Teaching theory: A multilevel framework for systematic and engaged learning and teaching processes and successful outcomes

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ABSTRACT

The purpose of this paper is to present teaching theory, its three components- assumptions, concepts, and propositions, and its application in higher education classrooms. A post-test evaluation design was used to assess the effectiveness of teaching theory. Qualitative data were collected through a classroom survey from undergraduate and graduate level classes including online and seated classes to investigate the application of teaching theory. The results showed that learning and teaching outcomes were improved when learning and teaching were implemented at three different engagement levels (i.e., learner level, peer level and classroom level). Students and teachers' engagement increased when teaching theory was operationalized and implemented in classrooms. Additionally, it was essential to consider and implement developmental, sociocultural and need-based contexts to foster learning and teaching at the three engagement levels of teaching theory. Students and teachers' proactiveness, sensitivity and responsiveness were important factors in carrying out a successful learning and teaching process. In sum, teaching theory substantially improved learning and teaching outcomes in higher education classrooms. Teaching theory facilitates students and teachers in all types of classrooms at all educational levels and with all groups of the population for achieving positive educational outcomes.

Keywords: Higher education, Learning and teaching engagement, Multilevel framework, Systematic learning and teaching process, Successful learning and instructional outcomes, Teaching theory.

Highlights of this paper

- Teaching theory is the very first scientific theory in education.
- It is a multilevel, systematic, and engaged theoretical framework which can be used and applied at all educational levels ranging from elementary school to higher education.
- It helps students and teachers to carry out a systematic and engaged learning and teaching process for achieving successful outcomes.

1. INTRODUCTION

The paper presents teaching theory and its three components, including assumptions, concepts, and propositions. It also provides empirical evidence in support of one of the theory's propositions. Existing literature of pedagogy is critically reviewed for this paper to demonstrate the unique contribution of teaching theory.

The author defines a theory as follows: A theory is a conceptual framework of interrelated concepts, terms, and ideas which are based in certain assumptions and inform specific propositions to conduct research, understand relevant phenomena and explain real-life situations (Author, 2024b).

Teaching theory is a scientific and multilevel theoretical framework which has three components, including assumptions, concepts, and propositions like the other contemporary theories (Smith & Hamon, 2022). Teaching theory describes, explains, and predicts successful, inclusive and multilevel learning and teaching processes and outcomes for students and teachers. Thus, it also serves important functions like the other contemporary theories (Knapp, 2009; White, Jacobs, & Miller, 2019). Teaching theory is a global theory for pursuing and achieving successful learning and teaching outcomes for learners and educators in a classroom. Since teaching theory acknowledges and highlights that learning and teaching is a complex, dynamic, and multilevel process, it improves the sensitivity of learners and educators on the topics of learning and teaching. Teaching theory is relevant and applicable to all types of classrooms and educational levels, ranging from elementary school to higher education. It provides students and teachers with a critical lens to assess their performance in a classroom. Consequently, learning and teaching are responsive, receptive, and sensitive at multiple engagement levels of the classroom.

According to teaching theory, learning and teaching take place at three different levels but interrelated engagement levels. Various actors and forms of interactions are involved within and between the engagement levels. These actors include students and teachers who are situated at these engagement levels of teaching theory. There are reciprocal relationships between these engagement levels. Hence, learning and teaching are intertwined for teachers and students in a classroom. The dynamics of each engagement level and their reciprocal relationships with each other are influenced by developmental, sociocultural, and need-based contexts. Students and teachers need to work collaboratively to devise useful pedagogical methods and techniques to foster successful learning and teaching practices at all three engagement levels leading to the achievement of positive learning and teaching outcomes.

Moreover, engagement and inclusion in learning and teaching take place at all three engagement levels when all actors work together in promoting relevant, effective, and best learning and teaching practices. When students and teachers collaborate and engage in meaningful, reflective, and reciprocal learning and teaching practices and interactions, such a process produces successful and sustainable learning and teaching outcomes for students, teachers, and institutions. When learning and teaching are reciprocal, collaborative, and engaged at multiple engagement levels, they produce positive outcomes for learners and educators. Consequently, teaching theory guides students and teachers to produce successful and sustainable learning and teaching outcomes in contemporary classrooms. Hence, the purpose of this paper is to introduce teaching theory to its audiences and demonstrate its application and empirical evidence in real-life situations.

2. LITERATURE REVIEW

This section reviews the existing literature on learning and teaching. It critically presents important and useful teaching methods, techniques, frameworks, and strategies that teachers have been using to grow and foster students' learning experiences and success in classrooms of different educational levels. To conclude this section, I highlight the gaps in existing literature and share how teaching theory addresses these gaps and makes a unique contribution to the literature of learning and teaching.

