



Teacher Interaction Proficiencies as Pathways to Enhanced Learning Environments

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Abstract— This study examined teachers' interaction proficiency and its influence on students' learning, engagement, motivation, and academic success in San Leonardo, Nueva Ecija. Utilizing a descriptive-correlational design, data were collected through validated questionnaires from a sample of 210 teachers, 17 school heads, and 353 students. The gathered data were subsequently analyzed using weighted mean, Pearson's r , Spearman's ρ , and the Kruskal-Wallis test. The results revealed that while teachers demonstrated an advanced level of interaction proficiency—with active listening emerging as their strongest skill—areas such as flexibility and emotional management still required improvement. Furthermore, teachers' interaction proficiency was found to significantly influence student outcomes. While sex showed a slight significant relationship to these dynamics, other demographic variables such as age, specialization, and years of service did not. Based on these findings, respondents highlighted a critical need for continuous professional development. Ultimately, the study concludes that strengthening teachers' communication and interpersonal skills directly enhances student outcomes and promotes a more supportive, engaging learning environment.

Keywords— Communication Skills, Educational Management, Emotional Intelligence, Teacher Interaction Proficiency, Student Engagement.

I. INTRODUCTION

This study emphasizes that effective teacher–student interaction is essential for a productive and inclusive learning environment. Key communication skills—verbal and non-verbal communication, active listening, adaptability, and emotional intelligence—enhance students' learning, engagement, motivation, and academic success. Guided by the Philippine Professional Standards for Teachers [1] and United Nations Sustainable Development Goal 4 [2], the study addresses gaps in understanding how teachers' demographic characteristics relate to interaction proficiency and student outcomes, as well as challenges that may hinder effective teaching. It aims to assess interaction proficiency, its impact on students, and propose improvement strategies.

The study investigates teachers' interaction proficiency and its extent on students' learning, engagement, motivation, and academic performance.

It examines teachers' profiles, assesses key communication dimensions, determines their influence on student outcomes, and analyzes relationships among variables.

It also compares perceptions of teachers, students, and school heads and proposes a sustainability plan to enhance interaction proficiency and improve the learning environment.

II. METHODOLOGY

Research Design

This study used a descriptive-correlational design to assess teachers' interaction proficiency and its relationship with student outcomes. It described proficiency levels across communication dimensions and examined relationships among teachers' profiles, interaction skills, and student learning without manipulating variables.

Participants and Sampling

The study involved 210 teachers, 17 school heads, and 353 students from six public secondary schools in San Leonardo, Nueva Ecija. Total enumeration was applied to teachers and school heads, while stratified random sampling ensured proportional student representation from junior and senior high school levels.

Data Sources and Instrumentation

Data were gathered using a validated self-constructed questionnaire with three parts: demographic profile, interaction proficiency (verbal, non-verbal, active listening, adaptability, emotional management) using a 4-point frequency scale, and extent on student outcomes (learning, engagement, motivation, academic performance) using a 4-point agreement scale. The instrument was tested for reliability through expert validation and pilot testing.

Data Collection and Ethical Protocols

Data collection followed approval, pilot testing, and final administration of questionnaires, completed within 10–15 minutes. Ethical standards included informed consent, voluntary participation, confidentiality, and compliance with the Republic Act No. 10173 and Republic Act No. 10175, along with proper data disposal and no conflict of interest.

Statistical Treatment

Data were analyzed using frequency and percentage for profiles, weighted mean for proficiency and outcomes, Pearson's r and Spearman's ρ for relationships, and multiple regression analysis to determine differences among respondent groups.

III. RESULTS AND DISCUSSION

The findings revealed that the 208 teacher-respondents in San Leonardo, Nueva Ecija were mostly young (21–30 years old), predominantly female, and largely non-language majors, with many specializing in Mathematics, Science, and Social Studies. Most held bachelor's degrees, while a significant number had pursued graduate studies, and only a few possessed doctoral qualifications. In terms of experience, the majority were in the early to mid-career stage (1–10 years of service), with fewer highly experienced teachers.

These results indicate a youthful and developing teaching workforce adapting to diverse and sometimes mismatched teaching assignments, reflecting national trends. Overall, the profile highlights the need for continuous professional development and better alignment of teachers' qualifications with their assigned subjects to enhance teaching effectiveness and interaction proficiency.



