

Influence of Teacher Fondness to the Conceptual Understanding of STEM Students of Nazareth School of National University

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Abstract— *Teacher fondness refers to the positive likeness of students toward their teachers, which can increase their engagement in class and improve academic performance. However, the direct influence of teacher fondness on the conceptual understanding of stem students calls for more information and studies conducted. Hence, this study investigates the influence of teacher fondness for STEM students concerning their conceptual understanding. The results of the study highlights themes such as significance of positive communication, effective teaching strategies, and appropriate boundaries between students and teachers, which are crucial in creating positive impacts on teacher-student interactions and academic success. Thus, exploring the long-term impact of teacher fondness and identifying effective strategies for promoting these relationships can enhance students' social-emotional development, career readiness, self-esteem, confidence, and resilience in facing challenges.*

Index Terms — *Conceptual Understanding, STEM Students, Teacher Fondness.*

I. INTRODUCTION

Teacher fondness refers to the positive likeness of students toward their teachers – making students more willing to participate, improving their understanding in the classroom. Reference [12] shows that students who perceived their teacher as willing to teach had higher academic motivation and engagement. Researchers have studied how having excellent and positive rapport between students and teachers influences active participation in class and how student engagement leads to a better understanding of lessons and concepts [5].

However, the direct influence of teacher fondness on the conceptual understanding of stem students calls for more information and studies conducted.

Statement of the Problem:

This research investigated the influence of the fondness of students on teachers concerning their engagement and understanding. Specifically, this research sought to answer the following:

1. How does teacher fondness influence STEM students' engagement and understanding in class?
2. Why does teacher fondness influence STEM students' engagement and understanding in class?

Objective of the Study

The study aims to investigate the influence of teacher fondness for STEM students in relation to their engagement

and understanding.

Significance of the Study:

This research will assist *teachers* in developing their teaching strategies to promote positive relationships inside the classroom and inspire students to be more active and involved in class participation; the *school* by developing and strengthening policies that promote positive teacher-student relationships that would contribute to the long-term impact beyond the academic success of students.

Scope and Delimitation

This study focused on how teacher fondness impacts the academic performance of STEM students at Nazareth School of National University. The study only examined students' fondness towards their current teachers and did not compare different teaching methods or include students from other strands. The study did not delve into psychological studies about human personality.

II. LITERATURE REVIEW

Teacher fondness refers to the positive relationship between educators and learners, leading to a positive classroom environment and student success [3]. Establishing a positive relationship between teachers and their students has long been recognized as crucial in promoting effective teaching and learning. When teachers and students have a good connection, they can build mutual trust and respect, leading to a more engaging and dynamic classroom

environment. As highlighted in a recent study, building a teacher-student connection is an essential aspect of teaching [5]. This study found that when teachers and students have a solid connection, both parties benefit from one another in the classroom. For example, students may feel more comfortable asking questions or seeking help, and teachers may be better able to provide individualized support to students. When students feel a strong connection with their teacher, they are often more motivated to succeed and perform well in class [5].

Teachers are a fundamental component in shaping the learning experience of students. They have the ability to influence student engagement, interaction, and academic success through their teaching methods, attitudes, and interactions. Students demonstrate improvement in the three aforementioned when teachers display sympathetic attitudes, use humor, and give positive feedback & constructive criticisms [7], [10], [11], [15]. A teacher's ability to create a positive learning environment can increase student engagement and motivation, leading to better academic performance.

Reference [23] shows that more engaged students showed increased success in the classroom. Active student engagement refers to the degree to which students are involved and invested in their learning process. It is an essential component of academic success because it enhances learning outcomes by promoting deeper understanding and long-term retention of the material. Additionally, students should actively engage in an educational institution to perform efficiently and successfully [18]. Reference [8] shows that when students are actively engaged, they are more likely to participate in class discussions, ask questions, and seek clarification when needed.

III. RESEARCH METHODS

A. Research Design

A qualitative phenomenological research approach was chosen by the researchers as the research design of the study to further examine the personal experiences of the participants. This approach is valuable for gaining insights into people's actions, motivations, perceptions, and wisdom, and is widely used in social and health sciences [13]. The researchers collected data through participant observation, discussion, and in-depth interviews and analyzed the information to uncover themes and develop generalizations about how a given occurrence was understood or interpreted. Overall, the research focused on understanding the meaning behind personal experiences.

