2016) stated that research on teacher's experience and student outcomes found that teachers with more than five years of teaching experience produced higher total student achievement outcomes. Research on teachers found that those who left teaching had significantly lower teacher efficacy than either teachers in their first year or fifth year of teaching (Butts, 2016). Subedi et al. (2015) noted that a multilevel study measuring teacher effectiveness found a substantial relationship of teacher experience with student achievement gains and a larger teacher effect variance in low socioeconomic status schools. Hubbard (2021) noted that a correlation showed a statistically significant relationship between variables such as years of experience and overall teacher efficacy.

Demographic Factors: Educational Attainment & Training

Alvarez-Nunez (2012) noted that there are poor percentages of trained teachers in Belize which is a matter of importance as quality instruction comes from having pedagogical content knowledge and a deeper understanding of subject matters. Stegal (2011) further asserted that teachers who are not given the opportunity to study have their efficacy suffer as self-efficacy is affected by professional development. Various studies have shown that teacher development programs and professional development programs boost teacher self-efficacy which then has a direct impact on enhancing teacher effectiveness (Karim et al., 2021).

School Climate

Habib (2017) defined school climate as the physical environment, level of upkeep, comfort of the school, feelings of trust, respect for students and teachers, and all materials used for instructions in the school to better student's academic achievement in school. Adepoju (2017) noted that inadequate facilities and lack of support were major factors that affected teaching and learning negatively. Aminu and El-jajah (2019) also found that uncondusive learning and teaching environments, irregular evaluation of lesson plans by the school management, late salary payment, and delayed promotions were factors affecting teachers' efficacy. Additionally, Karim et al. (2021) argued that teacher efficacy is influenced by the working environment (school climate) and teacher efficacy can be regarded as a significant predictor of teacher effectiveness. Interestingly enough, Karim et al. (2021) affirmed that high self-efficacy among instructors was found to be more common in high-performing schools which can be an indication of self-efficacy being critically influenced by school atmosphere, teacher effectiveness, and ultimately academic expectations. Furthermore, Begum et al. (2020) indicated that teacher competence and efficacy were affected by teacher training, personal demographic characteristics, and workplace environment.

Teacher Effectiveness

Darling-Hammond (2010) proclaimed that the key to improving public education is the placement of skilled and highly effective teachers in the classroom. Similarly, Stegall (2011) indicated that finding ways to improve teacher effectiveness should be a primary focus for schools. Strong et al. (as cited by Karim et al., 2021) stated that teacher effectiveness is the ability of a teacher to use a specific set of methods, techniques, connections with students, and attitude to enhance student learning and create positive student outcomes. In simpler terms, teacher effectiveness can be summarized as the level of confidence in the ability to lead

students to success (Karim et al., 2021). Karim et al. (2021) reported that teacher self-efficacy has a significant correlation with teaching practices and therefore has a great impact on teaching effectiveness.

Teacher effectiveness has been also defined as the impact that classroom factors, such as teaching methods, teacher expectations, classroom organization, and the use of classroom resources have on student performance (Begum et al., 2020). Akram et al. (2021) found that teachers have historically been evaluated through different tools such as classroom evaluation, portfolios, head teacher ratings, student ratings, and self-assessments. Finally, Stegall (2011) argued that improving teacher effectiveness should be a primary focus for schools; however, teacher effectiveness remains unmeasured, recorded, or used to inform decision-making in meaningful ways. Effective teachers have been shown to be the most important factor contributing to student achievement (Job, 2017), with the most effective teachers producing gains even among low-achieving students. Jupp (2009) stated that predicting and supporting teacher effectiveness can create an engine for stimulating greater teacher effectiveness in the system as a whole.

Conceptual Framework

This study explored the impact of the independent variables: teacher efficacy, teacher demographic factors and school climate on the dependent variable: teacher effectiveness. Thus, this conceptual framework was developed to illustrate the relationship among the independent variables and the dependent variable.

