



Communication Capacities and Mutual Connection System of Teachers in Public Elementary Schools

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

This study examined the communication capabilities and mutual connection system of public elementary school teachers in the Davao Central District, Division of Davao City. A universal sampling method was employed using a non-experimental quantitative research design with a correlational approach. The respondents were 132 public elementary school teachers. Statistical tools utilized included the mean, Pearson Product-Moment Correlation Coefficient (Pearson r), and regression analysis. The findings revealed that the communication capabilities of public elementary school teachers—measured in terms of connections, compelling communication, stability, manners, listening, and charm—were often demonstrated. Similarly, the mutual connection system, assessed through revision, goal achievement, unification, and potential, was also frequently evident. A significant relationship was found between the teachers' communication capabilities and their

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mutual connection system. Furthermore, specific domains of communication capabilities significantly influenced the mutual connection system. These results underscore the synergistic relationship between communication capabilities and a mutual connection system, where effective communication enhances mutual connections, and a well-structured connection system fosters continuous and efficient communication. Conversely, weaknesses in these areas could result in communication breakdowns, misunderstandings, or diminished group cohesion. The study highlights the importance of fostering both robust communication skills and a supportive connection system among public elementary school teachers to promote collaboration and effectiveness in the educational setting. This study was limited to public elementary school teachers in the Davao Central District, which may affect the generalizability of the findings to other contexts. Future research could explore other educational levels or regions and consider mixed methods to provide deeper insights and validate the results.

Keywords: Communication capabilities; mutual connection system; public elementary school; teachers; Philippines.

1. INTRODUCTION

The communication capacities and mutual connection systems of teachers are critical to building an effective and collaborative educational environment. Communication capacities encompass teachers' ability to convey information, ideas, and emotions with clarity and empathy, ensuring effective engagement with students, colleagues, and parents (Vanamali, 2023). Strong communication capabilities enable teachers to deliver lessons in ways that resonate with diverse learners, adapting language and teaching methods to meet various needs. Furthermore, these capabilities foster positive relationships with parents, creating a bridge between school and home that supports students' holistic development beyond the classroom (Hollie, 2017).

In the United States, the mutual connection system among teachers includes the professional networks and collaborative relationships they establish within their educational communities. These networks allow educators to share resources, exchange insights, and support one another in addressing professional challenges (Brown & Poortman, 2018). By fostering these connections, teachers can develop a collective knowledge base, benefiting from shared experiences and innovative practices. This collaborative environment enhances instructional effectiveness and creates a cohesive and enriching learning experience for students. Effective communication and mutual connection systems together cultivate a supportive professional culture that promotes continuous growth and a positive school climate (Lijun & Te, 2024).

In the Philippine context, communication capabilities are integral for teachers not only in delivering lessons effectively but also in building trust and understanding with stakeholders, including students, parents, and colleagues. Teachers with strong communication skills can articulate concepts clearly, listen actively to student concerns, and provide individualized guidance that addresses specific learning needs. These skills also extend to parent-teacher interactions, where ongoing communication facilitates collaboration on strategies to enhance student learning at home. This sustained dialogue fosters a supportive network that bolsters student growth and academic success (Daing & Mustapha, 2023).

Mutual connection systems among teachers in the Philippines further strengthen educational outcomes by fostering a collaborative professional culture (Gutierrez & Kim, 2017). By building strong relationships with colleagues, teachers create networks for sharing resources, strategies, and best practices. This collegial support introduces fresh perspectives and solutions, allowing educators to navigate challenges collectively and enhance their teaching approaches. Moreover, mutual connections ensure a unified approach to instruction across classrooms, creating a cohesive and supportive learning environment for students (Darling-Hammond & Cook-Harvey, 2018).

In Region XI, teachers' communication capacities encompass the ability to articulate ideas, instructions, and feedback clearly, while remaining responsive to the diverse needs of their students. Effective communication is not limited to content delivery but includes active

listening, recognizing unique student challenges, and adapting instructional methods to foster trust and rapport (Ogbanga, 2024). These practices motivate students to engage more deeply in their learning, creating a positive and inclusive classroom atmosphere.

