ABSTRACT
Caring for students’ progress is an important characteristic of a teacher that impacts students’ learning experiences and their content understanding. In science classroom, how empathetic teachers are towards their students has not been well investigated. To explore the concept of expressing empathy in a class from a teacher’s perspective, we conducted a case study at a science education graduate program. Two science education graduate students were asked to talk about their views on empathy in class and its impact on student learning experiences. In this paper, we present the two participants’ understandings of the role of empathy in teaching and discuss some implications for practice.

Keywords: Empathy, Science Education, Teaching, Case Study, and Student Learning Experience.

1. INTRODUCTION
Students’ skills, interest, and experience about the subject matter play a vital role in their learning process. At the same time a teacher’s competence, passion for teaching and extent of rapport with the students also affect students’ learning [1]. A teacher can establish a nurturing relation with her students by putting herself into her students’ positions and viewing the things from their perspectives. Science classroom is one of the places where the phenomenon of expressing empathy in a class and using it for personal development can occur. As this subject has not been broadly explored, the present study attempts to provide a framework of investigating science educators’ views on empathy and their perceptions towards expressing it in class for the efforts to positively impact student performance and learning experience.

2. THEORETICAL FRAMEWORK
Brunel, Walker, and Schleifer said “Empathy, broadly speaking, means the ability to identify other peoples' feelings from their points of views” (p. 226) [2]. Roger stressed that empathy is probably the most important aspect in learning (as cited in Brunel, Walker, and Schleifer [2]). Teich highlighted that if students feel empathetic towards a topic, it helps them to produce unique results [3]. Gilly said that “relationship between teachers’ empathy and their teaching ability is linked to the classical notion that a teacher cannot properly instruct pupils without knowing them well” (as cited in Brunel, Walker, and Schleifer [2], p. 228). Seeing things from other person’s perspectives helps in understanding their emotions and feelings. Empathy is crucial in creating a welcoming and a positive learning environment for all students.

The role of teacher’s empathy in science teaching has not being well explored. Science teachers are often taught to acquire science content knowledge and pedagogical knowledge. Pedagogical knowledge that science teachers are
instructed with focuses on learning theories, science teaching strategies and methods. It often lacks the discussion of the role of teacher’s empathy in class and how this may impact student learning experiences and subject matter performance. To explore the science educators’ views on the role of empathy in class, we have talked to two science education graduate students.

3. STUDY METHODS

In the present study, we conducted a collective case design which is helpful to optimize understanding of the cases chosen [4]. Two science education graduate students were chosen as the cases. Students’ views on empathy and its role in teaching were the units of analysis. We designed a semi-structured interview protocol in order to explore our participants’ views of empathy and its role in teaching. The protocol included twelve questions, yet, based on the conversations with the individual participants, we asked emerging questions and omitted few of the questions in the protocol. Appendix presents the twelve questions originally listed in the protocol.

Participants and Their Selection

We used a convenience sampling procedure [5]. The criteria used in choosing the participants were: (a) being a graduate student in science education program; (b) participants’ willingness and availability to participate in the study; and (c) convenience for the researchers. The two participants; John (a pseudonym) was an M.S. student; and Lily (a pseudonym) was a Ph.D. student in science education at the time we collected data. The two respondents’ teaching experience varied considerably. John had about two years of teaching experience whereas Lily had more than 20 years of experience in teaching. John’s major was in physics and he was studying to receive an M.S. degree in science education. Lily’s major was in biology and she was studying for her PhD degree in science education.

Data Collection and Analysis. We invited the participants to the interviews. Both agreed to participate. We talked to each interviewee for about 45 minutes. The conversations were audio-taped. The recordings were transcribed within the next five to ten days. We analyzed the transcriptions using the constant comparative method [6], which helped us identify the common themes and delimit the categories. We read the transcribed verbatim [7] a couple of times as we identified the common themes. Participants’ responses were categorized based on the themes emerged from our readings. Themes that did not belong to any categories were deleted. Below is the summary of the themes with excerpts from the interviews.

4. FINDINGS

Both participants agreed that empathy plays a role in teaching. However, they believed that it is difficult to maintain a balance between being empathetic sometime and not empathetic at all. The participants differed in their ways to express empathy in class and how empathy helps in connecting teachers with the students.

Within-Case Analysis

Case 1- John: According to John, empathy is understanding other people’s feeling at that particular time and context. When asked to define empathy John said:

“…empathy could be explained by taking an example of doctors. The analogy is to have sympathy and feel bad about the patients but they should understand their feelings and I think that is an important part for me, that is how we define it, that the teacher should understand what the students are going through and may be make adjustments accordingly.”

John maintained that a teacher with no empathy cannot teach successfully. John said:

“If a teacher does not have empathy skills, to me that means that they do not care about the students at all and if they do not care, what is
their goal? If they are trying to get their students learn, shouldn’t they care about what the students are doing? How they are learning? Their progress.”

When we asked John whether connecting emotionally with the students is same as being empathetic he replied:

“That is a difficult question for me because in some respects it is the teacher’s responsibility to maximize students’ learning to make every effort but at some level it is also a student’s responsibility to learn and work and if the teacher takes empathy too far and takes too much of responsibility therefore it could weigh down a lot of successful teachers because if the students are not performing well as they should and, it might not be a teacher’s responsibility but I think there is a fine line there, should a teacher feel bad that the students are performing poorly, absolutely, I do when my students perform poorly when I did student teaching, I did feel bad and want to do everything I could to get them there and I encourage students to provide extra opportunity to make the efforts.”