Research shows that collaborative teaching strategies that engage relevant stakeholders proved to be important in transmitting values learnt in physical education into home settings and classrooms (Xie Fai Mar, Koh, & Falcão, 2023). Students experienced different cognitive outcomes when they participated in physical activities in two different domains (outdoor and indoor) such that when students participated in outdoor physical activities, they performed well cognitively based on different assessments and when they participated in indoor physical activities, they did not perform quite as well (Rosiek, Etnier, & Willoughby, 2022). Some of the creative teaching modalities which increased students learning in a classroom were role plays, case studies, reflective journaling, and play-based approaches (Bell, 2018; Nelson, Hall, Anderson, Birtles, & Hemming, 2018; Prasath, Chandrika Prasanna Kumaran, Spears, & Jackson, 2023). These methods were student-centered which promoted active students' engagement and participation in a classroom (Nelson et al., 2018; Prasath et al., 2023). Researchers also introduced frameworks to guide learning and teaching in a classroom. For instance, Bloom's taxonomy described six different levels based on which students were taught and assessed, such as remember, understand, apply, analyze , evaluate, and create (Deo et al., 2024; Hui, 2024). Teachers designed their course objectives and devised teaching methods accordingly to educate their students about the course content based on any of these cognitive levels (Herrmann-Werner et al., 2024; Huang, 2024). It was also evident that those teachers who effectively organized their daily routine, content, and classroom activities supported students' learning in early childhood education classrooms (Nores, Friedman-Krauss, & Figueras-Daniel, 2022).

Experimental studies have shown that the effectiveness of reading aloud and making lesson plans for the classroom improved students' understanding of shapes, quantities, and spatial relationships among pre-kindergarteners (McGuire, Himot, Clayton, Yoo, & Logue, 2021). Experiential learning opportunities also raised students' positive learning experiences by increasing students' service-learning knowledge, developing their social skills, bringing positive changes in students' attitudes, and introducing them to different cultural traditions and values (Syatriana, Tohirovna, Shaxnoza, Malika, & Mardonovna, 2023). Research has shown that when students were given experiential learning assignments on topics such as work and family relationships, it substantially fostered their understanding of the topic at the graduate level and the undergraduate level (Thomas-Jackson, Zvonkovic, Reifman, Tanner, & Swenson, 2024). Additionally, learners' centered teaching methods such as questioning, small group work and discussion, games, quizzes and writing were also proved to be useful in growing students' understanding of the topic (Scott, Wilson, Greene, & Jeter, 2024). Research revealed that those teachers who believed in the usefulness of metacognitive strategies which accounted for students' context, first language, and traditional teaching methods were more likely to use those strategies in their classes to improve students' learning outcomes.

Teachers also used flipped classroom approaches which changed traditional classroom environments into more application-based and interactive classrooms (Autret, Bermea, Bible, Matera, & van Eeden-Moorefield, 2024). In flipped classrooms, students were studying the assigned readings before their class and spending classroom time applying the course content which made them more active learners who were constructing the knowledge with the teacher. Such a student-centered learning process deepen students' learning of the topic, increased their interactions

72

with peers and teachers, and made learning more meaningful for students (Autret et al., 2024). When students asked questions and applied the assigned course content to real-life situations, it also increased students' understanding of research related to the topic and enhanced students' overall research skills. These efforts also helped students to prepare their research proposal for postgraduate studies (Alsaleh, 2020). Some studies illustrated that it was essential for teachers in flipped classrooms to guide students to show mutuals recognition and acquire knowledge of communication to support each other (Sun & Lin, 2022). Additionally, it was also important for teachers to improve students' self-efficacy as well as collective efficacy for carrying out a successful learning and teaching process in a classroom (Sun & Lin, 2022). Flipped classrooms required teachers' readiness and preparation to carry out an appropriate process which was student-focused and offered real-life application of the course content and took the classroom learning beyond a traditional learning environment (Autret et al., 2024; Chou, Hung, Tsai, & Chang, 2020). Research has illustrated that flipped classrooms limited students' behavioral engagement due to several reasons   such as not agreeing about the types of learning, the videos shown to students were not perceived as interesting, there was a lack of students' participation in discussions, students did not have time to complete in-class activities, and teachers' interactions skills were not necessarily good (Lai, Hsieh, Uden, & Yang, 2021). Hence, teachers' readiness was an important factor to consider before introducing flipped classrooms and replacing them with traditional classroom environments (Autret et al., 2024; Chou et al., 2020).

