

# Regression Analysis of Communication Gap in Teaching-Learning Process among BTVTED Students

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## ABSTRACT

Inadequate teacher-student communication in schools causes misconceptions of academic information, resulting in decreased student performance and engagement. Furthermore, it impedes the formation of a supportive learning environment, which is critical for increasing student motivation and confidence. The study aimed to investigate the relationships and influences of the quality of teacher-student communication on students' level of academic learning outcomes among college students of Tagum City College of Science and Technology Foundation, Inc. Specifically, it examined the variables that best predict students' academic learning outcomes. Descriptive, correlational, and causal-comparative designs were utilized in this study. Moreover, researchers used adapted survey questionnaires to obtain information from the respondents. For students' quality learning achievement, the study used the students' general average acquired in the first semester. Pearson Product Moment Correlation  $r$  and Simple Linear Regression were the statistical tools utilized in the study. The study demonstrated a significant relationship between the quality of teacher-student communication and students' learning outcomes. All three indicators under the independent variable were of *high* descriptive equivalent. Moreover, learners' academic performance was *very satisfactory*. Furthermore, *teachers' feedback* on Quality teacher-student communication significantly predicted students' learning outcomes. Thus, the more precise the instructions the teachers give, the more responsive the teacher is, and the more they give positive feedback, the more they perform well in school.

**Keywords:** Communication Gap, Teaching, Learning Outcomes, Correlation, Regression, Philippines.

## 1. INTRODUCTION

### **1.1 Background of the Study**

The communication gap was an issue that is still very much present today. It had severely divided people, making it difficult for them to communicate effectively with each other. Teachers and students both live in a system that depends on communication. They both learned and taught but couldn't do either if they didn't communicate. There was a vast knowledge and education level gap between students and teachers. Their communication needs to improve to develop strong and effective listeners and communicators.

In Saudi Arabia, positive classroom environments, and enhanced learning opportunities could be achieved through effective teacher-student communication. But both parties had to put in work in this connection. When there were communication difficulties, it was undoubtedly difficult for students to get the most out of their education. Educators frequently needed help establishing a one-on-one connection with their pupils and needed help to develop compelling sessions. In addition, untreated language or speech issues in students cause them to communicate poorly. Peer pressure and personality differences combined to create an awkward or forced atmosphere in some classroom interactions [1].

A study conducted in Quezon City, Philippines, analyzed the level of Filipino students and teachers' communication, social, and thinking skills. They found out that there was an existing lower-power distance relationship between teachers and students. Filipino children, even outside school, could observe the same behavior patterns. In Philippine homes, where the young ones were first taught certain patterns of behavior; for instance, children were instructed to teach them values like submission to parental authority [2] and respect and obedience to older or more senior members of the family. Filipino students were also inclined to keep academic dialogues with their teachers at a minimum to avoid being considered rude by the latter.

Moreover, [3] also stated that one might observe that many Filipino students, if they are not completely quiet, are generally polite with or respectful to their teachers. According to [4], the power distance between students and their teachers when it comes to learning social, communication, and critical thinking skills from the teacher was narrow. They also concluded that when students manifested higher scores in their learning or acquisition of skills, the power distance in the classroom between the teachers and these students was lower. This was because of the general view in education that a more open and flexible classroom setting (i.e., where students and teachers could converse and interact freely, where students could raise questions to their teachers, and the like) makes for more effective learning among students.

In Tagum City, a gap was observed between teachers and students. It has been a part of a student's life and experience in school that even a tiny question takes a lot of courage and guts to voice out. Students were afraid to ask, suggest, and share their ideas, for they were scared to be scolded and judged. This problem impacted how the students performed in school because they could not clarify what they did not understand, and some even involved conflict and misunderstanding with teachers. It has had an impact, especially in their learning process.

In addition, some claim that communication gaps must exist for instructors to maintain respect. According to a teacher, they had been planning activities that would bring students closer to them and more comfortable with them in terms of academic subjects. However, some still needed to work on opening for them. But this does not warrant losing their respect. They claimed that communication breakdowns protected teachers' dignity and aided in instilling principles and good manners in kids. Additionally, they said that doing this would allow them to be heard and taken seriously by the students.

However, this research was pursued because the researchers have yet to come across a study about the impact of teacher-student communications on students' learning outcomes. This was to inform the teachers and other educators that this problem needs to be addressed. The researchers also hoped to provide information and recommendations on handling and solving this problem. This was indeed relevant to both students and teachers, as it improved their relationship and communication for a better teaching and learning process in school.

### **1.2 Literature Review**

### *Quality of Teacher-Student Communication and Student Learning Outcomes*

Consistent communication between students and teachers and a conducive learning environment created by teachers significantly impacted students' academic performance [5]. It became imperative for teachers to use critical reflection to become more aware of what students needed to learn and to integrate appropriate teaching methods to meet these needs better [6]. Students have abandoned their studies at a particular level due to lecturers' unavailability and poor communication [7]. [8] proved that students' self-confidence and self-ability help build their relationships with their teachers through nonverbal communication. [9] stated that students' success is directly related to the effective communication of the teacher.

Accordingly, communication plays a crucial role in building up students' careers. The communication of teachers, either verbal or nonverbal, is an essential factor required by students to become successful in their educational pursuits. Communication inspires learners to improve their abilities. It also motivates learners to work harder. Teachers must therefore successfully communicate with students [10]. Additionally, communication was a priority in creating a positive environment that supports student learning within the complex classroom context, the diversity of student courses, and the broader lives of students outside the university. According to [11], the opportunity for successful teaching and learning interactions in the classroom depends significantly on the successful transmission or exchange of ideas and information between teacher and students.

Also, a lack of good communication between teachers and students causes the teaching and learning process to fail in achieving its goals. It was necessary to provide a friendly classroom atmosphere to ensure competition in exchanging ideas and information between teachers and students. According to [12], effective communication involves more than just exchanging ideas; it also establishes connections between the ideas being exchanged and the emotions behind the ideas and information. Teachers' personality traits significantly impact students' learning and academic performance during lectures, practical communication skills, access to the most recent information, and proper classroom management [9]. In addition, the teacher was responsible for outlining expectations and preferred communication channels [1]. The quality of educational institutions was determined by teachers' consistent and efficient communication with their students. Teachers' effective classroom communication was essential for students to understand, learn, and become goal-oriented. It also creates a thought structure that molds students' thinking [9][10].