Table 1: Summary Table for Description of Teachers' Interaction Proficiency

Dimensions	Teachers		School Heads		Students	
	Mean	VD	Mean	VD	Mean	VD
Verbal Communication	3.83	A	3.73	A	3.58	A
Non-Verbal Communication	3.80	A	3.67	A	3.56	A
Active Listening Skills	3.84	A	3.68	A	3.59	A
Adaptability	3.79	A	3.62	A	3.52	A
Emotional Management	3.82	A	3.63	A	3.46	A
Grand Mean	3.82	A	3.67	A	3.54	A

Legend: VD=Verbal Description; 3.20-4.00=Advanced (A); 2.50-3.19=Proficient (P); 1.75-2.49=Developing (D); 1.00-1.74=Beginning (B)

The findings showed that teachers demonstrated an overall advanced level of interaction proficiency, with grand means of 3.82 (teachers), 3.67 (school heads), and 3.54 (students). Active listening emerged as the strongest skill from teachers' and students' perspectives (3.84), indicating that teachers are attentive and responsive in classroom interactions, while school heads identified verbal communication as the most prominent, highlighting teachers' clarity and effectiveness in delivering instruction.

However, adaptability was the lowest-rated dimension among teachers (3.79) and school heads (3.62), while students rated emotional management as the least evident (3.46), though all remained within the "Advanced" level. Overall, these results indicate that teachers are effective communicators who can meaningfully engage students. The strength in active listening supports its role in enhancing participation and learning, while effective verbal communication improves comprehension and motivation [4]. Additionally, strong communication skills foster empathy and better understanding of students' needs, with active listening promoting engagement [5]. Meanwhile, adaptability remains essential in addressing diverse classroom situations and improving interaction quality [6].

Table 2: Summary Table for Description of Extent on the Student Learning of the Teachers' Interaction Proficiency

Dimensions	Teachers		School Heads		Students	
	Mean	VD	Mean	VD	Mean	VD
Students' Learning	3.84	SA	3.80	SA	3.57	SA
Students' Engagement	3.84	SA	3.79	SA	3.56	SA
Students' Motivation	3.81	SA	3.75	SA	3.52	SA
Students' Academic Performance	3.84	SA	3.81	SA	3.58	SA
Grand Mean	3.83	SA	3.79	SA	3.56	SA

Legend: VD=Verbal Description; 3.20-4.00=Strongly Agree (SA); 2.50-3.19=Agree (A); 1.75-2.49=Disagree (D); 1.00-1.74=Strongly Disagree (SD)

The findings revealed that teachers' interaction proficiency has a strong extent on student outcomes, with high ratings from teachers (3.83), school heads (3.79), and students (3.56), all interpreted as "Strongly Agree." Teachers (3.84) emphasized its strong influence on learning and engagement, while school heads (3.81) and students (3.58) highlighted its impact on academic performance. Although students' motivation received the lowest ratings (3.81, 3.75, and 3.52), it remained within the "Strongly Agree" level. Overall, the results indicate that effective teacher communication and interpersonal skills significantly enhance students' learning, engagement, motivation, and academic performance by fostering a positive and participative classroom environment. These findings align with Buah (2017), who identified a significant relationship between teacher-student interaction and student motivation and performance [7], as well as the Collaborative for Academic, Social, and Emotional Learning (2024), which highlights the role of supportive classroom environments in improving engagement and outcomes. Similarly, positive teacher-student relationships strengthen students' confidence and academic achievement [8].

Table 3. Correlation Analysis Results between Teachers' Profile and Description on Their Interaction

Variable	Proficiency	
	Interaction Proficiency	
	Correlation Coefficient	p-value
Age ^a	0.01	0.833
Sex ^a	0.27**	0.000
Specialization ^a	-0.11	0.127
Highest Educational Attainment ^b	0.06	0.394
Length of Service ^b	-0.02	0.726

Legend: Subscripts a=Pearson r (Point Biserial) b=Spearman Rank **significant at 0.01 level

The correlation analysis shows that only sex has a significant relationship with teachers' interaction proficiency ($r = 0.27$, $p = 0.000$), indicating a positive but weak association, suggesting that interaction skills slightly vary between male and female teachers. In contrast, age, specialization, highest educational attainment, and length of service showed no significant relationship, implying that these factors do not meaningfully influence interaction proficiency. The findings suggest that gender-related differences may shape classroom interaction styles, where female teachers are often associated with stronger interpersonal and emotional engagement, while male teachers are perceived as more authoritative. This is supported that female teachers tend to develop closer and less conflict-prone relationships with students [9], and that female teachers are generally more responsive, encouraging, and effective in creating supportive learning environments [10].