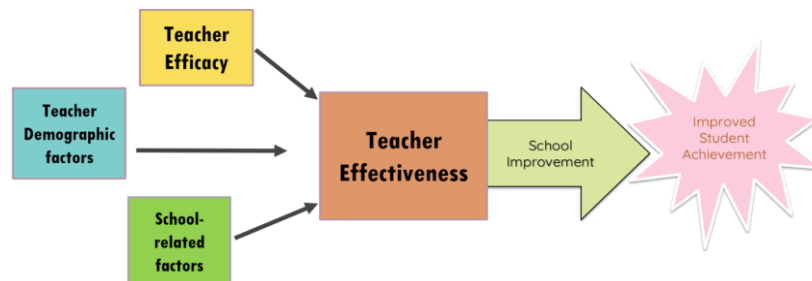


Figure 1. Teacher Effectiveness Model Illustration

The conceptual framework displays the interconnected relationships between the factors, teacher effectiveness, and outcomes such as school improvement and student achievement. The factors included in this framework are teachers' demographic factors such as age, gender, educational attainment, years of experience and the training of the teacher while the school related factor is school climate. The guiding framework shows that the three factors, namely school related factors, teacher efficacy and teacher demographic factors have equal relationships with teacher effectiveness. Teacher effectiveness is further shown to have a direct relationship and ultimately impacts both school improvement and student achievement.

Method

A quantitative approach with an exploratory correlational research design was utilized to determine the impact of teacher demographic factors, school climate, and teacher efficacy on teacher effectiveness to teach in secondary schools in Western Belize. The population for this study was high school teachers in Western region Belize. In Western Belize there are 17 high schools; 2 are government schools, 7 are government

aided and 8 are private schools. The number of teachers in this region was 339, of which 139 teachers were males and 200 were females (Ministry of Education, 2021).

Participants

The sample for this study consisted of 142 teachers from the population of 339 teachers, which represents a 42% response rate. The distribution gender in the sample was 59.9% female and 40.1% male teachers. For teachers' educational attainment, 64.2% had a bachelor's degree, while only 1.4% had a doctorate degree. Additionally, in terms of teachers' pedagogical training, 36.6% had a diploma in Educational Methodology, 31.7% had bachelors in education, while only 1.4% had a doctorate in education degree. The mean age of teachers was 38.79 years ($SD = 8.7$) with a range from 22 to 59 years. Teachers' mean years of teaching experience was 13.993 years ($SD = 9.3$) with a range of 0 to 41 years.

Instrumentation

To collect the data for this study a survey with three sections was developed. Section one contained an introductory section with demographic items. Also, in this section, teachers were asked to report their teacher effectiveness scores from section A - Pedagogical Performance of the Ministry of Education Performance Appraisal instrument. The Ministry of Education Performance Appraisal instrument was developed by the Ministry of Education and is grounded in Charlotte Danielson's framework for teaching. The teachers were asked to report their scores from three subsections: 1) Planning, Preparation and Record Keeping, 2) Instruction & Assessment and 3) Learning Environment. The second section included the Ohio State Teacher Efficacy Scale (OSTES) developed by Tschannen-Moran and Hoy's (2001). The third section included the School Climate Assessment Instrument (SCAI) developed by the Alliance for the Study of School Climate (ASSC). The OSTES has 12 items using a Likert-type 9-point scale with 1 = nothing, 3 = very little, 5 = some influence, 7 = quite a bit, and 9 = a great deal. It has three dimensions, efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management. The OSTES has good reliability with Cronbach's alphas of .939, .864, .888, and .886 for the overall scale and three dimensions, respectively (Tschannen-Moran & Woolfolk Hoy, 2001). The SCAI uses analytic trait structure with three options that represent three levels of phenomena to determine the school climate. Items in the SCAI allows participants to select two to five degree options based on a root system. SCAI has 8 subscales, i.e., physical environment, teacher interactions, student interactions, leadership & decisions, discipline & management, learning & assessment, attitude & culture and community. The SCAI has exceptionally high levels of reliability with Cronbach's alpha of .97, .84, .89, .83, .96, .87, .91 and .91 for the overall scale and eight dimensions, respectively (Jones & Shindler, 2016).

Variables

The independent variables in this study were teacher efficacy, age, educational attainment, gender, teaching experience, pedagogical training and school climate. Teacher efficacy was measured on an interval scale. Teachers, age and experience were measured on a ratio. Educational attainment was measured on an ordinal scale and coded from 1 to 4 for associates, bachelors, masters and doctorate degrees respectively. School climate was measured on an interval scale and coded from 1 to 3 for low, medium and high, respectively. The dependent variable in this study was teacher's effectiveness which was measured using the Ministry of Education performance appraisal scores which include individual scores for section A – Pedagogical Performance which includes three subsections: 1) Planning, Preparation and Record Keeping, 2) Instruction & Assessment and 3) Learning Environment. Teacher appraisals are completed on a yearly basis by the principals which determines a performance rating for the teacher into one of 5 categories: 1 – Ineffective, 2 – Marginal, 3 – Satisfactory, 4 – Proficient and 5 – Distinguished. The raw scores out of 150 for the overall scale and 50 for each subscale were used.