Similarly, the quality of teacher-student communication affected the student's academic performance in terms of clarity of instruction. According to [13] and [14], teachers' clarity enhances students' ability to organize and maintain information, facilitating learning. Also, [13] stated that clarity decreases students' cognitive load, expediting learning. Also, according to [15], teacher clarity was an essential factor in student learning; it could help students learn better than those by unclear teachers. Moreover, clarity might improve students' capacity to assimilate course material. Some studies have shown that clarity may help students learn more efficiently by minimizing cognitive demands [13]. He also examined the assertion that students' motivation had a bearing on the impact of an instructor's clarity on learning. He also stated that clarity allows learners to process course information in elaborate ways that might improve academic outcomes. Processing and comprehending educational information in the classroom were vital aspects of the achievement of student learning outcomes.

Furthermore, a critical competency for any teacher is the ability to communicate with students to facilitate learning in the classroom. Instructional clarity could be defined as a teacher's capacity to deliver classroom instruction clearly and concisely [16]. Disorder in classrooms was a significant concern for teachers and students [17], with significant negative impacts on student achievement, school belonging, and motivation.

On the other hand, students' academic performances were also affected by the quality of teacher-student communication in terms of teachers' feedback. According to [18], Feedback was considered a vital approach to facilitating students' development as independent learners to monitor, evaluate, and regulate their learning. The impact of feedback on future practice and the development of students' learning was highlighted by [19]. When students enter higher education, the type of feedback they then receive, intentionally or unintentionally, will play an

essential part in shaping their learning futures. As a result, we need to know much more about how the nature of the feedback they receive shapes their learning and, indeed, their professional identity.

Consequently, [20] stated that teachers' feedback was necessary for students to achieve their learning objectives and to help them recognize their work's critical and sensitive elements. Feedback could help students bridge the gap between their current performance or understanding and the intended result. Depending on how much information the teacher offers for later development, feedback could significantly impact pupils' learning. [21] also asserted that feedback affected students' academic motivation and excellence. According to [22], feedback highlights students' strengths and guides them in developing and regulating their learning strategies. Feedback also provides better learning opportunities while guiding them to improve their weaknesses. They also discovered that, while teachers' feedback was critical in helping students progress academically and inspiring them to become independent, written input could have a negative impact on or inhibit learning.

Likewise, the teacher-student communication quality regarding teachers' responsiveness also affected the student's academic performance. According to [23], close student-teacher connections benefit students in several ways. A recent study reported an association between closer student-teacher relationships, higher school engagement, and student achievement levels. Conversely, students with more conflictual student-teacher connections had more significant behavior problems and poorer academic achievement [24].

According to [12], effective communication involves more than just exchanging ideas; it also establishes connections between the ideas being exchanged and the emotions behind the ideas and information. Studies show that engaging students in discussions that explore the value of homework, reflect on their experiences, and develop ideas to enhance homework increases awareness of their responsibility for their learning outcomes [25][26]. Support and guidance from teachers have also been shown to reduce the likelihood that students will drop out of school [27]. Thus, student-teacher relationship quality is linked to students' current and future academic performance, social development, school engagement, and high school completion.

Consequently, the way instructors communicate significantly impacts how effective they are. They use various methods to communicate ideas, facts, and expectations, including spoken language, body language, gestures, and written words [28]. Teachers who use humor in their instruction develop positive relationships with their students [29] [30]. In contrast, those who use a human, authoritative voice have an impact on how much students participate in class [31]. Students were more satisfied with their teachers' attentive, friendly, relaxed, unforgettable, and controversial characteristics, which also predicted their effectiveness [32].

#### *Student's Learning Academic Performance*

In improving academic achievements, the main priority was to comprehend the educational complications [33]. Educators must be very responsive to their teaching approaches when imparting information and knowledge to students, as the learning process will determine the student's academic performance. Hence, in helping the students to unleash their potential and progress holistically, teaching philosophies need to concentrate on producing students' learning outcomes [34]. According to [35], academic performance was highly linked with higher self-confidence. Also, teachers' personality traits significantly impacted students' learning and academic performance during lectures, along with their effective communication skills, access to the most recent information, and proper classroom management [9].

Moreover, the teachers' assertive style made student communication functional, participatory, and relational, and their expressive style enhanced student engagement, while their expressive style enhanced student engagement. Their authoritarian ways were inversely related to the student-teacher relationship [36]. The quality of educational institutions was determined by teachers' consistent and efficient communication with their students. Teachers' effective classroom communication was essential for students to understand, learn, and become goal-oriented. It also creates a thought structure that molds students' thinking [10].

Furthermore, according to [7], the unavailability of teachers and poor communication by teachers were the significant factors that led students to abandon their studies at a certain level.

[8] also, students' self-confidence and self-ability helped build relationships with their teachers through non-verbal communication. Students' success is directly related to the effective communication of the teacher [9]. In addition, [37] opined that student and teacher relations had unlimited effects on learning, and it was essential for teachers to understand their students. Many students agreed and thought that the friendly environment and cooperation of the teacher were a necessary part of the study's success. The communication of teachers, either verbal or non-verbal, is an essential factor required by students to become successful in their educational pursuits, according to [10].

Additionally, students' academic performance was based on their school performance, especially during lectures, activities, and written evaluations. Students' academic performance and achievements were affected by how the teacher interacted inside the classroom and during lectures/discussions. Their motivation and participation depended on how the teachers delivered the lessons, their styles, and how they communicated and exchanged ideas with their students inside and outside the classroom. The more the teachers gave a friendly vibe and a fun and exciting atmosphere during discussions, the more the students were willing and motivated to listen and interact. Also, a teacher who gave a positive vibe to their students was more likely to provide self-confidence and encouragement and could bring out the best in them without forcing them to do so. It would come naturally as the relationship, interaction, and communication goes well. The interaction of the teachers with their students is the basis of how successful a student's learning is; it also could help teachers avoid student's loss of motivation and, much worse, abandoning their studies.

Similarly, a study by [38] titled Influence of student-teacher Communication on Students' Academic Achievement for Effective Teaching and Learning, revealed the coefficient relationship between student-teacher Communication and Students' academic achievement in Schools. This proved a solid positive relationship between the benefit of student-teacher communication and students' academic achievement. They also concluded that undergraduate students had a positive relationship with their lectures through student-teacher communication, which affected their academic achievement in the department. [39] mentioned that her study on the influence of teacher-student relationships on students' learning found that a positive teacher-student relationship could regulate students' mental emotions, improve students' participation in class, cultivate students' learning ability, and promote students' academic achievement and goals. The study concluded that teacher-student relationships significantly impacted students' learning outcomes and learning process.

According to [40], the kind and worth of relationships between instructors and learners are vital to successful teaching and learning. They also stated that students with close, supportive, and positive relationships with their teachers attain higher levels of achievement than those with more conflicting relationships with teachers. Additionally, Michael defines academic achievement as a standardized test score, grades, and overall academic ability and performance outcome of learners within their program in school. It is a mark of success for students and teachers after the studies program. Moreover, good interaction and communication between teachers and students was crucial to ensure students learn optimally [41]. According to [42], communication plays a very important role in improving the students' interest in learning and increasing student self-efficacy, understanding, and motivation.