B. Research Setting and Participants

In gathering participants, the researchers focused on the influence of positive rapport between teachers and learners on the learners itself, hence why the participants were students, specifically STEM students at Nazareth School of

National University where the researchers gathered fifty (50) of them. The researchers also limited the criteria to only two: (1) STEM students and (2) who currently enrolled at the Nazareth School of National University. This would allow for a wider range of experiences and prevent the exclusion of potentially helpful information.

C. Research Instrument

The researchers used a semi-structured interview approach to gather qualitative data about the experiences of STEM students. The interview questions were designed to explore the influence of teacher fondness on students' engagement and conceptual understanding in class, including different impacts on STEM students. As the accumulation of data was analyzed, the questionnaire was divided into four (4) classifications; (1) the Influence of teacher fondness on the engagement of STEM students in class concerning their conceptual understanding, (2) the Impact of teacher fondness on STEM students, (3) Different impacts of teacher fondness on STEM students, and (4) Impact of teacher fondness to students' engagement and understanding in class. The interview also included open-ended questions followed by follow-up questions to guide the participants.

D. Procedure

The study used a phenomenological research design to explore the impact of teacher fondness on student engagement in STEM subjects. The researchers selected 50 STEM students from Nazareth School of National University using purposive sampling to ensure participants' diversity. The students then underwent orientation and participated in confidential one-on-one interviews, providing the researchers with qualitative data. The researchers then transcribed and analyzed the data thematically to determine whether teacher fondness influences student engagement and conceptual understanding.

E. Data Analysis

The study aimed to analyze the qualitative aspect of the impact of teacher fondness on student engagement and conceptual understanding in STEM subjects. After collecting qualitative data, the researchers then conducted a thematic analysis process [2], using the Quirkos program to create a comprehensive summary report. To ensure the reliability of the results, the researchers carefully transcribed the voice-recorded responses and engaged in member-checking with the participants to verify the accuracy of the interpretations. These measures were essential in increasing the study's credibility and accurately representing the participants' experiences and perspectives.

IV. RESULTS

Arising Themes on the Influence of Teacher Fondness to the Conceptual Understanding of STEM Students

Theme 1: Teacher Fondness Influences Student Engagement by Making Them Feel Comfortable

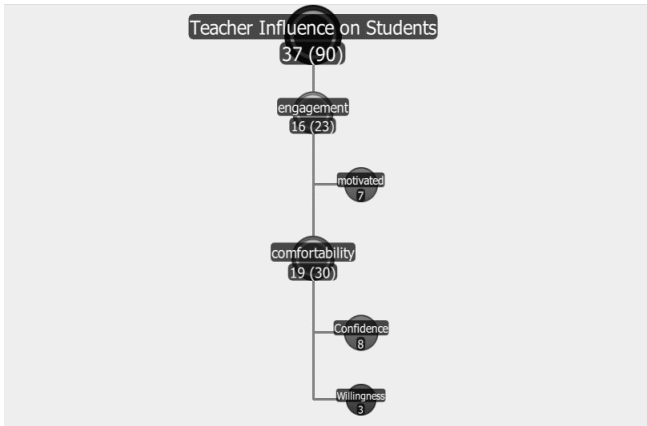


Figure 1: Quirk Clusters of codes on Theme 1

Fig. 1 shows the cluster of quirks joined together to form theme 1. The codes within: Teacher Influence, Engagement, and Comfortability. It is also observed that when a teacher is approachable and possesses excellence in their expertise, it creates a sensation of motivation and eagerness for the students to learn; as supported by Respondent #23, "My teacher was approachable, due to that, I have listened a lot more and I became more eager to understand the concepts." Such a relationship is necessary for students to acquire the motivation to engage in their classes; motivation and engagement coexist so that the learners can participate and be active. These results emphasized the importance of teachers' approachability and excellence in their subject matter expertise. When teachers are approachable, students feel more motivated and eager to learn, which, in turn, fosters engagement in the classroom. This relationship between teacher and student is fundamental to creating a positive learning experience.

Having a sense of comfortability in the ambiance of a learning environment also contributes to students' engagement; as Respondent #02 said, "If I like the teacher, I am more engaged with them because I am more comfortable being around them." When comfortability exists, communication can easily coincide, assisting students in seeking help and asking questions to their teachers, and expressing their opinions and ideas during discussions. This idea, along with other participants, is supported by Participant #18: "I think that it is effective (having positive communication) since it is easier for you to approach your teacher if you are comfortable with them. It will be easier to ask questions, and you will not be afraid to."