The mutual connection systems among teachers in the region refer to their ability to build collaborative relationships, share resources, and develop innovative instructional strategies (Brown & Poortman, 2018). Through mutual support, educators address challenges collectively, improve classroom management, and enhance student outcomes. These networks also foster professional growth by enabling teachers to learn from each other's successes, challenges, and innovations. Together, robust communication capabilities and well-established connection systems empower teachers to create a unified, enriched learning environment while fostering a strong sense of community and shared purpose among educators (Chellaraj, 2024).

Given the importance of these elements, this study aims to explore and assess the communication capacities and mutual connection systems of public elementary school teachers. The findings will offer insights into how these factors contribute to a cohesive and effective educational environment. This study also seeks to provide a foundation for administrative policies that support professional collaboration and communication development. By addressing these areas, the research aims to create a document with both educational and social relevance, guiding public schools toward fostering a more unified and supportive learning community.

2. METHODOLOGY

2.1 Research Design

This study employed a non-experimental quantitative research design, utilizing the correlational method. This approach is suitable when the objective is to describe the current status of a phenomenon and explore the relationships or potential causes of specific occurrences. In correlational research, data is collected to determine whether a relationship exists between two or more quantifiable variables and, if so, to assess the strength and direction of that relationship (Pregoner & Baguio, 2024).

A non-experimental quantitative research design investigates relationships between variables without manipulating them. Unlike experimental designs, which involve controlled conditions and interventions, non-experimental designs observe variables in their natural settings. The correlational method, a key approach within this framework, examines whether variables are related and the extent of this relationship. For example, researchers might explore correlations such as the relationship between exercise frequency and mental well-being or between study habits and academic performance (Pregoner, 2024).

The primary goal of quantitative research is to determine relationships between an independent variable and a dependent or outcome variable within a population. Quantitative research designs can be categorized as either descriptive—where variables are measured once—or experimental, where subjects are measured before and after an intervention. While descriptive studies establish associations between variables, experimental studies aim to establish causality. Quantitative research relies on numerical data, logic, and an objective approach, focusing on precise, structured reasoning rather than the open-ended generation of ideas (Duckett, 2021).

To accurately estimate the relationships between variables, descriptive studies often require large samples, sometimes numbering hundreds or thousands of participants. Minimizing bias in descriptive studies involves ensuring a high participation rate and random sampling from the population. In experimental studies, bias is reduced through random assignment to treatments and employing blinding procedures for both researchers and participants (Lohr, 2021).

This descriptive survey gathered quantitative data to investigate the communication capacities and mutual connection systems of public elementary school teachers. The quantitative aspect involved structured data collection using a well-designed questionnaire targeted at the study's respondents. The data collection process adhered to systematic and standardized methods to ensure reliability and validity. The focus of this study was to assess the communication capacities and mutual connection systems of public elementary school teachers, providing insights into their relationships and their influence on the educational environment.

2.2 Research Respondents

The respondents of this study consisted of 132 teachers from public elementary schools in the Davao Central District, Division of Davao City. To ensure relevant experience, only teachers with a minimum of three years of service in public elementary schools were included. The researcher employed universal sampling in selecting respondents, meaning the entire population of teachers from the selected schools was included in the study. This comprehensive approach ensured a representative sample of the target group. The study was conducted during the school year 2021–2022.

2.3 Research Instrument

The research instrument used for data collection was a survey questionnaire designed based on concepts from various authors and contextualized to the local setting to ensure its relevance. The refinement of the questionnaire was facilitated through the assistance of the thesis adviser and three expert validators who assessed its content for clarity, accuracy, and alignment with the study's objectives. To evaluate its reliability, a pilot test was conducted with 31 teachers from a separate school within the same district, resulting in a Cronbach's alpha reliability score of 0.746, which indicates acceptable internal consistency.

The questionnaire comprised 50 items divided into 10 indicators, with each indicator consisting of five questions. A Likert scale was adopted to measure the communication capacities and mutual connection systems of public elementary school teachers. The instrument was structured into two main parts. Part 1 focused on the communication capacities of public elementary school teachers, which included six indicators. Part 2 addressed the mutual connection system of public elementary school teachers, consisting of four indicators. This structured approach ensured comprehensive coverage of the study variables and facilitated accurate data collection and analysis.