### 1.3 Statement of the Problem

This study's main concern and aim were to determine the relationship between teacher-student communication and learning through academic learning outcomes. More specifically, it seeks to answer the following questions:

1. What is the level of Quality of teacher-student communication in terms of;
  - 1.1 Clarity of instructions;
  - 1.2 Teachers feedback; and
  - 1.3 Responsiveness of teachers?
2. What is the level of Quality learning among college students in TCCSTFI in terms of;
  - 2.1 Academic Learning Outcomes?
3. Is there a significant relationship between the quality of teacher-student communication and students' academic learning outcomes?
4. Does quality teachers-student communication significantly predict students' academic learning outcomes?

### 1.4 Research Hypothesis

Based on the research objective, the null hypothesis of 0.05 would be tested:

1.  $H_0$  = There is no significant relationship between the Quality of teacher-student communication and students' academic learning outcomes.
2.  $H_0$  = Quality of teacher-student communication does not predict students' academic learning outcomes.

### 1.5 Theoretical and Conceptual Framework

This study was anchored by [44] theory of congruent communication, which states that effective classroom management depends significantly on how the teacher interacts with students. The teacher is believed to be a decisive element in the classroom who can shape students in any way depending on the teacher's behavior. The author promotes using congruent messages and respecting students as they are for effective classroom management. [45] supported that the theory explains that a teacher is a facilitator who minimizes disruption and encourages students to engage in classroom lessons actively. This theory was designed to provide information and ways to eliminate the barriers to learning in students. It also stated that students must feel that they belong and are welcome once they enter the classroom. They created three tenets to create the foundation of successful learning experiences; the first was that teachers must seek harmonious communication, where he stated that teachers provide a clear and smooth relationship to students, suggesting not being too strict in terms of classroom rules and allowing students freely tell their concerns during classes. Second, the teachers must invite cooperation; he suggested that teachers encourage and help students to cooperate and build collaboration, starting with the teachers themselves. Third was the teachers must promote discipline as an alternative to punishment; where he encouraged teachers to know the difference between discipline and punishment, wherein he defined discipline as a way students could learn from mistakes and situations; on the other hand, he defined punishment as a payment for students to their misbehavior and inviting themselves to do it once more.

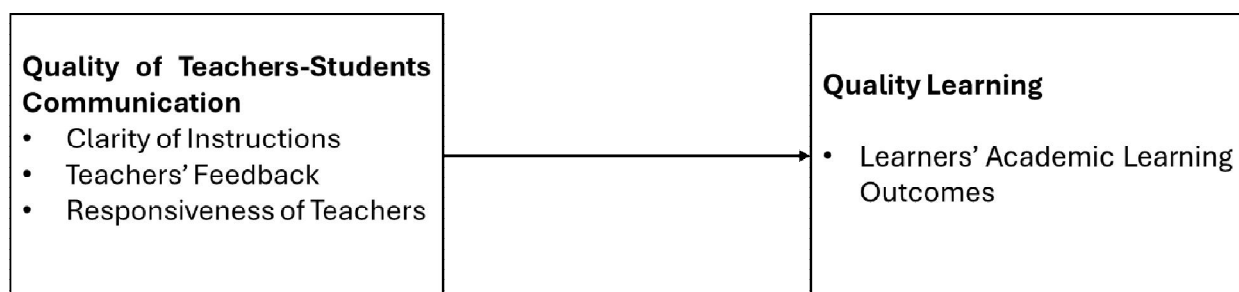
On the other hand, this study was also anchored by [46] in her qualitative study investigating how teachers develop positive relationships with students to improve motivation and class behavior. The study

addresses the problem of teachers not establishing meaningful relationships with their students, which affects them, resulting in their loss of motivation and misbehavior in the classroom. Her study found that teachers need more training in establishing relationships and creating a positive classroom environment.

In addition, communication between teachers and students plays a significant role in the student's learning process. Students need more motivation and guidance inside the classroom and good communication and relationships with their teachers. This theory was designed to provide information that a teacher must create a classroom with a friendly atmosphere and a sense of belongingness to give students meaningful experiences. Teachers and students must have a harmonious relationship to get what they have come to school for. Having good relationships and communication with each other can enhance their experiences, increase their learning, and teach them values and good character to help them improve not just as students and teachers but as human beings.

Figure 1 below schematically presents the study's conceptual framework, which includes one variable, the independent and dependent variables, and their relationships. The independent variable is the quality of the teacher-student communication, while the dependent variable is the learners' academic learning outcomes. Moreover, the independent variable is the quality of teacher-student communication. The indicators of this variable were clarity of instructions, teachers' feedback, and responsiveness of teachers. A teacher's clarity of instruction refers to how well they can give clear, concise, and understandable directions, explanations, and expectations. This helps students understand what is expected of them and the steps required for task achievement, improving their performance and learning ability. On the other hand, teacher feedback is constructive information teachers give about a student's performance, behavior, or understanding of the material. It is designed to help students during their learning process by emphasizing their strong points, showing where they need improvement, and providing valuable tips and ideas to foster academic development.

Teacher's responsiveness, on the other hand," refers to how quickly teachers answer learners' questions. It involves active listening, provision of timely support, and changing instruction to ensure that all students get the help needed for success in school. Furthermore, an effective link between a quality teacher-student dialogue will significantly influence students' academic achievement. In this way, if students feel supported and understood by their teachers, they are more likely to be engaged in class activities and be motivated or have self-confidence while undertaking their studies.



*Figure 1.* Conceptual Framework of the Quality of Teachers-Student Communication and Students' Academic Learning Outcomes

### **1.6 Significance of the Study**

This study would provide information, knowledge, and awareness in exploring the impact of the communication gap between teachers and learners on students' academic performance. Also, the study's findings would benefit the College students, as they were the subjects of this study. This would provide them with knowledge and awareness of the importance of communication and how the gap in communication between them and their teachers affects their school performances. In addition, the findings of the study would benefit Instructors/Teachers/Professors, as they would be provided data on how the students saw them and observed their communication performances. This would help them be

more knowledgeable and aware of the issue and its effects on the students, them as their instructors, and their overall performance in school.

Moreover, the study's findings would benefit the administrators since they would gain essential and valuable insights into enhancing the students' learning experiences. This would give them new ideas for improving and developing more effective communication and relationships between instructors and students. More so, the study's findings would also benefit the Commission on Higher Education since this study gave them new insights, knowledge, awareness, and data that have been analyzed and considered to develop more refined policies and activities that could create a more communicative, collaborative, and effective environment for the betterment of the students' and teachers' relationship and performance inside the institution. Lastly, the study's findings would benefit future researchers, as this research provides reliable data that could be a good reference and provide them with helpful information as they tackle the issue of the impact of the quality of teacher-student communication on academic performance.