Data Analysis

Data collected were analyzed using IBM SPSS 23 statistical software. Two main statistical manipulations were conducted. First, descriptive statistics were computed on teacher effectiveness and teacher efficacy to determine the levels of teacher effectiveness and efficacy. Second, four multiple linear regressions were performed to determine the impact of teacher demographic factors, school climate, and teacher efficacy on teacher effectiveness.

Results

The goal of research question one was to determine the levels of teacher efficacy and teacher effectiveness. To answer question one, measures of central tendency were computed to summarize the data for efficacy and teacher effectiveness. The results presented in Table 1, indicated the mean teacher efficacy in student engagement was 7.1 (SD = 1.301) with a range of 3.5 to 9.0. The mean teacher efficacy in instructional practices was 7.6 (SD = .959) with a range of 5.0 to 9.0. The mean teacher efficacy in classroom management was 7.5 (SD = 1.043) with a range of 4.5 to 9.0. The mean teacher efficacy overall was 7.4 (SD = .977) with a range of 4.8 to 9.0. Thus, on average, teachers had lower teacher efficacy in student engagement compared to their efficacy for instructional practices and classroom management. Of the three dimensions of teacher efficacy, on average, teachers had higher efficacy for instructional practices. Considering the 9-point scale used to measure teacher efficacy, on average, teachers reported having above average (7 = quite a bit) levels of efficacy.

Based on the results from Table 1, the mean teacher effectiveness in planning, preparation and record keeping was 44.4 (SD = 5.335) with a range of 25 to 50. The mean teacher effectiveness in instruction and assessment was 44.9 (SD = 4.935) with a range of 25 to 50 and the mean teacher effectiveness in learning environment was 45.1 (SD = 5.358) with a range of 20 to 50. The mean overall teacher effectiveness was 134.5 (SD = 14.487) with a range of 70 to 150. Therefore, on average, teachers' effectiveness was above average (4 – Proficient). Of the three dimensions of teacher effectiveness, on average, teachers had higher effectiveness in learning environment.

Table 1. Levels of Efficacy and Teacher Effectiveness					
	N	Min	Max	Mean	SD
Efficacy in Student Engagement	142	3.5	9.0	7.144	1.301
Efficacy in Instructional Strategies	142	5.0	9.0	7.648	.959
Efficacy in Classroom Management	142	4.5	9.0	7.553	1.043
Efficacy Overall	142	4.8	9.0	7.448	.977
Planning, Preparation & Record Keeping	142	25.0	50.0	44.415	5.335
Instruction & Assessment	142	25.0	50.0	44.944	4.935
Learning Environment	142	20.0	50.0	45.141	5.358
Teacher Effectiveness Overall	142	70.0	150.0	134.500	14.487

The goal of the second research question was to determine if there was a statistically significant relationship between teacher effectiveness and the combination of: teacher efficacy, school climate and experience and age. To answer research question two, a multiple linear regression was conducted using a stepwise design to determine if there was a significant relationship between teacher effectiveness and the combination of: teacher efficacy, school climate, age, gender, educational attainment, training, and teacher experience. The results of the multiple linear regression, with overall teacher effectiveness as the dependent variable, revealed a weak relationship ($R = .288$). Thus, the combined independent variables had a 28.8% chance of influencing overall teacher effectiveness. Further, $R^2 = .083$ indicated that only about 8.3% of the variation in overall teacher effectiveness can be explained by the resulting model, which included experience and efficacy in instructional practices. Therefore the null hypothesis ($H_0: R = 0, R^2 = 0$): There is no statistically significant relationship between overall teacher effectiveness and the combination of teacher efficacy, school climate, age, gender, educational attainment, and teacher experience, was rejected.