Table 4: Correlation Analysis Results between Teachers' Profile and Description on Extent of Their Interaction Proficiency

Variable	Interaction Proficiency	
	Correlation Coefficient	p-value
Age ^a	0.13	0.057



Sexa	0.09	0.186
Specializationa	0.01	0.897
Highest Educational Attainmentb	0.09	0.221
Length of Serviceb	-0.01	0.905

Legend: Subscripts a=Pearson r (Point Biserial) b=Spearman Rank

The correlation analysis in Table 4 shows that none of the teachers' profile variables have a significant relationship with their interaction proficiency as perceived by students. All variables—age ($r = 0.13$, $p = 0.057$), sex ($r = 0.09$, $p = 0.186$), specialization ($r = 0.01$, $p = 0.897$), highest educational attainment ($r = 0.09$, $p = 0.221$), and length of service ($r = -0.01$, $p = 0.905$)—produced p-values higher than 0.05, indicating no statistical significance. Although age had the highest correlation coefficient, it was still weak and not meaningful. Overall, the results suggest that teachers' demographic and professional characteristics do not influence their interaction proficiency. This implies that factors such as age, sex, specialization, education, and experience are not key determinants of how effectively teachers interact with students. Instead, other factors like communication skills, personal competencies, and emotional intelligence may play a more important role.

Table 5: Differences on Teachers' Interaction Proficiency and the Extent of the Teachers' Interaction Proficiency as to the Three Groups of Respondents

Respondents	Teachers' Interaction Proficiency				Extent of the Teachers' Interaction Proficiency			
	Mean	Mean Rank	H-value	p-value	Mean	Mean Rank	H-value	p-value
Teachers	3.82	370.78a	102.039**	0.000	3.83	380.38a	105.870**	0.000
School Heads	3.67	318.71b			3.79	351.06a		
Students	3.54	234.31b			3.56	232.94b		

Legend: **=significant at 0.01 level

Note: Mean ranks with the same subscript are not different using DSCF Test Non-Parametric Post Hoc

Table 5 presents the results of the Kruskal-Wallis test examining differences in teachers' interaction proficiency and its perceived extent among teachers, school heads, and students. For interaction proficiency, findings show a highly significant difference ($H = 102.039$, $p = 0.000$), with teachers obtaining the highest mean rank (370.78^a), followed by school heads (318.71^b) and students (234.31^b), indicating that teachers rated their own interaction proficiency higher than the other groups, while school heads and students did not significantly differ. A similar trend was observed in the perceived extent of interaction proficiency, which also showed a highly significant difference ($H = 105.870$, $p = 0.000$), with teachers having the highest mean rank (380.38^a), followed by school heads (351.06^a) and students (232.94^b), suggesting that teachers and school heads share more positive perceptions compared to students' consistently lower ratings. These findings highlight a clear perceptual gap

between teachers' self-assessments, administrators' evaluations, and students' classroom experiences. Supporting literature reinforces this: Christodoulou and Papadopoulos (2023) found teachers rate their interpersonal behavior more positively than students [11]; Kim (2021) reported teachers overestimate their supportiveness per student evaluations [12]; Fauth et al. (2014) emphasized inconsistencies in teacher-student perceptions of classroom interactions [13]; Ursin et al. (2021) identified a "perception gap" where teachers rate instructional effectiveness higher than students [14]; and Havik and Westergård (2020) noted students' perceptions significantly influence engagement and motivation [15].

Table 6: Proposed Sustainability Plan

Teacher's Interactive Proficiency	Problem Encountered	Strategies / Interventions	Objectives	Responsible Persons	Timeline	Expected Output
Verbal Communication	Lack of language simplification strategies	Conduct communication enhancement seminars and workshops focused on using learner-centered and simplified language. Provide peer coaching and feedback on lesson delivery.	To improve teachers' ability to use clear, concise, and student-friendly language in classroom instruction.	School Head, English Department Coordinator, Master Teachers	Every 1st and 3rd Friday of the month	Teachers consistently use simplified and comprehensible language during instruction.
Non-Verbal Communication	Lack of effective nonverbal communication	Implement training on nonverbal teaching strategies such as facial expressions, gestures, and classroom presence. Utilize video-based self-assessment of classroom interaction.	To enhance teachers' awareness and application of nonverbal cues that support verbal instruction.	HR/Training Office, Guidance Counselor	A week before the start of the academic year	Teachers effectively use facial expressions and gestures to emphasize important points and sustain student engagement.
Active Listening Skills	Limited responsiveness to students' input	Conduct workshops on active listening and	To develop teachers' ability to acknowledge	Academic Coordinator,	A week after the end of	Teachers demonstrate improved responsiveness