## **2.METHODOLOGY**

### ***2.1 Research Design***

This study utilized a quantitative research design, specifically the descriptive, correlational, and causal-comparative methods. Descriptive research was used to describe the status of the situation as it existed at the time of the research to explain the causes of a specific phenomenon. According to [47], descriptive research entailed describing individual events and conditions by studying them as they are in nature. In this research design, the researcher does not manipulate any variables but only describes the sample.

Furthermore, [48] defined correlational research design as a method that examines the relationship of the variables in statistical conjunction without variables within the researcher's direct control or manipulation. The degree and direction of the association between two (or more) variables is reflected in a correlation. A correlation may go in either a positive or negative direction. Correlational data was usually collected through observations, secondary data, and surveys. A survey technique will be used. A survey was used to gather data using relevant questions to describe the target population using a drawn-out sample of people. In this study, the data was collected through researcher-made questionnaires distributed personally to the subjects by the researcher. In addition, [49] defined causal-comparative research design as an approach to identify the cause-and-effect relationship between the independent and dependent variables.

Moreover, this design was suitable for this research study since it intends to determine the levels and significant influence of the quality of teacher-student communication and learners' learning outcomes among college students currently taking up BTVTEd courses in a private college in Tagum City, Davao Del Norte. In addition, the data was collected using a single set of adapted-modified questionnaire checklists.

### ***2.2 Research Respondents and Sampling Procedure***

The respondents of this study were the college students of Tagum City College of Science and Technology Foundation, Inc. That was officially enrolled in the school year 2023-2024. There was a total of 264 college students, specifically who were taking up Bachelor of Technical Vocational Teachers Education, which was also specified by qualifications such as Automotive Technology, Drafting Technology, Electrical Installation and Maintenance, Food and Services Management, Computer Science, and Tourism Management students from first to fourth year.

Table 1. Respondents of the Study

Tagum City College of Science and Technology Foundation Inc. (BTVTED Courses)	Population	Sample	Percent
Automotive Technology	106	63	40.15
Drafting Technology	15	9	5.68
Electrical Installation and Maintenance	21	13	7.95
Food and Service Management	45	27	17.05
Computer Science	40	24	15.15
Tourism Management	37	22	14.02
<b>Total</b>	<b>264</b>	<b>158</b>	<b>100</b>

Moreover, this study includes respondents from specified institutions who have expressed and shared their ideas about the impact of teacher-student communication. The student population represents a variety of ethnicities and socio-economic backgrounds, thus encompassing diverse cultures and experiences. Furthermore, the analysis includes those who get low grades and exam results because they need help understanding the questions asked or how best to develop their responses. In addition, some learners have a sense of detachment from learning, making them less interested in classroom activities or studying.

This study's respondents consisted of BTVTEd college students of Tagum City College of Science and Technology Foundation, Inc., who are officially enrolled for the academic year 2023-2024. This includes 158 students from first-year, second-year, and fourth-year classes. The researchers utilized a stratified random sampling method to select the respondents for this study. Researchers used the Rao soft Sample Size Calculator with a confidence level of 95% and a margin of error of 5% to determine the sample size of respondents from the given total population of 264 BTVTEd college students.

### 2.3 Research Statistical Treatment

To analyze and interpret the data gathered, the researcher made use of the following statistical tools:

*Mean.* This was used to determine the level of the quality of teacher-student communication and students' learning outcomes.

*Pearson r.* This was used to determine the significant relationship between teacher-student communication and students' learning outcomes.

*Simple linear regression.* This was used to determine the significant influence between teacher-student communication and students' learning outcomes.

## 3. RESULTS AND DISCUSSION

### 3.1 Summary Level of Quality of Teacher-Student Communication

Table 2 summarizes the quality of student-teacher communication rated by the Tagum City College of Science and Technology Foundation, Inc. college students. As shown in the table, it had an overall average mean ( $\bar{x} = 4.48$ ,  $SD = 0.73$ ) of the three indicators under the quality of student-teacher communication precisely clarity of instruction, teachers feedback, and responsiveness of teachers. The results indicate that the respondents felt and observed teacher-student communication quality.

Additionally, college students have highly observed the quality of student-teacher communication. They appreciate their instructors' instruction, how they respond to their students, and how they motivate

them through feedback. This shows that the students feel their instructors' efforts to have a good relationship and communication with students.

Furthermore, the findings disclosed that the students felt and observed the quality of teacher-student communication. This indicated that students' academic performance was affected by how the instructors gave their instructions, responses, and feedback during discussions. Among the three indicators, clarity of instructions got the highest mean value, which indicates that among the three factors, the clarity of teachers' instructions was significantly associated with how the students performed academically at school, including their motivation and participation during activities.

**Table 2. Summary Level of Quality of Student-Teacher Communication**

<b>Indicators</b>	<b><math>\bar{x}</math></b>	<b>SD</b>	<b>Descriptive Equivalent</b>
Clarity of Instruction	4.11	0.7	High
Teachers' Feedback	4.09	0.74	High
Responsiveness of Teachers	4.04	0.76	High
Overall Mean	4.08	0.73	High

Further findings showed that the level of teacher explanation to students is a critical determinant of instructional classroom communication since it defines the classroom teaching process. In a study by [50], instructional clarity relates to the accuracy of how a teacher incorporates the intended instructional message into learning goals, methods, and evaluation criteria, hence improving the student's learning experience. [51] also corroborate these findings, which indicate a comparison of results of the student group who received well-presented worked-out instructions to that of Student groups who did not indicate increased positive academic results in the former group. Clear instructions help a learner point out concepts within the lessons and problems to be solved, and this helps develop a meaningful understanding of the concepts being taught as well as the means of achieving better problem-solving skills. This line of literature highlights the need for teachers to understand how they can best practically improve their cue delivery for the purpose of enhancing the delivery of instructions to meet the student's learning needs to the maximum.

In the same way, teacher feedback should be utilized to enhance the students' participation in the class and achieve better learning results. In a similar view, [52] notes that feedback, which is formative, enhances student learning because it enables students to think or reflect on their learning processes. Successful feedback allows the students to assume more responsibility in the learning process, developing better comprehension of the contents and problem-solving skills. This view is supported by [53], who stated that feedback that is not only based on the outcomes but also the process and effort enhance students' motivation and persistence.

Teacher responsiveness, which is how a teacher responds quickly and adequately to needs demonstrated by the learners, dramatically affects the learning process. In the study of [54], responsive teaching was described as attributions of students' points of view, support of students' well-being, and teacher's awareness of the students' input to adapting teaching approaches. This causes the development of a positive attitude towards learning among the students and creates a harmonious atmosphere in the class that enhances participation. According to [55], when the teachers are responsive, the students tend to be involved, motivated, and interested in their courses.