The goal of research question three was to determine if teacher effectiveness can be predicted from: teacher efficacy, school climate, age, gender, educational attainment, training, and teacher experience. To answer research question three, the results from the ANOVA and Coefficients Tables from the multiple linear regression from research question two were used. The results from the multiple linear regression revealed that a significant proportion of the total variation in overall teacher effectiveness can be predicted from the predictors in the resulting model: experience and efficacy in instructional strategies, $F(2, 139) = 6.284, p < .01$. Therefore, the null hypothesis ($H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$): Overall teacher effectiveness cannot be predicted by teacher efficacy, school climate, age, gender, educational attainment, training and teacher experience was rejected. The conclusion is that a statistically significant relationship exists between teacher effectiveness and experience and efficacy in instructional practices. The multiple regression model tested was:

$$\hat{Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + \text{error}$$

Where: \hat{Y} = Overall Teacher effectiveness

X_1 = Teacher efficacy

X_2 = Age

X_3 = Educational Attainment

X_4 = Gender

X_5 = Experience

X_6 = Training

X_7 = School climate

The overall model was significant; however, of the seven independent variables tested, only two variables were significant predictors of overall teacher effectiveness: experience and teacher efficacy in instructional strategies, as shown in Table 2. The variables age, educational attainment, gender, training and school climate were not found to be significant predictors of overall teacher effectiveness. For experience, the unstandardized partial slope (.328) and standardized slope (.211) are statistically different from 0 ($t = 2.579, df = 2, p < .05$). Thus, with every one-point increase in experience, overall teacher effectiveness increased by .328. For efficacy in instructional strategies, the unstandardized partial slope (2.590) and standardized slope (.171) are statistically different from 0 ($t = 2.094, df = 2, p < .05$). Thus, with every one-point increase

in efficacy in instructional practices, overall teacher effectiveness increased by 2.590, which is significant. The resulting regression model was:

$$\hat{Y} = 110.105 + .328X_1 + 2.590X_2 + \text{error}$$

Where: \hat{Y} = Overall Teacher Effectiveness

X_1 = Experience

X_2 = Efficacy in instructional strategies

Table 2. Multiple Linear Regression Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	110.105	9.478		11.617	.000
	Experience	.328	.127	.211	2.579	.011
	Efficacy in Instructional Practices	2.590	1.237	.171	2.094	.038
Dependent Variable: Overall Teacher Effectiveness						

Limitations

The major limitation of this study was the small sample size resulting from the population being limited to the Western region schools in Belize. While the average response rate in academic research is 55.6%, Fincham (2008) notes that assurance is rather more dependent on the representativeness of population samples. As such, in this study, the representation of 40.1% male and 57.8% female teachers was representative of the population with 41% male and 58.9% female teachers. This research yielded a 46% response rate; a mere 9.6% lower than the average response rate. This relatively high response rate might be indicative of the teacher's willingness to participate despite the many challenges such as a heavy workload, short timeframe of data collection, and lack of communication and support from the school's administration. Additionally, this study was limited to high school teachers in Western Belize. A larger population and sample would allow for broader generalizability.

Conclusion and Recommendations

The purpose of this quantitative study, utilizing a three-part online survey and an exploratory correlational design, was to determine the impact of teacher demographic factors, school climate, and teacher efficacy on teacher effectiveness to teach in secondary schools in Western Belize. The results revealed that, on average, teachers had lower teacher efficacy in student engagement compared to their efficacy for instructional practices and classroom management. Teacher efficacy for instructional practices was the highest. On average, teachers reported having above average (7 = quite a bit) levels of efficacy. Also, on average, teachers' effectiveness was above average (4 – Proficient). Of the three dimensions of teacher effectiveness, on average, teachers had higher effectiveness in learning environment.

Additionally, it was found that there is a statistically significant weak relationship between the dependent variable, teacher effectiveness, and two of the seven independent variables: experience and efficacy in instructional practices. It was found that the combination of these independent variables has a 28.8% chance of influencing overall teacher effectiveness. This aligns with the suggestion that teachers' effectiveness is related to their ability to implement various strategies, questions, and activities for their classroom and have calm and undisrupted classes. This finding of instructional strategies correlating with teacher effectiveness is consistent with the findings from Karim et al. (2021), who noted that teacher efficacy enhances teacher effectiveness and is also significantly correlated to their teaching practices.