2.4 Data Gathering Procedure

The data collection process followed a series of organized steps to ensure the validity and reliability of the study on the communication capacities and mutual connection systems of public elementary school teachers. Initially, the researcher secured a letter of permission to

conduct the study. This letter, along with a formal appearance, was signed and approved by the Dean of Graduate Studies of Rizal Memorial Colleges, the study adviser, the school principal, and other authorized personnel such as moderators or teachers in charge of the public elementary schools involved.

To facilitate smooth administration, adequate and clear copies of the questionnaire were prepared. The researcher personally distributed the questionnaires to the respondents and requested them to answer honestly to ensure the elicitation of valid and reliable data. Remarkably, 100% of the questionnaires were retrieved, reflecting the cooperation of the respondents.

Once the responses were collected, the researcher organized and tabulated the data before submitting it to tabulators and a statistician for statistical analysis. The results were then analyzed and interpreted to address the study's purpose, which was to determine the relationship between the communication capacities and mutual connection systems of public elementary school teachers.

2.5 Data Analysis

The gathered data were systematically classified, analyzed, and interpreted using the following statistical tools:

Mean: This statistical tool was employed to determine the overall levels of communication capacities and mutual connection systems of public elementary school teachers. It provided an average measure for each variable, allowing for an understanding of the general tendencies and patterns.

Pearson Product-Moment Correlation (Pearson r): This was utilized to assess the significant relationship between communication capacities and mutual connection systems. It measured the strength and direction of the linear relationship between the two variables, providing insight into how changes in one variable corresponded to changes in the other.

Regression Analysis: This tool was applied to determine the significant influence of communication capacities on the mutual connection systems of public elementary school teachers. It allowed the researcher to identify which aspects of communication capacities had the most substantial impact and to quantify

the predictive relationship between the variables.

3. RESULTS AND DISCUSSION

3.1 Communication capacities of teachers

Table 1 presents the summary of the communication capacities of public elementary school teachers, evaluated based on six indicators: connections, compelling communication, stability, manners, listening, and charm. The mean ratings for these indicators are as follows: connections (3.62) or high; compelling (3.54) or high; stability (3.55) or high; manners (3.51) or high; listening (3.55) or high; and charm (3.56) or high. The overall mean rating is 3.56, which is categorized as high.

This high rating underscores the pivotal role of teachers in fostering effective teaching and learning environments. A teacher's ability to communicate clearly and effectively significantly influences how well students comprehend and engage with the material. Teachers' communication skills enable them to articulate concepts, provide instructions, and address students' needs with clarity and empathy. Beyond simply delivering subject matter, teachers also create an atmosphere of open dialogue, encouraging students to express their ideas, ask questions, and participate actively in the learning process.

These findings align with the study by Sekhar (2024), which emphasizes the growing importance of diverse communication tools, including digital platforms, in modern education. Teachers must strike a balance between assertiveness and approachability, maintaining authority while remaining accessible to students. Effective communication not only enhances classroom interactions but also builds trust and supports students' academic and personal development.

Moreover, Stronge (2018) highlighted the crucial role of teachers' communication capacities in fostering effective teaching, meaningful student engagement, and a supportive learning environment. Similarly, Insigne (2024) demonstrated that strong communication capabilities empower teachers to convey complex ideas in a clear and accessible manner, ensuring students grasp and retain key concepts. Additionally, these skills help teachers establish

positive relationships with students, parents, and colleagues, promoting collaboration and trust within the educational community.

3.2 Mutual Connection System of Teachers

Table 2 presents the summary of the level of mutual connection system among public elementary school teachers, evaluated across four indicators: revision, goal achievement, unification, and potential. The mean ratings for these indicators are as follows: revision (3.39), goal achievement (3.56), unification (3.56), and potential (3.64). The overall mean rating is 3.54, categorized as moderate.