### **3.2 Summary Level of Students' Academic Learning Outcomes**

This study also measured the students' performance level by gathering the students' general average grades. Among the 158 students, 58.86% of them got a grade ranging from 85-89, which was described as very satisfactory; 33.54% of them got a 90-100 range grade, which was described as outstanding; and 7.59% of them got a grade ranging from 80-84 which was described as satisfactory. The overall mean was 88.27, which was described as very satisfactory. This means that most students have developed fundamental knowledge, skills, and understandings and can transfer them independently through authentic tasks.

**Table 3. Level of Students' Academic Learning Outcomes**

Grade	Frequency	Percent	Level of Performance
90-100	53	33.54	Outstanding
85-89	93	58.86	Very Satisfactory
80-84	12	7.59	Satisfactory
75-79	0	0	Fairly Satisfactory
0 – 74	0	0	Did Not Meet Expectations
Total	158	100	
	Mean: 88.27		Very Satisfactory
	SD: 2.82		

The results indicated that the college students appreciate the efforts of their teachers in giving clarity when giving instruction and giving positive responses and feedback, which gave them motivation and courage to participate and share their thoughts and ideas comfortably and without the fear of being discriminated against and left out. Also, the students' general average implied that they had gained motivation and courage from their teachers during their classes. Their performance in school implied how they felt they belonged and could understand and learn more through exchanging thoughts and clarifying what they do and don't understand through interaction and good communication with their instructors/teachers. Table 3 shows students' academic learning outcomes, which revealed that most students performed satisfactorily in teacher-student communication. Moreover, the student's performance level was ( $\bar{x}$  88.27; SD 2.82), which means that most students had developed good communication and relationships regarding clarity of instructions, teacher feedback, and responsiveness and could perform and participate in class properly.

In addition, this result was supported by [55]. Educators must be very responsive to their teaching approaches when imparting information and knowledge to students, as the learning process will determine the student's academic performance. Additionally, [56] points out that instructional communication is a strong determinant of students' achievement, which is based on a reduction of extraneous cognitive load that hinders the understanding and utilization of knowledge. Effective communication of the teacher's expectations and procedures makes students feel entangled in the course and lessons, promoting their participation in the tasks set in class [57]. Also, clear instructions assist in reducing confusion and distractions, enabling pupils or students to spend most of their time and concentration on class pursuits and academic content.

On the other hand, the quality of feedback the teachers give is an essential factor that determines the improvement of students' achievements and learning. [58] Effective feedback focuses on considering the student's status in terms of learning outcomes, understanding what needs to be improved, and exploring possibilities for how this could be achieved. This accords with even [59], which underlined the aspects of timely and contingently corrective feedback and prone to fostering meaningful learning. The learner is likely to self-regulate and take enhanced responsibility for the feedback given by the tutor, with a more positive outcome of regulation linked to a growth attitude and improved performance. From the literature, it is understood that constructive feedback from teachers, which is informative and relevant to the needs of the students, usually influences students' learning process.

Moreover, one can determine that teachers' attentiveness to students' needs and questions is one of the key factors in academic performance. These include the fact that based on [60], it is possible to understand that responsive teaching can create better relationships with students, which plays a vital role in positive learning environments. In this case, when the teachers listen to the students' concerns or questions and pay attention to their questions, this assists in clearing misconceptions and increases engagement on the topic. [61] have also confirmed this in a study where they found out that students who receive teachers as responsive tend to have better grades and satisfaction levels.

Furthermore, the findings revealed that the quality of teacher-student communication was much felt and observed among the college students, which was shown from their general average. According to Bacon et al., academic achievement was the extent to which a learner, teacher, or institution had achieved their educational goals. [62] also added that learners' academic achievement could be improved when there was a typical flow of communication between students and teachers within and outside the classroom. The students' general average implied they had gained motivation and courage from their teachers during their classes.

### 3.3 Relationships between Teacher-Student Communication and Students' Academic Learning Performance

Table 4 shows the data on the correlation between the independent variable quality of teacher-student communication and the dependent variable students' academic learning outcomes. The table also shows the three indicators under the independent variable: the clarity of instruction, the responsiveness of teachers, and teachers' feedback.

The analysis disclosed that all the indicators, which were the clarity of instruction, the responsiveness of teachers, and teachers' feedback, had a strong positive significant relationship with the student's academic performance. The clarity of instruction ( $r=0.083$ ;  $p\text{-value} < 0.05$ ), teacher's feedback ( $r=0.878$ ;  $p\text{-value} < 0.05$ ), and teacher's responsiveness ( $r=0.807$ ;  $p\text{-value} < 0.05$ ). Moreover, the r-value of both variables was 0.220 with a p-value of 0.005, which was just significant at  $\alpha=0.05$  significance level. *The results of the correlation analysis led the researchers to reject the null hypothesis, which states there was no significant relationship between the quality of teacher-student communication and the student's learning outcomes.* Hence, there was a significant relationship between the quality of teacher-student communication and the student's learning outcomes.

**Table 4. Relationship of Quality of Teacher-Student Communication on Students' Academic Learning Outcomes**

Variable		Acad_Learn	CI	TF	RT	Decision
1.Acad_Learn	Pearson'sr					
	p-value	—				
2.CI	Pearson'sr	0.247**	—			
	p-value	0.002	—			
3.TF	Pearson'sr	0.283***	0.711***	—		
	p-value	< .001	< .001	—		Significant
4.RT	Pearson'sr	0.143	0.589***	0.666***	—	
	p-value	0.074	< .001	< .001	—	
5.Quality of TeacherCommunication	Pearson'sr	0.220**	0.813***	0.878***	0.807***	
	p-value	0.005	< .001	< .001	< .001	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

The results above confirm the study of [38] about the influence of student-teacher communication on students' academic achievement for effective teaching and learning, revealing a robust positive relationship between the benefit of student-teacher communication and students' academic achievement. They also concluded that undergraduate students had a positive relationship with their lectures through student-teacher communication, which affected their academic achievement in the department. Accordingly, having a strong relationship between quality teacher-student communication is crucial for enhancing students' academic learning outcomes. Effective communication fosters trust and understanding, which increases student engagement and motivation, leading to better academic performance [56]. [23] highlight that positive teacher-student relationships significantly impact students' school engagement and achievement. Such relationships provide a supportive environment where students feel valued and are more likely to excel academically.

In addition, a [39] study on the influence of teacher-student relationships on students' learning found that a positive teacher-student relationship could regulate students' mental emotions, improve students' participation in class, cultivate students' learning ability, and promote students' academic achievement and goals. The study concluded that teacher-student relationships significantly impacted students' learning outcomes and learning process. Furthermore, the results were strengthened by the citations of the following authors. According to [40], the kind and worth of relationships between instructors and learners were the key to successful teaching and learning. The authors also stated that students with close, supportive, and positive relationships with their teachers attain higher levels of achievement than those students with more conflicting relationships with teachers.