Both correlating factors: experience and instructional strategies, were also found to be predictors of teacher effectiveness. With every one-point increase in experience, overall teacher effectiveness was found to increase by .328, and for every one-point increase in instructional practices, overall teacher effectiveness increased by 2.590. This aligns with the suggestion that teacher retention in the classroom would result in increased effectiveness and their ability to employ better strategies in the classroom, which would also result in increased effectiveness. Existing studies by Subedi et al. (2015), Batool and Shah (2018), and Hubbard (2021) have investigated the correlation between factors such as teacher efficacy and experience on teacher effectiveness, however Subedi et al. (2015) noted that there is a substantial relationship between teacher experience and teacher effectiveness. Batool and Shah (2020) stated that while experience is a causative factor behind efficacious teachers, other factors such as gender and subject specialization significantly affect teacher efficacy. Additionally, Batool and Shah (2020) noted that age, gender, and education played a significant relationship with teacher effectiveness, but the findings in this study found that educational attainment and age were not significant predictors of teacher effectiveness and thus refutes the idea that these factors influence the effectiveness of teachers.

One of this study's most salient findings is the correlation between experience and efficacy in instructional strategies. According to Barry (2010), improving teacher efficacy depends on teacher training, which is considered central and the most impactful initiative in successful education programs. Only the subscales of teacher efficacy showed a correlation with teacher effectiveness; therefore, the Ministry of Education should prioritize implementing workshops and training that focus on improving teacher efficacy in these areas. Existing education programs should be revised to provide relevant experiences for pre-service teachers. One such suggestion would be extending the existing field experience and internship programs to more prolonged periods that would provide significant experience to pre-service teachers. While a field experience/internship provides teachers not only experience in the classroom but also practice in developing instructional strategies for the classroom, the time frame should reflect a reasonable period to provide adequate experience for pre-service teachers. It would be beneficial to extend the 2-week field experience to half a semester in secondary schools and internship from a 3-month period to an entire 6-month (1 semester) period, thereby allowing teachers to immerse in experience attainment fully.

The results of this study build on existing literature that experience plays a substantial role in influencing teacher effectiveness. The findings suggest that the longer a teacher remains in a school, the more experience they gain and, thus, the more effective they will become. Administration and schools should invest in programs that seek to groom and retain teachers to become more effective as they gain experience. Teachers with more experience can be relocated to schools that are in need of more experienced teachers. Jupp (2009) noted that lasting improvements in student achievement and closing gaps could be achieved by increasing the number of effective teachers and placing them in areas of dire need.

While this study provides an initial step in understanding the factors that are correlated and can predict Belizean teacher effectiveness in the Western Region, there is ample space for strengthening research in this area. The following are recommendations for future research. This study can be replicated with a larger

sample size to include a broader cross-section of teachers to increase the statistical power of the results and generalize the findings to a broader range of teachers. The study can be replicated to include primary school teachers nationwide. A mixed-method approach can create a greater insight and understanding of teacher effectiveness and the correlated factors. In addition, a mixed-method approach can explore other factors that can predict the retention of teachers in the classroom, especially considering that experience has been a predictor of teacher effectiveness. Lastly, further research that focuses on the impact of experience on teacher effectiveness and student outcomes can provide more significant insights for schools wanting to improve their students' success.

Competing Interests

The authors declare that they have no conflict of interest.

Acknowledgments

The authors wish to thank the principals who assisted with dissemination of this online survey and all the teachers who completed the online survey that made this study possible.

Funding

No funding was received by any of the authors to support this research project or in the execution of this research study.

References

- Adepoju, T. (2017). Managing Classroom Teaching Through Effective Communication Network: The Strategies and Policy Measures. *American Journal of Language and Communication*, 2, B1-B18.
- Akram, M. (2019). Relationship between Students' Perceptions of Teacher Effectiveness and Student Achievement at Secondary School Level. *Bulletin of Education and Research*, 41(2), 93-108.
- Akram, M., Munir, F., & Bilal, A. (2021). Effect of teacher performance evaluation on school effectiveness. *SJESR*, 4(1), 431-439.
- Alvarez-Nunez, T. M. (2012). Teacher self-efficacy: A link to student achievement in English language and mathematics in Belizean primary schools. *Oklahoma State University*.
- Aminu, A. C., & El-jajah, W. G. (2019). Relationship between Physical School Climate and Teachers' Effectiveness in Senior Secondary Schools in Yobe State, Nigeria.
- Barry, R. A. (2010). Teaching effectiveness and why it matters. Marylhurst University and the Chalkboard Project.
- Batool, S., & Shah, S. M. A. (2018). Causative factors behind an efficacious teacher: Evaluating teacher efficacy. *Journal of Human Psychology*, 1(1), 18-26.
- Begum, Z., Rahman, A., & Majoka, M. I. (2020). Contribution of Professional Efficacy and Demographic Factors towards Performance of Secondary Schools Teachers. *Dialogue (Pakistan)*, 15(1).
- Butts, E. T. (2016). A Study of the Relationship of Teachers' Self-Efficacy and the Impact of Common Core Professional Development. *Gardner-Webb University*.
- Darling-Hammond, L. (2010). Evaluating teacher effectiveness: How teacher performance assessment can measure and improve teaching. Center for American Progress. Economic Policy Institute, 1660 L Street, NW, Suite 1200, Washington, DC 20035. *EUROPEAN ACADEMIC RESEARCH*, VOL. (2015). 12, 9.
- Egger, K. J. (2006). An exploration of the relationships among teacher efficacy, collective teacher efficacy, and teacher demographic characteristics in conservative Christian schools. *University of North Texas*.
- Habib, H. (2017). A study of teacher effectiveness and its importance. *National Journal of Multidisciplinary Research and Development*, 2(3), 530-532.