This moderate level suggests that the mutual connection system among teachers highlights the importance of collaboration and strong professional relationships within the teaching community. A robust mutual connection system fosters a supportive network where teachers can share resources, exchange ideas, and provide constructive feedback. This collaboration enhances professional development, enriches teaching practices, and contributes to a more cohesive educational environment.

These findings align with Messiou et al. (2016), who emphasized that mutual respect and understanding among teachers enable them to learn from one another's experiences and strengths. Such connections encourage collective contributions toward a cohesive and effective educational environment, ultimately benefiting student outcomes and fostering a positive school culture.

Similarly, research by Albion et al. (2015) highlighted the pivotal role of mutual connection systems in promoting collaboration, professional growth, and supportive educational settings. This system establishes a platform for teachers to exchange knowledge, share best practices, and implement innovative strategies, thereby enhancing their individual and collective effectiveness.

Furthermore, Voogt et al. (2015) emphasized that collaborative approaches foster continuous learning by allowing teachers to draw from one another's expertise and experiences. This mutual connection system strengthens school culture, improves teaching quality, and supports better outcomes for students.

3.3 Significance on the Relationship between Communication Capacities and Mutual Connection System of Teachers

Table 3 shows the significant relationship between communication capacities and the mutual connection system of public elementary school teachers. The computed r-value of 0.082 and the corresponding p-value of 0.00 at an α level of 0.05 indicate a statistically significant relationship between the two variables. Since the computed r-value exceeds the tabular value, the null hypothesis is rejected, affirming that improvements in teachers' communication capacities are linked to stronger and more effective mutual connection systems within the school environment.

This finding aligns with the view of Sergiovanni (2015), who emphasized the importance of strong communication capabilities in fostering positive professional relationships and collaboration among teachers. Effective communication capabilities create an environment conducive to mutual support, where teachers can exchange ideas and strategies, thus strengthening both their mutual connection system and collective effectiveness.

Moreover, this finding corroborates with the study of Vangrieken et al. (2015), which highlighted the role of effective communication capabilities in enhancing teachers' professional networks. When teachers are able to communicate well, they are more likely to engage in collaborative practices that improve their teaching methods and create a more cohesive educational environment. The mutual connection system, thus, thrives on the communication capabilities that teachers exhibit,

fostering a supportive and efficient learning community.

Table 4 shows the domains of communication capacities that significantly influence the mutual connection system of public elementary school teachers. With an overall computed r-value of 0.877 and an equivalent p-value of 0.00 at an α of 0.05 significance level, the computed r-value is much higher than the tabular value. This result leads to the rejection of the null hypothesis, indicating that the domains of communication capacities significantly influence the mutual connection system of public elementary school teachers. Thus, it can be concluded that as the domains of communication capacities improve, so does the mutual connection system among teachers.

Table 1. The level of communication capacities of teachers

No	Indicators	Mean (x)	Descriptive Level
1.	connections,	3.62	High
2.	compelling,	3.54	High
3.	stable,	3.55	High
4.	manners,	3.51	High
5.	listening	3.55	High
6.	Charming	3.56	High
Overall		3.56	High

Table 2. The level of mutual connection system of teachers

No	Indicators	Mean (x)	Descriptive level
1	Revision	3.39	Moderate
2	goal achievement	3.56	High
3	Unification	3.56	High
4	Potential	3.64	High
Overall		3.54	Moderate

Table 3. Significance on the relationship between communication capacities and mutual connection system of teachers

Variables	r-value	Degree of Correlation	p-value	Decision (Ho)
Communication capacities Mutual connection system	0.082	High Correlation	0.00	Rejected

Table 4. The Domains of communication capacities significantly influence mutual connection system of teachers

Model	Sum of squares	DF	r-value Degree	p-value	Decision
Regression	573.898	3			
Residual	524.331	131	0.877	0.00	Rejected
Total	564.121	134			

Note: Significance when $P < 0.05$ (2T)

This finding validates the theory of Social Exchange Theory by Cook and Emerson (1987) which posits that individuals engage in relationships based on perceived benefits, such as the exchange of ideas, resources, and support. In the context of this study, the enhanced communication capacities of teachers facilitate a more efficient and supportive mutual connection system, where teachers are able to exchange resources and collaborate more effectively.