### 3.3 Regression Analysis of the Quality Teacher-Student Communication on Students' Academic Learning Outcomes

The R-value from the model summary is 0.074, indicating that 7.4% of the variation in the dependent variable (learners' academic learning outcomes) is caused by the explanatory variables (quality of teacher-student communication) included in the model summary. The remaining 92.6% is explained by variables not included in the model but influencing the dependent variable. The result shows that the explanatory variables explain 7.4% of the variation in the model.

**Table 5. Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.283 <sup>a</sup>	.080	.074	2.710

a. Predictors: (Constant), Teachers\_Feedback  
b. Dependent Variable: Acad\_Learn

Also, the value from the ANOVA table used to test statistical significance is 0.000<sup>b</sup>, which is less than the P value of 0.05. This implies that the quality of teacher-student communication significantly affects students' academic learning outcomes.

**Table 6. ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.447	1	99.447	13.539	.000 <sup>b</sup>
	Residual	1145.850	156	7.345		
	Total	1245.297	157			

a. Dependent Variable: Acad\_Learn  
b. Predictors: (Constant), Teachers\_Feedback

Table 6 below displays the regression analysis results of the quality of the teachers-students communication on students' academic learning outcomes. It can be noticed that among all indicators under independent variables included in the regression analysis, the significant predictor was *Teacher's Feedback*. As a result of this finding, *the researcher rejects the null hypothesis, which claims that no variables significantly predict students' academic learning outcomes*. It can be gleaned that the factor has a p-value < 0.05. Thus, this factor substantially influences students' academic learning outcomes among BTVTED students in Tagum City College of Science and Technology Foundation, Inc. The result can be concluded that for every unit increase in the teacher's feedback, there is a corresponding increase in the student's academic learning outcomes by 0.283, respectively. Moreover, the regression equation can be formulated as  $(Y) = 92.701 + .283(X_1)$ .

**Table 7. Predictor of Students' Academic Learning Outcomes**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Decision
		B	Std. Error	Beta			
1	(Constant)	92.701	1.223		75.813	.000	
	Teachers_Feedback	1.083	.294	.283	3.680	.000	Significant

The findings further revealed that teachers' feedback considerably influences learners' academic learning outcomes, highlighting the importance of strengthening students' abilities to regulate their learning processes. Teacher feedback influences a learner's academic outcome and eventually results in better student performance by giving them an idea of what they are good at and the areas they need to improve upon. Through such feedback, this class shows a personalized learning environment that makes learners more involved and enthusiastic about their aims. As well it offers teachers the opportunity to adapt their teaching methods according to the individual requirements of students for their benefit and gain from efficient and tailor-made education.

The results supported the claim that teacher feedback significantly influences students' academic learning outcomes by providing clear, actionable guidance that helps students improve their performance. [56] feedback is one of the most powerful influences on student achievement, mainly when it is specific, timely, and related to learning goals. [53] points out how effective feedback motivates learners to recognize their strengths as well as weaknesses, leading them to be absorbed more in the material. [59] further indicates that constructive feedback instills a growth mindset where learners perceive complex tasks as opportunities for development. This approach enhances academic results and promotes endurance alongside a positive attitude toward studying.

While increasing academic achievement, teacher response is equally important in cultivating students' metacognitive and self-regulatory skills. According to [63], dialogic feedback is a valuable tool that necessitates the involvement of both teachers and students to remove confusion about understanding something and outlining future goals for learning. [64] argues that feedback that focuses on the learning process as opposed to focusing solely on the final product enables students to acquire a deeper insight into how they learn. As [65] opines, formative feedback allows teachers to change their instructional strategies in real-time, promoting a more personalized learning experience. By blending input within the learning process, instructors foster an enabling atmosphere bolsters educational triumphs and lifelong learning skills development.

#### 4. CONCLUSION AND RECOMMENDATIONS

According to the study concluded by the researcher, communication quality between students and teachers was highly observed by students and teachers. It was also evidenced that if the students highly valued the quality of communication with teachers, it could improve students' academic outcomes. Communication improves the understanding of the material, enhances students' interest levels, and ensures a conducive learning environment, strengthening the grades.

Thus, the study found that the students at this level had implemented all the knowledge skills of the introductory course and the overall knowledge and understanding skills as essential core competencies, and they could transfer these skills through tasks on their own. Thus, when students' initial domain knowledge, skills, and critical conceptual frameworks are well established at an advanced level, learners can use this knowledge flexibly in other activities. The fact that they can apply the learned concepts to new problems improves their problem-solving skills, flexibility, and readiness for higher-level tasks in their academic and work lives.

Analyzing the gathered information, the authors established a positive and highly significant correlation between student-teacher interactions and student achievement. Suppose the student's academic achievement is generally and positively related to their communication with the teacher. In that case, such a study emphasizes the importance of communication for students and teachers in improving achievement. This association indicates that communication that includes clarity of communication,

supportiveness, and responsiveness can result in improved understanding, motivation, and, thus, higher student achievement.

The education authorities and school administrators should provide activities and programs, such as seminars, to help teachers adapt and improve their styles, strategies, and techniques, improving their delivery and clarity. They should also aim for a very high quality of teacher-student communication for a better learning and teaching process. Teachers should improve their strategies and teaching styles, implement activities, and provide a friendly atmosphere to help students feel they belong. This will also enhance their understanding and learning through interaction and communication with their instructors.

Additionally, Students should take initiative, fully understand, and be aware of their teachers to improve their relationship and communication. Parents, teachers, and school administrators should provide moral support to their students and observe their psychological state to understand them and know what they truly need. The researchers also would like to recommend the same study to future researchers using a qualitative research design to provide another reliable and valid source of information and to see the consistency of the results.

## **DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

The author (s) declare that no generative AI technologies such as large language models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of manuscripts.

## **CONSENT**

As per international standards or institutional standards, the author(s) have collected and preserved the respondents' written consent.

## **COMPETING IN INTEREST**

The authors have declared that no competing interests exist.

