

## IMPACT ASSESSMENT OF ACHIEVEMENT OUTCOMES IN RESEARCH WRITING AMONG MAPUA UNIVERSITY UNDERGRADUATES: USING TEACHER-RELATED VARIABLES IN MANILA, PHILIPPINES

<sup>1</sup>Edward Inimotimi Amakiri & <sup>2</sup>Idris Kaila

<sup>1</sup>School of Languages, Humanities, and Social Sciences,  
Department of Psychology, Mapua University  
Manila, Philippines

<sup>2</sup>Federal University Dutse, Jigawa State Nigeria

### Abstract

This study investigated the predictive relationships between teacher-related variables and student achievement in research writing among Mapua University undergraduates. The study used correlational research design for the study. The population for study was .....A sample of 249 participant were conveniently selected and participated in the study. Data were collected using a self-designed on Teachers Variables, Teacher-Student Partnership Questionnaire, and self-reported achievement outcomes in research writing. Hierarchical multiple regression was employed for data analysis. Results from Model 1 revealed that teacher's experience and teacher's effectiveness significantly explained 14% of the variance in student achievement outcomes in research writing. Model 2, incorporating teacher-student partnership, demonstrated an incremental 6% variance explained, highlighting the significant additional contribution of social-level teacher variables. These findings underscore the critical role of both personal and social teacher-related factors in fostering student success in academic writing. The study has implications for teacher training and student support initiatives in higher education, suggesting that experienced and effective teachers who engage in collaborative partnerships with students can significantly enhance research writing proficiency.

**Keywords:** Teacher Experience, Teacher Effectiveness, Teacher-Student Partnership, Research Writing, Student Achievement.

### Background of the Study

The quest to understand the determinants of student academic achievement has been a central focus in educational research over the past decades. Literature consistently highlights numerous variables influencing student outcomes, including student characteristics, peer effects, home environment, school structure, and management. However, recent scholarship increasingly emphasizes the paramount role of teachers as pivotal agents in shaping student achievement and bridging educational gaps (Ferguson, 1991; Goldhaber, 2002). Teachers are considered the most critical school-based factor affecting student achievement levels (Sanders, 1998). A comprehensive understanding of teacher characteristics and their specific influence on student achievement is vital for educational administrators in making informed decisions regarding recruitment, retention, and class assignments. Therefore, research should increasingly focus on teacher-related factors, as the solutions to student success often reside in the instructional practices and qualities of educators (John, 2003).

According to Sanders (1998), teachers are the most important school-based factor in effecting students' achievement levels. Having a full knowledge of teacher's characteristics and what part of it essentially influences student's achievement will help administrators prioritize who to hire, retain, and who to assign to classes. John (2003) thus suggest that it high time researchers be more

focus on teachers because the solutions we seek to students success lies in the person who gently closes the classroom door and performs the teaching act.

### **Teacher-Related Variables**

Previous research shows that student achievement is linked to several school characteristics, including a focus on basic skills, high expectations for students, regular evaluations of progress, a safe and organized school environment, and strong educational leadership. Teachers play a crucial role in student development by demonstrating the necessary skills and attitudes that meet student expectations. They are not just sources of information but serve as learning mediators and community supporters. Teachers are expected to possess various abilities, such as clarity, competence, knowledge, and good communication skills. They should be organized, efficient, and enthusiastic about their subjects, able to engage students, and open to questions. Conversely, negative traits like arrogance are discouraged. Research indicates that teacher factors significantly impact student performance, accounting for around 59.4% of academic success in Kenyan high school students. Other studies suggest that teachers contribute to about 15-20% of the differences in student achievement, while factors at the school and student levels account for the rest.

In this study, the specific teacher variables that were examined that are relation to student achievement outcomes in research writing are:

### **Teacher Experience**

Teacher characteristics such as years of teaching have been found out to relate with student's achievement outcomes, In a meta-analytical study by Greenwald, Hedges, and Laine (1996), it was found that teaching experience had a positive and significant effect on student achievement outcomes, also in a study by Wenglinsky (2000) it was found that teachers with a major or minor in the subject area that they are assigned to teach produce greater gains in student achievement outcomes. However, not all studies agree that teacher's experience is a significant predictor of student's achievement outcomes. Hanushek (1997) did not find any results to support a relationship between teaching experience and student achievement in 71 percent of reviews he made on teacher's experience and student achievement outcomes.