The study's findings suggest that a sense of comfortability in the learning environment also contributes to student

engagement. When students feel comfortable in their surroundings, they are more likely to communicate with their teachers, seek help, and participate actively in discussions. A sense of comfortability, in turn, facilitates positive communication between students and teachers, allowing students to express their opinions and ideas freely.

Theme #2: Teacher Fondness Creates Positive Impacts by Developing Proper Communication and Establishing Boundaries Between Students and Teachers

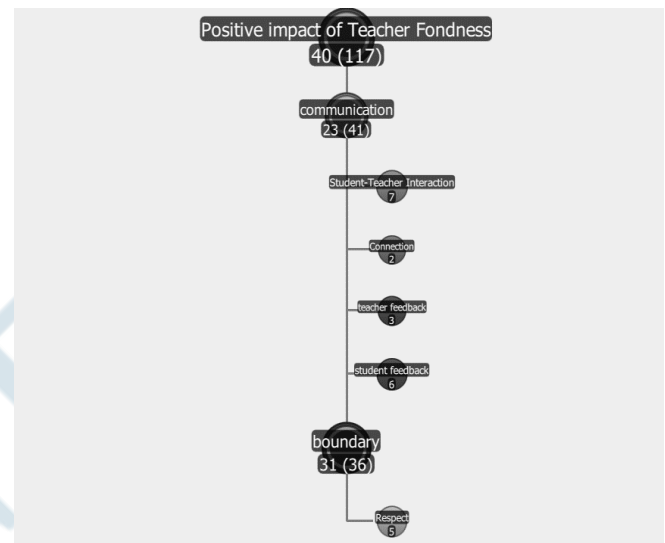


Figure 2: Quirk Clusters of codes on Theme 2

Fig. 2 shows the cluster of quirks joined together to form theme 2. The codes are Positive Impact of Teacher Fondness, Communication, and Boundary. Participant #20 stated, "Proper communication leads into open discussion wherein you are free to ask questions and share some thoughts." Several participants shared the same sentiment: that student-teacher interaction enables communication to grow between the said parties, which, when acquired, develops a connection between the student and the teacher that enables students to feel more comfortable expressing their thoughts during discussions, making them more engaged in lessons, and making them more focused in class. Communication allows growth and improvement, enabling feedback from both the student and the teacher; thus, communication is crucial for efficient teaching and learning, as stated by participant #23's statement: "As this (communication) makes comprehension and conveying information efficient." Participant #4 also expressed the same idea: "When there is proper communication between the teacher and the student, we will have effective teaching and learning inside the classroom."

As aforementioned, developing good communication impacts students and teachers positively. However, Participant #22 said, "You cannot just talk to your teacher like they are your friend - respect must be observed when you are talking. It would be best if you also kept it professional

inside the classroom. It is okay to communicate openly with the teacher if you keep your respect." Responses from other participants also highlight the importance of establishing boundaries between student-teacher interactions, which suggests that students recognize the power dynamic between educators and learners, especially in a professional setting. When boundaries are set between interactions, respect from both parties is reflected, as stated by Participant #15 statement: "It is a give and take situation, so if you respect your teacher, they will also show the same respect that you have given." Setting boundaries is beneficial during interactions and when accomplishing academic work. This idea is supported by Participant #5, which stated, "Even if you and your teacher are "friends" you should still be able to pass (activities) on time." Teacher fondness can create positive impacts on teacher-student interactions and academic work as long as boundaries are established, and respect is given.

Theme #3: Teacher Fondness Negatively Impacts Student-Teacher Relationships When Casual Interaction Leads to Student Complacency.