Moreover, this finding aligns with Bandura's Social Learning Theory (1977), which emphasizes the role of communication in observational learning and the transfer of knowledge. Teachers with strong communication capabilities are more likely to engage in collaborative practices, thus strengthening their professional network and fostering a culture of shared learning and support.

Furthermore, the study supports the view that communication is a key enabler in creating a positive organizational culture. According to Kouzes and Posner (2023), effective communication is essential for building trust and collaboration within teams. Teachers who demonstrate strong communication capacities are better equipped to establish meaningful connections with their colleagues, which in turn promotes a more cohesive and effective teaching environment.

4. CONCLUSION

On the basis of the forgoing findings, the following conclusions are drawn:

It is concluded in this study that the communication capacities of public elementary school teachers in terms of connections, compelling, stable, manners, listening and charming is high and manifested oftentimes by the teachers.

It is determined in this study that the mutual connection system of public elementary school teachers in terms of revision, goal achievement, unification and potential is high and manifested oftentimes by the public elementary school teachers.

It is clinched in this study that there is a significant relationship between communication capacities and mutual connection system of public elementary school teachers. This

indicates that the null hypothesis is hereby rejected.

It is concluded in this study that the domains of communication capacities is significantly influence to mutual connection system of public elementary school teachers. This indicates that the null hypothesis is rejected.

5. RECOMMENDATIONS

Based on the foregoing conclusions, the researcher proposes the following recommendations:

It is recommended that school heads prioritize improving the communication capacities of public elementary school teachers in order to foster a better work-related environment for all stakeholders, including teachers, staff, students, and the community. Special attention should be given to enhancing areas such as conveying the feeling that others matter, demonstrating leadership qualities, and inspiring teachers to work productively. By focusing on these areas, a positive and motivating school atmosphere can be established.

It is suggested that the mutual connection system of public elementary school teachers be strengthened, particularly in areas identified as needing improvement, such as encouraging openness in communication between teachers, school clients, and other stakeholders. School leaders should model effective communication behaviors and foster an environment of transparency and trust. This will enable teachers to communicate more openly and collaborate effectively with one another.

It is recommended that efforts be made to clarify and improve the consistency of workplace communication, especially in areas identified as weaknesses, to ensure that teachers and school heads build a mutual understanding and trust. Consistent communication can help bridge gaps, allowing for better teamwork and collaboration among teachers and between teachers and school leaders.

Lastly, it is commended that the communication capacities and mutual connection system of public elementary school teachers be enriched, with a particular focus on listening skills and showing genuine interest in colleagues' ideas. Teachers should be encouraged to express their opinions and share constructive suggestions,

fostering a culture of collaboration and collective achievement. By improving these aspects, teachers will contribute to a more cohesive and productive professional community.

CONSENT

This quantitative study adhered to strict ethical guidelines to ensure the privacy and protection of all participants. Before data collection, informed consent was obtained from all respondents, and they were thoroughly briefed on the study's objectives, as well as the measures taken to ensure confidentiality. To preserve anonymity, no personal identifying information was collected, and each respondent was assigned a unique code for data analysis. All collected data were securely stored on encrypted servers, with access limited to the research team. The findings were presented in aggregated form, ensuring that individual responses could not be traced back to any participant. Furthermore, statistical analyses were carried out in a manner that further safeguarded the anonymity of the respondents, ensuring their privacy was upheld throughout the entire research process.

ETHICAL APPROVAL

Initially, the researcher secured a letter of permission to conduct the study. This letter, along with a formal appearance, was signed and approved by the Dean of Graduate Studies of Rizal Memorial Colleges, the study adviser, the school principal, and other authorized personnel such as moderators or teachers in charge of the public elementary schools involved.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

The author(s) hereby declare that generative AI technologies have been used during the writing and editing of this manuscript. The details of the AI usage are as follows:

1. **Grammarly:** Used for grammar and spell-checking, as well as suggestions for improving sentence structure and overall clarity.
2. **Quillbot:** Employed for paraphrasing and refining sentence flow to enhance readability and coherence.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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