### **Teacher Effectiveness**

An effective teacher intellectually stimulates and encourages students while setting high expectations and encouraging independent learning. They use different teaching technologies, create a positive learning environment, and explain complex subjects well. Teacher effectiveness is essential for student success, and managing classroom behavior is crucial. Good teaching also involves understanding classroom dynamics and requires strong management skills.

Positive interactions between teachers and students, both in and out of the classroom, enhance learning. Effective teachers should encourage these interactions to motivate students. Additionally, having strong knowledge of their subject is vital, as it affects how well students learn. Teachers who believe in their ability to make a difference tend to be more satisfied and committed, which leads to better student outcomes.

### Teacher-Student Partnership

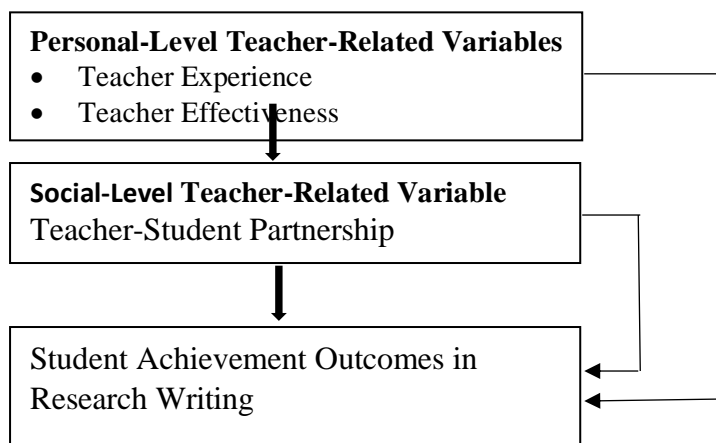
Teacher-student partnerships generally involve students and teacher working together in a way that is different from the established teaching and learning relationship. It often entails some form of collaborative work. It can be seen as a way of: engaging students in their own learning through innovative and enquiry-based teaching approaches (Healy et al. 2014); enabling students to work with teachers to develop learning and teaching provision and practice (Cook-Sather et al., 2014); helping students develop as learners and gain ‘self-authorship (Baxter Magolda and King, 2004).

### Student’s Achievement Outcome in Research Writing

Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. Academic achievement should be considered to be a multifaceted construct that comprises different domains of learning. The concept of academic achievement is very wide-ranging and covers a broad variety of educational outcomes; therefore its definition also depends on the indicators used to measure it.

The conceptual framework for this study is grounded in the Social Cognitive Theory (Bandura, 1986), which emphasizes the role of observational learning, reinforcement, and reciprocal interactions between individuals and their environment. In the context of research writing, teacher-related variables play a significant role in shaping student achievement outcomes. Research suggests that experienced teachers possess pedagogical content knowledge, instructional strategies, and classroom management skills that positively impact student learning (Greenwald, Hedges, & Laine, 1996; Wenglinsky, 2000).

Effective teachers demonstrate clarity, competence, and enthusiasm, creating a supportive learning environment that fosters student engagement and motivation (Ahmad & Sahak, 2009; Darling-Hammond, 2006). Collaborative relationships between teachers and students promote a sense of community, motivation, and engagement, leading to improved academic outcomes (Baxter Magolda & King, 2004; Cook-Sather et al., 2014).



**Figure 1.** A flow chart of the conceptual framework showing personal-level teacher-related variables (Teacher Experience and Effectiveness) and social-level teacher-variables (Teacher-Student Partnership) as independent variables and Student Achievement Outcomes in Research Writing as a dependent variable.

The conceptual framework posits that personal-level teacher-related variables (Teacher Experience and Effectiveness) and social-level teacher-related variable (Teacher-Student Partnership) could influence student achievement outcomes in research writing

### **Statement of the Problem**

Despite the critical role that research writing plays in academic and professional success, many undergraduate students continue to struggle with achieving proficiency in this area. While various factors may contribute to these challenges, the influence of teacher-related variables such as teaching experience, effectiveness, and the quality of teacher-student partnerships remains underexplored in the context of higher education. At Mapua University, there is a need to understand how these teacher-related factors specifically affect student achievement outcomes in research writing. Without this understanding, efforts to improve research writing instruction may overlook essential elements that directly impact student performance. Therefore, this study seeks to investigate the predictive relationships between personal- and social-level teacher-related variables and students' achievement outcomes in research writing.