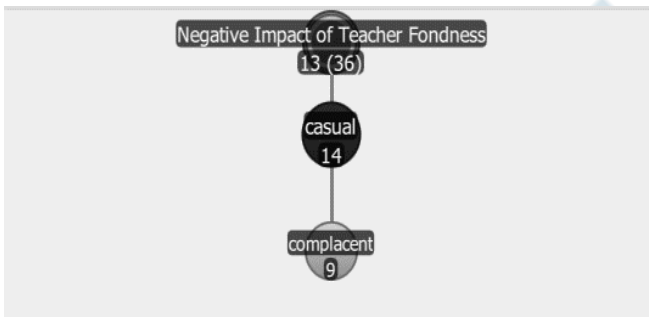


Figure 3: Quirk Clusters of codes on Theme 3

Fig. 3 shows the cluster of quirks joined together to form theme 3. The codes are Negative Impact of Teacher Fondness, Casual, and Complacent. Participant #9 stated, "I have to admit that being too comfortable or casually talking to my teacher caused me not to take my studies seriously. I thought I could ignore deadlines and procrastinate by being close to my teacher. It led me to have poor performance on assignments." Most participants shared similar experiences where teacher fondness negatively impacted their academic performance. The issue arises when students become overly comfortable with their teachers and blur the student-teacher boundary. This level of comfort can lead to complacency and cause students to ignore deadlines and procrastinate, thinking that their relationship with their teacher is a pass to be less concerned about their academic responsibilities. Participant #24's statement can support this idea, "You (the student) will think that since you are close with your teacher, maybe he/she will still accept your work even if you do not pass it on time."

Theme #4: Students Improve Their Understanding when Teachers Possess Positive Teacher Qualities

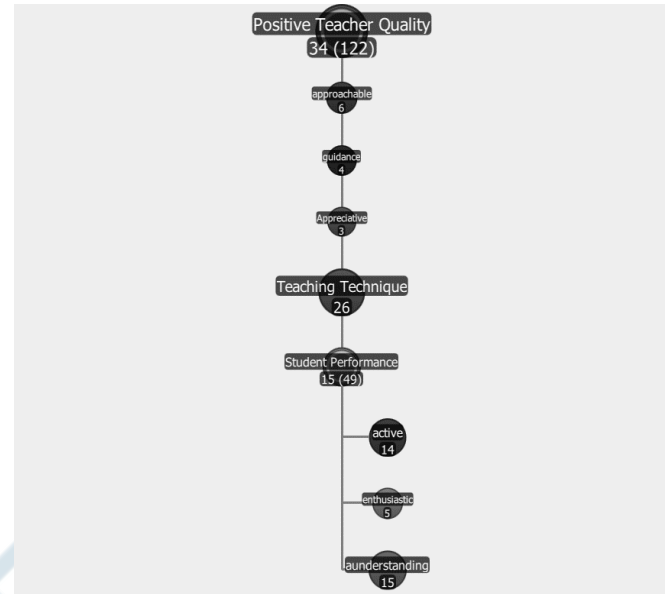


Figure 4: Quirk Clusters of codes on Theme 4

Fig. 4 shows the cluster of quirks joined together to form theme 4. Positive Teacher Quality, Teaching Technique, and Student Performance are the codes. Participant #23 stated, "If my teacher is approachable, and likeable, I am more attentive and participative in his/her class." Participant #18 shared a similar sentiment: "If I like my teacher's way of teaching, I participate more actively since I can match with that teacher's vibe." These views were echoed by many other participants, indicating that whenever teachers possess positive teaching qualities and utilize effective teaching techniques, students tend to be more engaged in the learning process and have a greater chance to perform well. Moreover, Participant #30 stated, "It will help the student performance if their approach is interactive among students," which supports the idea that how an instructor uses an interactive instructional strategy affects students' involvement in class discussions.

Additionally, educators with positive qualities allowed students to build a positive relationship with them, making it easier for students to ask and clarify concepts regarding the lessons. This idea is supported by Participant #29's statement, "A good relationship with your teacher will let you be able to ask relevant questions about the STEM subjects. Therefore, you will be able to understand the subject and perform well in that specific lesson. For example, if there are questions, we will not hesitate to approach the teacher because we have a good relationship with them." Responses from several participants also indicated that having educators with positive qualities creates an environment that is conducive to learning.

When students feel comfortable, and at ease with their teacher, they are more likely to ask questions and seek clarification about the topics they are learning. It not only

helps students understand the material better but also helps to build trust and respect between the teacher and student. Ultimately, this positive relationship can lead to tremendous success and achievement for the student. Therefore, it is vital for educators to cultivate positive qualities, such as approachability, patience, and appreciation, to create a positive and effective learning environment.

V. DISCUSSIONS

Theme 1: Teacher Fondness Influences Student Engagement by Making Them Feel Comfortable

This study's results suggest that students' fondness towards their teachers can significantly impact their engagement and participation in class. The findings are consistent with previous research demonstrating the importance of teacher-student relationships in promoting student motivation, engagement, and achievement [1], [9], [21].