## **REFERENCES**

1. Aparajeya N. Lack of communication between teachers and students. 2016. Retrieved from <https://www.toppr.com/bytes/failure-communication-between-teachers-and-students/>
2. De Torres S. Understanding persons of Philippine origin. Center for International Rehabilitation Research Information & Exchange. 2002. Retrieved from <http://cirrie.buffalo.edu/culture/monographs/philippines/#s5c>.
3. Halagao PE. Teaching Filipino American students. *Multicultural Review*. 2004;13(1):42-48. Retrieved from [http://filameducation.com/wpcontent/uploads/Teaching\\_Filipino\\_American\\_Students.pdf](http://filameducation.com/wpcontent/uploads/Teaching_Filipino_American_Students.pdf)
4. Muega M, Acido M, Lusung-Oyzon M. Communication, social, and critical thinking skills of students with low-power-distance teachers in a highpower-distance country. *International Journal of Whole Schooling*. 2016;12(1):22-39.
5. Shakir, ANKR. Teacher-Students' Relationship and Its Impact on Students' Academic Achievement at Secondary School Level in n District Lasbela. *Pakistan Journal of Educational Research*. 2023;30. <https://doi.org/10.52337/pjer.v6i2.791>
6. Weimer, ME. Focus on learning: Transform teaching. *Change*. 2023; 35(4), 49-54. <https://eric.ed.gov/?id=EJ676424>
7. Bajracharya, D. Impact of Teacher-Student Communication on High-Risk. *Developing Country Studies*; 2015
8. Heather AD. The Quality and Impact of Relationships between Elementary School Students and Teachers. *Contemporary Educational Psychology*. 2010.

9. Khan A, Khan S, Islam SZU, Khan M. Communication Skills of a Teacher and Its Role in the Development of the Students' Academic Success. *Journal of Education and Practice*. 2017.
10. Asrar Z, Tariq N, Rashid H. The Impact of Communication Between Teachers and Students: A Case Study of the Faculty of Management Sciences, University of Karachi, Pakistan. *European Scientific Journal*. 2018; Vol.14, Issue 16, pp. 32-39.
11. Alrashidi O, Phan H. Education Context and English Teaching and Learning in the Kingdom of Saudi Arabia: An Overview. *English Language Teaching*. 2015; 8(5), 33-44. <http://dx.doi.org/10.5539/elt.v8n5p33>
12. Alrabai F. Factors underlying low achievement of Saudi EFL learners. *International Journal of English Linguistics*. 2016; 6(3), 21-37. <http://dx.doi.org/10.5539/ijel.v6n3p21>
13. Bolkan S. The Importance of Instructor Clarity and Its Effect on Student Learning: Facilitating Elaboration by Reducing Cognitive Load. *Communication Reports*. 2015; 29(3), 152–162. <https://doi.org/10.1080/08934215.2015.1067708>
14. Bolkan S, Goodboy AK. Examples and the facilitation of student learning: should instructors provide examples or should students generate their own? *Communication Education*. 2019; 68(3), 287–307. <https://doi.org/10.1080/03634523.2019.1602275>
15. Chesebro JL. Effects of Teacher Clarity and Nonverbal Immediacy on Student Learning, Receiver Apprehension, and Affect. *Communication Education*. 2013; 52(2), 135–147. <https://doi.org/10.1080/03634520302471>
16. Maulana R, Opdenakker MC, Bosker R. Teachers' instructional behaviors as important predictors of academic motivation: Changes and links across the school year. *Learning and Individual Differences*. 2016; 50, 147–156. <https://doi.org/10.1016/j.lindif.2016.07.019>
17. Duesund L, Ødegård M. Students' perception of reactions towards disruptive behavior in Norwegian and American schools. *Emotional and Behavioral Difficulties*. 2018; 23(4), 410–423. <https://doi.org/10.1080/13632752.2018.1469847>
18. Ferguson P. Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education*. 2011; 36(1), 51–62. <https://doi.org/10.1080/02602930903197883>
19. Eraut M. Feedback. *Learning in Health and Social Care*. 2016; 5(3), 111–118. <https://doi.org/10.1111/j.1473-6861.2006.00129.x>
20. Masantiah C, Pasiphol S, Tangdhanakanond K. Student and feedback: Which type of feedback is preferable? *Kasetsart Journal of Social Sciences*. 2020; 41(2), 269-274. <https://doi.org/10.1016/j.kjss.2018.07.020>
21. Orsmond P, Merry S. Feedback alignment: effective and ineffective links between tutors' and students' understanding of coursework feedback. *Assessment & Evaluation in Higher Education*. 2011; 36(2), 125–136. <https://doi.org/10.1080/02602930903201651>
22. Selvaraj AM, Azman H, Wahi W. Teachers' Feedback Practice and Students' Academic Achievement: A Systematic Literature Review. *International Journal of Learning, Teaching and Educational Research*. 2021; 20(1), 308–322. <https://doi.org/10.26803/ijlter.20.1.17>
23. Roorda DL, Koomen HMY, Spilt JL, Oort FJ. The Influence of Affective Teacher–Student Relationships on Students' School Engagement and Achievement. *Review of Educational Research*. 2011; 81(4), 493–529. <https://doi.org/10.3102/0034654311421793>
24. Rudasill KM, Reio TG, Jr., Stipanovic N, Taylor JE. A longitudinal study of student-teacher relationship quality, difficult temperament, and risky behavior from childhood to early adolescence. *Journal of School Psychology*. 2010; 48, 389–412. doi:10.1016/j.jsp.2010.05.001
25. Keeley SM, Shemberg KM, Cowell BS, Zinnbauer BJ. Coping with student resistance to critical thinking. *Journal of Higher Education*. 2005; 65(1), 58-74.
26. McBrayer DJ. Tutoring helps improve test scores. *Teaching Professor*. 2001; 15(4).