- Hanushek, E. A., & Rivkin, S. G. (2006). Teacher quality. *Handbook of the Economics of Education*, 2, 1051-1078.
- Hubbard, B. (2021). *Improving Performance: A Correlational Study Investigating the Relationship between Teacher Efficacy and Teacher Demographic Characteristics in a Rural Texas School District (Doctoral dissertation, Lamar University-Beaumont)*.
- Inegbedion, H. E., Obadiaru, D. E., & Bello, V. D. (2016). Factors that influence consumers' attitudes toward internet buying in Nigeria. *Journal of Internet Commerce*, 15(4), 353-375.
- Job, C. (2017). What Is Teacher Effectiveness? A Case Study of Educator Perceptions in a Midwest Elementary School. *The University of North Dakota*.
- Jones, A., & Shindler, J. (2016). Exploring the School Climate--Student Achievement Connection: Making Sense of Why the First Precedes the Second. *Educational Leadership and Administration: Teaching and Program Development*, 27, 35-51.
- Jupp, B. (2009). What States Can Do to Improve Teacher Effectiveness. K-12 Policy. *Education Trust*.
- Jupp, B. (2009). What States Can Do to Improve Teacher Effectiveness. K-12 Policy. *Education Trust*.
- Karim, M., Masud, N. A., Subarna, N., Taherun, M., Billah, M., & Wienaah, P. (2021). Self-efficacy: A Key Component of Teacher Effectiveness. Taherun and Billah, Md. Masum and Wienaah, Prosper, Self-efficacy: A Key Components of Teacher Effectiveness (December 23, 2021). Karim, MR, Masud, NA, Subarna, MTN, Billah, MM, & Wienaah, P, 24-34.
- Levine, A. (2006). Educating school teachers. The Education Schools Project.
<http://www.eric.ed.gov/argo.library.okstate.edu/PDFS/ED504144.pdf>
- Ministry of Education, Culture, Science and Technology. (2022). Belize Education Sector Plan 2021 – 2025. <https://www.moecst.gov.bz/belize-education-sector-plan-2021-2025/>
- Ministry of Education (2021). Abstract of education statistics 2020-2021. Policy, Planning, Research, & Evaluation Unit. Ministry of Education, Youth, Sports & Culture, Belize C. A.
<http://www.moe.gov.bz>
- Organization for Economic Cooperation and Development (OECD). (2012). Equity and quality in education: Supporting disadvantaged students and schools.
- Rice, J. K. (2003). Teacher quality: Understanding the effectiveness of teacher attributes.

- Statistical Institute of Belize. (2022). Multidimensional Poverty in Belize. https://sib.org.bz/wp-content/uploads/MPI_Infographic_v03.pdf
- Stegall, D. A. (2011). Professional learning communities and teacher efficacy: A correlational study. Unpublished dissertation, University of North Carolina.
- Subedi, B. R., Reese, N., & Powell, R. (2015). Measuring Teacher Effectiveness through Hierarchical Linear Models: Exploring Predictors of Student Achievement and Truancy. *Journal of Education and Training Studies*, 3(2), 34-43.
- Tschannen-Moran, M. & Woolfolk Hoy, A. E. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- United Nations Educational, Scientific and Cultural Organization. (2018). Improving the quality of teacher education in Sub-Saharan Africa: Lessons learned from a UNESCO-China Funds-in-Trust project. 55.