The current study highlights several ways the relationship between teachers and students can promote engagement. First, when students feel comfortable with their teachers, they are more likely to participate actively in class and be motivated to learn. This finding supports previous research emphasizing the importance of creating a positive classroom environment conducive to learning [17]. Second, when teachers are approachable and possess expertise in their subject area, students are more likely to be focused and eager to learn. This finding is consistent with research highlighting teacher competence's importance in promoting student engagement and achievement [14].

This study also suggests that positive communication between teachers and students is crucial for promoting engagement. When students feel comfortable communicating with their teachers, they are more likely to seek help and express their academic concerns. This finding is consistent with previous research emphasizing the importance of effective communication between teachers and students in promoting engagement and achievement [16].

Theme #2: Teacher Fondness Creates Positive Impacts by Developing Proper Communication and Establishing Boundaries Between Students and Teachers

The findings of this study suggest that proper communication and establishing boundaries between students and teachers are crucial in creating positive impacts on teacher-student relationships and academic success.

According to previous research, students will have quicker absorption of learning materials when positive and effective communication is practiced inside the classroom, as this increases students' learning motivation and enthusiasm [22]. This supports statements from participants #04, #20, & #23 that fostering positive communication in a class encourages students to ask questions and engage in discussions which benefit educators in effectively teaching the material and learners in understanding the material.

Additionally, communication and establishing boundaries have been critical factors in developing positive relationships between students and teachers [17]. The previous study supports the responses given by the participants that communication is vital in developing positive relationships; however, students must still observe boundaries to reflect the professional nature inside the school, allowing both educators and learners to gain respect.

Theme #3: Teacher Fondness Negatively Impacts Student-Teacher Relationships When Casual Interaction Leads to Student Complacency.

The results presented in this theme suggest that teacher fondness, which refers to a teacher's expression of affection, care, and warmth towards students, can negatively impact the relationship between students and teachers, mainly when students interact casually with their teachers. The findings are consistent with previous research that has demonstrated that overly friendly or permissive teacher-student relationships can be detrimental to student's academic performance and motivation [17].

The idea of being too close to students with their teachers creates a negative impact on student's performance. Research suggests that a teacher's warmth and positive regard can positively influence student outcomes, but too much fondness can lead to adverse outcomes such as reduced academic achievement [17]. This negative impact is because developing a close relationship with a teacher can lead to blurring the boundaries between student and teacher. The student may become too comfortable and start taking their studies less seriously, thinking that being close to their teachers will provide a safety net. Participants in the discussion shared their experiences, stating that being too comfortable or casually talking to their teacher caused them not to take their studies seriously, leading to poor academic performance. This is consistent with previous research that suggests that when students become overly comfortable with their teachers, they may take their studies for granted [19]. When this happens, they may miss deadlines, procrastinate, and not put in the effort required to succeed academically.

Theme #4: Students Improve Their Understanding when Teachers Possess Positive Teacher Qualities

Several studies have supported the findings of theme 4, which suggest that teachers' positive teaching qualities can influence students' enthusiasm and participation in learning. References [6], [20] supports the notion that teachers' teaching quality and strategy have a significant impact on students' engagement and motivation. In addition, the statement made by participant #30 supports previous research that interactive teaching strategies can enhance students' critical thinking skills, creativity, and problem-solving abilities [24].

Furthermore, previous study concluded that teachers' instructional skills have a crucial role in the growth of their

students' capacity for understanding and critical analysis [4]. This supports the study's results that teachers significantly impact students' participation in courses. Professors must be approachable and appreciative, provide the proper guidance, and demonstrate effective teaching methods so students can quickly adapt to new information, comprehend lessons, and participate in class discussions.

VI. CONCLUSION AND RECOMMENDATION

This study highlights the importance of positive teacher-student relationships for student engagement, participation, and successful learning. It emphasizes the significance of fostering a healthy learning environment in the classroom and supporting teacher competence, communication, and establishing boundaries between teachers and students. In accordance with the study, teachers ought to strive to establish positive relationships with their students while maintaining proper restrictions to reflect the professional aspect of the classroom. The findings are consistent with prior research showing that motivation and academic success are influenced by positive teacher-student interactions (Elguncel, 2020).

It is significant to explore the long-term impact of teacher fondness beyond the academic success of students, including social-emotional development and career readiness, and to identify effective strategies for promoting these relationships to enhance students' self-esteem, confidence, and resilience in facing challenges to deepen the understanding of the positive effects of teacher-student relationships.

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