		feedback integration. Introduce reflective teaching journals to document how student feedback is applied.	e, understand, and incorporate student feedback into future lessons.	Department Heads	Academic year	s and maintain open dialogue with students.
Adaptability	Lack of instructional flexibility	Organize training on differentiated instruction and adaptive teaching strategies. Encourage collaborative lesson planning across subject areas.	To improve teachers' capacity to adjust teaching methods based on students' needs, interests, and learning contexts.	School heads, Curriculum Development Committee	A week after the end of Academic year	Teachers effectively modify instructional approaches to fit various learning situations.
Emotional management	Difficulty in managing one's own emotions and understanding those of students	Provide seminars on emotional intelligence, stress management, and empathy in teaching. Offer mentoring and counseling sessions for emotional support.	To strengthen teachers' emotional regulation and ability to recognize and respond to students' emotional cues.	Guidance Office, HR Department, School Head	Every Friday of the week; At least 2 hours per week	Teachers exhibit improved emotional control and empathy, leading to a more positive classroom climate.
Extent of Teachers' Interaction Proficiency	Lack of varied motivational strategies and flexible instructional approaches	Implement professional development programs on student motivation techniques, reward systems, and adaptive pedagogy.	To enhance teachers' ability to apply extrinsic and intrinsic motivators and flexible methods that sustain student	Training and Development Office, School heads	A week before the start of the academic year	Increased student participation and motivation through effective and adaptive teaching methods.



		Integrate motivation-based approaches into performance evaluation.	engagement .			
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The proposed sustainability plan aims to enhance teachers' interaction proficiency and ensure the long-term effectiveness of instructional practices within the school community by addressing identified gaps in verbal communication, non-verbal communication, active listening, adaptability, emotional management, and overall interaction proficiency. It employs targeted interventions such as seminars, workshops, peer coaching, reflective journals, mentoring, and video-based self-assessment to improve specific areas, including clear and student-friendly language, effective non-verbal cues, responsiveness to student feedback, instructional flexibility, emotional regulation, and student motivation strategies. The plan is structured with clearly defined objectives, responsible personnel (including school leaders, department heads, coordinators, and support offices like HR and guidance services), implementation timelines (ranging from weekly sessions to academic-year-based programs), and expected outputs to ensure accountability and sustainability. Ultimately, it seeks to institutionalize reflective, adaptive, and student-centered teaching practices that strengthen classroom interaction, boost student engagement and motivation, and foster a more positive and effective learning environment.

IV. CONCLUSION AND RECOMMENDATIONS

Conclusion on Teachers' Interaction Proficiency and Student Outcomes

The study concludes that most teacher-respondents in public schools in San Leonardo, Nueva Ecija are young (21–30 years old), predominantly female, teaching non-language majors, mostly bachelor's degree holders, and generally in their mid-career stage (6–10 years of service). Overall, teachers demonstrated an advanced level of interaction proficiency across verbal communication, non-verbal communication, active listening, adaptability, and emotional management, as perceived by teachers, school heads, and students, with key strengths in verbal clarity, consistent eye contact, active listening, instructional adaptability, and emotional management—all supporting effective classroom interaction and positive learning environments. The findings further revealed that teachers' interaction proficiency has a strong positive extent on students' learning, engagement, motivation, and academic performance, with all groups strongly agreeing on its importance and identifying clear communication, student engagement strategies, emotional support, and feedback as the most influential factors in improving student outcomes. In terms of relationships, only sex showed a significant correlation with interaction proficiency, while age, specialization, educational attainment, and length of service showed no significant relationship; likewise, no significant relationship was found between teachers' profiles and the extent of interaction proficiency, leading to acceptance of the null hypothesis. Finally, significant differences in perceptions showed teachers rating themselves highest in both interaction proficiency and its extent, with students consistently giving lower ratings (though all remained positive), confirming that teacher interaction proficiency is a key factor in enhancing student outcomes regardless of most demographic characteristics.

Recommendations for Enhancing Teachers' Interaction Proficiency and Student Outcomes

Based on the study's conclusions, the Schools Division Office is recommended to provide continuous capacity-building programs to further enhance teachers' instructional competence, communication skills, classroom management, and subject specialization—particularly through scholarships and advanced training—given that most teachers are young (21–30 years old), female, non-language majors, bachelor's degree holders, and in early to mid-career stages (6–10 years). School heads are encouraged to sustain and strengthen teachers' advanced interaction proficiency via regular seminars, workshops, mentoring, and peer observation focusing on verbal/non-verbal communication, active listening, and emotional intelligence to maintain high-quality practices. Since teachers' interaction proficiency significantly influences students' learning, engagement, motivation, and academic performance, educators should consistently adopt student-centered, interactive, and emotionally supportive strategies with clear communication and constructive feedback. Noting sex's significant correlation with interaction proficiency, gender-responsive professional development is advised to leverage unique strengths of male and female teachers. As no significant relationships existed between other demographic profiles (age, specialization, attainment, service length) and proficiency extent, training should emphasize skill-based development with equal access for all. With no significant perceptual differences among respondent groups, a standardized, collaborative evaluation system involving teachers, school heads, and students is recommended for consistency and objectivity. Finally, school administrators should implement the proposed sustainability plan to address gaps and continuously improve teacher-student interaction and instructional effectiveness.

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