27. Croninger R, Lee V. Social capital and dropping out of high school: Benefits to at-risk students of teachers' support and guidance. *The Teachers College Record*. 2011; 103, 548–581. doi:10.1111/0161-4681.00127
28. Duta N, Panisoara G, Panisoara IO. The Effective Communication in Teaching. Diagnostic Study Regarding the Academic Learning Motivation to Students. *Procedia - Social and Behavioral Sciences*. 2015; 186, 1007–1012. <https://doi.org/10.1016/j.sbspro.2015.04.064>
29. Heydarnejad T, Fatemi A, Ghonsooly B. An exploration of EFL teachers' teaching styles and emotions. *Journal of Applied Linguistics and Language Research*. 2017; 4, 26–46
30. Sxen O. Analyzing the correlations between primary school teachers' teaching styles and their critical thinking disposition. *Journal of Education and Training Studies*. 2018; 6(1), 130–137. <https://doi.org/10.11114/jets.v6i1.2790>
31. Makewa LN, Role E, Ayiamba, GJ. Teachers' use of humor in teaching and students' rating of their effectiveness. *International Journal of Education*. 2011; 3(2), 1–17. <https://doi.org/10.5296/ije.v3i2.631>
32. Bota OA, Tulbure C. Aspects regarding the relationship between teaching styles and school results. *Procedia - Social and Behavioral Sciences*. 2015; 203, 285–290. <https://doi.org/10.1016/j.sbspro.2015.08.296>
33. Khan MJ, Rasheed S. Moderating Role of Learning Strategies Between Meta-Cognitive Awareness and Study Habits Among University Students. *Pakistan Journal of Psychological Research*. 2019; 34(Spring 2019), 215–231. <https://doi.org/10.33824/pjpr.2019.34.1.12>
34. Hanin NH, Zaiton A, Norshida N. The relationship between learning approaches and academic achievement among Intec students, Uitm Shah Alam. *Procedia-Social behavioral Sciences*. 2013; 90, 178-186  
[https://www.researchgate.net/publication/273428996\\_The\\_Relationship\\_between\\_Learning\\_Approaches\\_and\\_Academic\\_Achievement\\_Among\\_Intec\\_Students\\_Uitm\\_Shah\\_Alam](https://www.researchgate.net/publication/273428996_The_Relationship_between_Learning_Approaches_and_Academic_Achievement_Among_Intec_Students_Uitm_Shah_Alam)
35. Zimmerman BJ, Kitsantas A. Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychology*. 2005; 30(4), 397-417.
36. Giles SM, Pankratz MM, Ringwalt C, Jackson-Newsom J, Hansen WB, Bishop D, Dusenbury L, Gottfredson N. The role of teacher communicator style in the delivery of a middle school substance uses prevention program. *Journal of Drug Education*. 2012; 42(4), 393–411. <https://doi.org/10.2190/de.42.4.b>
37. Liberante L. The importance of teacher–student relationships, as explored through the lens of the NSW Quality Teaching Model. *Journal of Student Engagement: Education Matters*. 2012. <https://ro.uow.edu.au/jseem/vol2/iss1/2/>
38. Amadi G, Paul AK. Influence of Student-Teacher Communication on Students' Academic Achievement for Effective Teaching and Learning. *American Journal of Educational Research*. 2017, 5(10), 1102-1107. DOI: 10.12691/education-5-10-12
39. Dai P. The Influence of Teacher-Student Relationship on Students' Learning. *Lecture Notes in Education Psychology and Public Media*. 2024; 40(1):240-246. [10.54254/2753-7048/40/20240764](https://doi.org/10.54254/2753-7048/40/20240764)
40. Aultman LP, Williams-Johnson MR, Schutz PA. Boundary dilemmas in teacher–student relationships: Struggling with “the line.” *Teaching and Teacher Education*. 2009; 25(5), 636–646. <https://doi.org/10.1016/j.tate.2008.10.002>
41. Prijanto J H, Kock F de. Peran Guru Dalam Upaya Meningkatkan Keaktifan Siswa Dengan Menerapkan Metode Tanya Jawab Pada Pembelajaran Online. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*. 2021; 11(3), 238–251. <https://ejournal.uksw.edu/scholaria/article/view/4318/1894>
42. Nadia R P, Delliana S. Peran Komunikasi antara Guru dan Murid dalam Membangun Minat Belajar di Komunitas Jendela Jakarta. *Jurnal Komunikasi*. 2020; 14(1), 83–94. <https://doi.org/10.21107/ilkom.v14i1.7019>

43. Manning ML, Bucher KT. Revisiting Ginott's congruent communication after thirty years. *The Clearing House. A Journal of Educational Strategies. Issues and Ideas.* 2001;74(4):215-218. doi:10.1080/00098650109599194.<https://www.jstor.org/stable/30189664>
44. GinottHG. *Teacher and child: A book for parents and teachers.* New York, NY: Macmillan; 1972.
45. Manning ML, Bucher KT. *Classroom management: Models, applications and cases.* N.J.: Merrill; 2003.
46. Huntley TA. *Generic Qualitative Study Investigating How Teachers Develop Positive Relationships with Students to Improve Motivation and Class.* 2021. BehaviorProQuest.
47. Siedlecki SL. *Understanding Descriptive Research Designs and Methods.* *Clinical Nurse Specialist.* 2019; Vol. 34, Issue 1, pp. 8-12. [https://journals.lww.com/cnsjournal/Citation/2020/01000/Understanding\\_Descriptive\\_Research\\_Designs\\_and.4.aspx](https://journals.lww.com/cnsjournal/Citation/2020/01000/Understanding_Descriptive_Research_Designs_and.4.aspx)
48. Bhandari P. *Correlational Research | When & How to Use.* Scribbr. 2021. <https://www.scribbr.com/methodology/correlational-research/>
49. Salkind N. *Encyclopedia of Research Design.* SAGE. 2010. <https://sk.sagepub.com/reference/researchdesign>
50. Fendick F. *The relationship between teacher clarity and student achievement: A meta-analysis.* University of Illinois; 2012.
51. Wittwer J, Renkl A. How effective are instructional explanations in the classroom? *A meta-analysis.* *Educational Psychology Review.* 2010; 22(4):419-438.
52. Wiliam D. *Embedded formative assessment.* Solution Tree Press.2012.
53. Brookhart SM. *How to give effective feedback to your students.* ASCD. 2017.
54. Pianta RC, Hamre, B, Stuhlman M. Relationships between teachers and children. In W.M. Reynolds & G. E. Miller (Eds.). *Handbook of psychology.* 2013; Vol 7, educational psychology (pp.199-234). John Wiley.
55. Skinner EA, Pitzer JR. Developmental dynamics of student engagement, coping, and everyday resilience. In *Handbook of Research on Student Engagement* (pp. 21-44). Springer.2012.
56. Hattie J. *Visible learning for teachers: Maximizing impact on learning.* Routledge.2012.
57. Marzano RJ. *The new art and science of teaching: More than fifty new instructional strategies for academic success.* Solution Tree Press. 2017
58. Hattie J, Timperley H. The power of feedback. *Review of Educational Research.* 2007; 77(1): 81-112.
59. Shute VJ. Focus on formative feedback. *Review of Educational Research.* 2008; 78(1): 153-189.
60. Wubbels T, Brekelmans M, den Brok P, van Tartwijk J. An interpersonal perspective on classroom management in secondary classrooms in the Netherlands. In *Handbook of Classroom Management* (2nd ed., pp. 215-236). Routledge.2015.
61. Murray C, Pianta RC. Effective teacher-student interactions: Engagement, classroom management, and teacher responsiveness. In *Handbook of Research on Student Engagement* (pp. 49-72). Springer.2012.
62. Demesy AJ. *Psychosocial determinants of academic performance and vocational learning of students with disabilities in Oyo State.* Ibadan University Press.2004.
63. Carless D. *Excellence in University Assessment: Learning from Award-winning Practice.* Routledge. 2016.
64. Nicol D. Rethinking feedback practices in higher education: A peer review perspective. *Assessment & Evaluation in Higher Education.* 2015; 40(1), 1-14.
65. Wiliam D. *Embedded formative assessment.* Solution Tree Press. 2016.