### **Significance of the Study**

Despite the importance of writing in academic and professional settings, there is evidence that significant numbers of college-aged students lack proficiency in writing and many variables are asserted to influence the writing proficiency of students, particularly in research writing.

This study will be of high significance to students because it seeks to provide predictive relations between teacher-related variables that are personal and social in nature to student achievement outcomes of students in research writing.

### **Scope of the Study**

This study focused on examining the predictive relationships between specific teacher-related variables and student achievement outcomes in research writing. The investigation specifically explored the influence of three key teacher-related variables: Teacher Experience, Teacher Effectiveness, and Teacher-Student Partnership, in their capacity to predict student achievement outcomes exclusively in the domain of research writing.

The participants of this study were undergraduates of Mapua University Manila, Philippines who had completed their research writing courses, with a sample size of 249 students conveniently selected for data collection.

### **Objectives of the Study**

The main objective of this study is to:

1. Examine the significant effect of personal-level teacher-related variables (teacher's experience and teacher's effectiveness) on student achievement outcomes in research writing.
2. Determine if social-level teacher-related variables (teacher-student partnership) significantly contribute to the influence of personal-level teacher-related variables on student achievement outcomes in research writing.

### **Research Questions**

The study seek to provide answers to the following questions:

1. Do personal-level teacher-related variables (Teacher Experience and Teacher Effectiveness) have a significant effect on student achievement outcomes in research writing?

2. Does social-level teacher-related variables (Teacher-Student Partnership) significantly contribute to the prediction of student achievement outcomes in research writing beyond the influence of personal-level teacher-related variables?

### **Research Hypothesis**

Based on the research questions the following hypothesis are formulated:

H<sub>1</sub> Personal-level teacher-related variables (Teacher Experience and Teacher Effectiveness) will have a significant positive effect on student achievement outcomes in research writing.

H<sub>2</sub>. There will be no significant contribution of social-level teacher-related variables (Teacher-Student Partnership) on the influence personal-level teacher-related variables have on student's achievement outcomes in research writing.

### **Methodology**

#### **Research Design**

The study employed a correlation research design. According to Creswell (2012) a correlational design is appropriate if the goal of the research is to relate two or more variables to examine their influence on other variables. Creswell has identified two types of correlational designs: Those which are useful in predicting outcomes known as prediction design, and those used to explain relationships among variables known as explanatory design. This study uses a prediction design. A prediction research design is used to predict likely outcome or influence of one or more variables on other variable (s)

#### **Participants and Sampling**

The participants for this study consisted of 249 students that were conveniently selected from among students who had taken their research writing courses. This sampling technique fits this study because according to Fink (2003), convenience sampling technique enables researchers to choose from individuals that are ready and available to participate.

#### **Instrument or Materials**

The instrument used for data collection in this study were:

1. **Teacher-Related Variables:** This was measured using Teacher Variables Questionnaire, which consisted of two subscales: teacher's experience subscale, and teacher effectiveness subscale.
2. **Teacher-student Partnership:** This was measured with Teacher-Student Partnership Questionnaire
3. **Achievement Outcomes in Research Writing:** This was obtained through self - report for students who had taken their research courses.

#### **Procedures**

The participant were conveniently selected and contacted to seek their consent to participate in the study, and those who consent to participate had the questionnaires administered to them to feel out at their own time, for at most three days. Completed questionnaires were retrieved and data coded. The scores of the participants on each of the three questionnaires were then matched against the achievement outcome results which were obtained through self-report.

#### **Data Analysis**

The study employed a hierarchical regression model to analyze the data. Hierarchical regression shows if variables of one’s interest explain a statistically significant amount of variance in the dependent variable (DV) after accounting for all other variables. In hierarchical regression, several regression models are built by adding variables to a previous model at each step. In this study, the first model consisted of two personal-level variables (Teacher Experience + Teacher Effectiveness) that are teacher-related, and the second model included social-level variables that are also teacher-related (Teacher-Student Partnership). The interest was to determine if the newly added variable show a significant improvement in variance of the dependent variable (Student Achievement Outcomes in Research Writing).

**RESULT**

This section tests the hypothesized models in research question 1 and 2 by using a hierarchical multiple regression.