Among the advantages of having empathy John listed are: understanding the nature of students’ problems and difficulties and providing feedback accordingly. John said:

“[Empathy] always pushes you to try a little harder because you are understanding the nature of [students’] problem, what their difficulties are. And if you do really care about the students, I think that you try a little harder rather than just getting through the material so I think the disadvantages though would be if you care too much you may become either very depressed or pulled down because you cannot have 100 % success or you cannot change the world.”

When we asked about the ideal situation to express empathy, John responded that one on one situation is the most ideal. He said:

“I think that it is most useful when you are in one on one situation. I do not think that it means as much or comes across as a correct way if you say it in front of the whole class. I think it is more important on one on one basis because then you can address the issues and let those students know what to address.”

Case 2- Lily: When asked about the importance of expressing empathy, Lily said that:

“...yes, but within limits. I think if you are too empathetic then you go too far to the other side. Because at some point you might feel sorry for the kids that their situation is so bad that at some point they have to be held accountable for what’s going on.”

When asked about the advantages of empathy, she responded:

“[Empathy] helps in every form with them. When they think that you care about them they are gonna respond better in the classroom, you will have less classroom management issues if they think that you care and you listen to them and feel what they are feeling.”

Lily maintained that knowing the limit to express empathy is tricky. She told:

“...it is different for every kid, some kids can manipulate you and can take advantage; oh, she likes me; she feels sorry for me; I will give her some excuse trying not to do my homework. So you kind of get the feel of the kid and make sure they are not manipulating you or playing on your feelings. But at the same time you do not want to be hard so that the kids know that you care about them.”

To demonstrate empathy Lily tries to be authentic and does not put on a façade. She said:

“I think it also relates to being authentic with the kids; not putting on a facade, like I am a tough guy, or anything like that, then I always try to be myself. Basically listen to the kids.”

On the issue of creating a boundary, Lily mentioned that it is hard to find where the line is but you need to use your judgment and see all aspects before acting just based on your emotions.

“Yes, I had a student I remember that I kind of coached, she was complaining about certain issues at home, At first I was panicked almost ready to call the protective
services and then I had conference with her mother and found out that there are certain issues with a boy and this and that. She (student) was portraying that they were mean to her. At one point I was on her side. I realized that she might be number one attention seeking from me and may be sort of manipulating to her side or whatever so I remember that case.”

Lily explained that connecting emotionally is helpful in feeling empathetic towards the person. When asked about the importance of emotions in empathy she mentioned:

“Definitely although you feel more empathetic towards someone you know but if you see a homeless person on the street you say look at that. I feel more about people whom I know or family members but even those who I see in the world I feel, oh look at that person! You see commercials on TV like that.”

She further mentioned it is equally important to be empathetic within reasonable limits as sometimes the students may take undue advantage of the teacher.

Cross-case Analysis: The participants narrated their experiences to elaborate about the role of empathy in class. Their explanations of the role of empathy differed to some extent. John related empathy with caring and emphasized on its role in connecting with the students. He gave examples to elaborate the differences between expressing empathy in different scenarios. He stressed on the practical applications of empathy. John also related empathy with improving students’ performance. According to John, it is best to express empathy in “one-on one” situation because it helps address the issue in a more practical way.

Julie mentioned the importance of expressing empathy within limits. According to Julie, the importance of expressing empathy in class cannot be neglected. However, it needs to be exercised with caution. Julie also highlighted that we feel more empathetic towards people who we are familiar with or have known more. She agreed with John that a teacher can improve students’ performance by being empathetic towards her students. An interesting finding from the Julie’s interview is the notion of students taking undue advantage of the teacher. She mentioned that if a teacher tries hard to connect with the students, students might come up with a strategy to gain sympathy from the teacher for undue reasons. Julie further stressed a teacher should be genuinely concerned about the students’ progress for effectively expressing empathy with the students. Even though participants differed in their views of expressing empathy in class, they both agreed on the essence of expressing empathy in teaching.

5. CONCLUSION

Our participants reported that empathy plays a role in students’ learning. They noted empathy expressed in a typical classroom is complicated because it may include many dimensions. Although, empathy helps in connecting with the students they believed, it was equally important to know the limits and ideal situations to express empathy. Our participants had different teaching experiences that might have contributed to the differences in their views.

Further studies are recommended to explore ways to express empathy and the demarcation of the boundaries and setting the limits to express it. There may be other characteristics that impact people’s views of empathy and its role in teaching. Teachers’ sex, age, experience, and even the topic of instruction can play roles to what extent empathy is expressed in class by the teacher. This study has provided a framework that can further be investigated. Future studies can focus on other disciplines Students’ views about their teacher’s empathy and the ways of expressing it can also be a focus for future research.

6. REFERENCES


APPENDIX

Interview Protocol

Main Research Question: What are the participants’ views of empathy in class and its role in teaching?

Questionnaire

1. Please describe empathy in your own words.
2. How do you feel if you find someone in distress?
3. What do you think about the statement that a teacher should be empathetic towards their students?
4. When is the ideal situation to express empathy in class?
5. How can empathy be expressed in class? / How can a teacher be empathetic towards the students?
6. What do you do to judge your students’ feelings?
7. How do you feel when your students succeed? How do you feel when they fail?
8. How do you relate to the difficulties your students face by?
9. What do you do if you have a disagreement with a student of yours on an issue?
10. How do you approach when you want to correct one of your students’ mistakes?
11. Have you ever been in a situation when you felt helpless, hopeless or frustrated in your class? How did you deal with the situation?
12. Have you ever come across a situation where being empathetic was counterproductive? How do you deal with such a situation?