**Model 1:** Student Achievement Outcomes = Teacher Experience + Teacher Effectiveness.

**Research Question 1:** Do personal-level teacher-related variables (Teacher Experience and Teacher Effectiveness) have a significant effect on student achievement outcomes in research writing?

**Model 2:** Student Achievement Outcomes = Teacher Experience + Teacher Effectiveness + .

**Research Question 2:** Does social-level teacher-related variables (Teacher-Student Partnership) significantly contribute to the prediction of student achievement outcomes in research writing beyond the influence of personal-level teacher-related variables?

**Table 1.** Hierarchical Multiple Regressions Analysis of Teacher-Related Variables Predicting Students Achievement Outcomes in Research Writing

Model 1						
Teacher Experience*	0.16	0.07	2.30	1.08	2.12	
0.03*						
Teacher Effectiveness*	0.24	0.07	2.71	0.86	3.15	
0.00*						
Model 2						
Teacher Experience		0.00	0.08	0.06	1.17	0.05
0.95						
Teacher Effectiveness	0.05	0.08	0.63	0.96	0.65	
0.51						
Teacher-Student Partnership	* 0.40	0.09	4.26	1.00	4.22	
0.00*						
$R^2 = .14$ for model 1, and $R^2 = .20$ for model 2						
$p < .05$						

**Discussion of Findings**

A hierarchical multiple regressions was conducted to determine whether personal-level variables that is teacher-related influences student achievement outcomes in research writing. Teacher Experience and Teacher Effectiveness was entered in model 1. The result indicated that Teacher Experience and Teacher's Effectiveness explained 14% of the variance of Student Achievement Outcomes in Research Writing,  $F(2,246) = 20.347$   $p < .00$ . The result of model 1 is in line with Greenwald, Hedges, and Laine (1996) study which concluded that teaching experience has a positive and significant effect on student achievement outcomes. The result is further in line with Brookover et al, (1979) and Bandura's (1993) submissions that effective teachers make better gains in students' achievement.

In Model 2, Teacher-Student Partnership was entered in addition to the initial Model, and the result revealed a  $R = 20\%$ ,  $F(3,245) = 20.439$   $p < .00$ , indicating an increase in percentage of the R-squared of the second Model from the first Model. This finding agrees with Baxter Magolda and King's (2004) finding that teachers partnerships with students helps develop gains in self-authorship of the student.

Further test were carried out by using probability calculator to determine if the increase in the percentage of variance from model 1 to mode 2 was significant, and if the predictor in model 2 explained a significant percentage of variance in Student Achievement Outcomes over and above what the predictors in model 1 had explained. The test was significant  $F(1,245) = 17.8386$ ,  $p < .034$ , and the predictor in model 2 explained an incremental 6% over and above what the predictors in model 1 had explain in Student Achievement Outcomes in Research Writing.

The overall result suggests that personal and social attributes of teachers accounts for student's learning. It further suggest that students will be successful in their research writings if they are handled by experienced teachers who are effective in their subject areas, and combines these personal attributes with partnerships with students that entails some form of collaborative work as regards research writing.

### **Summary**

The study investigated the predictive relations between teacher-related variables and student achievement outcomes in research writing. Two Models were tested using multiple hierarchical regression. The results were statistically significant, with model 1 explaining 14% variance of student achievement outcomes in research writing, while model 2 explained an incremental 6% variance over and above model 1.

### **Conclusion**

The researchers based on the findings conclude that students will do better and be successful in their research writing if their assigned mentors and supervisors are experienced teachers who are also effective and adept in their subject areas, and work collaboratively with the students while they do their research.

### **Recommendations**

Based on the findings of this study, the following recommendations were made:

1. The researchers recommends that with regards to the research topic of interest to the student, only experienced teachers who are effective and adept in their subject areas, and are willing to partner and work collaboratively with students be assigned as mentors or supervisors to oversee the student's research project. This will ensure a positive outcome because such a teacher is

likely to bring to bear his/her wealth of experience and adept knowledge to guide the students in their research writings.

2. The researchers also recommend a continuous professional development to enhance teaching/research skills of teachers and stay updated on best practices in research writing instruction.
3. Universities should create a collaborative learning environments that would foster Student-Teacher partnerships and make students feel supported and motivated to improve their research writing skills.
4. The researchers further recommend the development and implementation of teacher training programs that focuses on effective research writing instruction and pedagogical strategies.

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