Moreover, teachers used developmentally and culturally appropriate activities to improve students' learning in the classroom (Hu, Wang, Song, & LoCasale-Crouch, 2020; Ólafsdóttir & Einarsdóttir, 2021). Hu et al., (2020) have shown that developmentally appropriate activities fully mediated the association between curriculum planning and implementation and emotional and instructional support in 59 rural preschools in northern China. Studies also revealed that when teachers provided students with developmentally and culturally appropriate curricular activities and encouraged them to critically think, value their voice as storytellers, and created a supportive literacy environment where children explored their ideas and voices in exciting and creative ways, students' engagement and participation in early literacy instruction increased (Fitzpatrick, 2022; Kim & Hachey, 2021). Teachers also promoted culturally relevant activities in classrooms in many ways by inviting guest speakers to share their experiences and stories about their cultural backgrounds who praised diverse cultures by sharing their success stories (Amoako Kayser, Darling-Aduana, Harris, Edwards, & Alridge, 2024; Santiago-Rosario, McIntosh, & Whitcomb, 2023). Students were also encouraged through classroom activities to share their cultural traditions, clothes, food, etc. (Dorn-Medeiros, Christensen, Lértora, & Croffie, 2020). Teachers also incorporated different stories and examples into the lessons to promote students' culture and raise cultural awareness among other students (Author, 2024c; Debnam, Smith, Aguayo, Reinke, & Herman, 2023). Similarly, teachers celebrated cultural nights and holidays and during these events they encouraged students to wear their cultural dresses and perform shows, songs, games and dramas to demonstrate their culture before others (Nethsinghe, Joseph, Mellizo, & Cabedo-Mas, 2023; Protacio, Piazza, David, & Tigchelaar, 2020). Teachers also integrated diverse cultural perspectives into the curriculum which streamlined culture into classroom and made instructional activities more culturally relevant, which also made the curriculum more representative of all students in a classroom (Baize, 2023; Evans, 2023). All these activities and efforts made curricula more culturally relevant, classrooms more inclusive, and diverse cultures were promoted which encouraged active engagement and participation of all students in a classroom (Author, 2024c; LePeau, Silberstein, Sharp, Miller, & Manlove, 2022; Lyrio, Nada, & França, 2023).

Furthermore, teachers also facilitated students with learning disabilities to ensure their learning and engagement in classrooms. Research shows that students with autism spectrum disorder (ASD) faced difficulties in early childhood education classrooms and needed special assistance and care to perform well like their peers (Yi,

Liu, & Lan, 2024). The use of artificial intelligence (AI) technologies in ECE classrooms showed benefits for such students. For instance, the AI technology increased social interaction of typical students with students who had ASD (Yi et al., 2024). Students with disabilities usually struggled with writing skills which impacted their academic performance. Hence, the use of such strategies proved to be quite useful for these students in terms of enhancing their writing skills (Öğülmüş & Açıkgöz, 2024). Teachers also used art activities with STEM with students who had special learning disabilities which fostered students' positive learning experiences and improved their academic success (Sari, Çevik, & Çevik, 2024). Teachers used two active learning methods such as rich vocabulary instruction and retrieval practice to help students with developmental language disorder learn new vocabulary. Their study revealed that retrieval practice showed greater learning gains compared to rich vocabulary instruction (Levlin, Wiklund-Hörnqvist, Sandgren, Karlsson, & Jonsson, 2022). Teachers' positive interactions and relationships due to their beliefs in inclusive teaching also increased the learning and engagement of students with intellectual and developmental disabilities (Watts, Davis, & López, 2024; Xin, Liu, Zhang, & Yao, 2024). Research has shown that teachers' positive communication and relationships with students with intellectual disabilities made a positive impact on their learning in classrooms (Wallin, Hemmingsson, Thunberg, & Wilder, 2024; Watts et al., 2024). Hence, teachers used various methods and techniques to ensure that students with disabilities were fully engaged in classrooms, their unique needs were addressed and simultaneously they were also provided with similar opportunities like the other students in a classroom to foster their positive learning experiences (Chen, Lim, & Clardy, 2024; Zhang, Carter Jr, Bernacki, & Greene, 2024).

The above literature review shows that teachers have been using effective and impactful teaching methods, techniques, and strategies to foster the positive learning experiences of both typical students and students with learning disabilities. There are also descriptive frameworks such as Bloom's Taxonomy which guides teachers to develop their course objectives and curriculum and assess students' learning based on different cognitive levels. There is a frequent use of advanced technologies such as AI in classrooms to enhance students' success and learning. Student-centered learning activities such as small group discussions, role plays, and flipped classrooms are also conducted to demonstrate a real-life application of the course content. However, there is no scientific theory in the field of learning and teaching which provides students, teachers, and researchers with a comprehensive, multilevel, and systematic framework and guides a specific learning and teaching process to predict successful learning and teaching outcomes for learners and teachers in classrooms. Teaching theory is developed and introduced which provides learners and teachers with a multilevel, inclusive, and engaged framework to carry out a successful and systematic learning and teaching process and achieve positive outcomes to address the aforementioned gaps in learning and teaching literature. Teaching theory is the very first scientific theory in the history of education which has all components of a scientific theory (Author, 2024a). It also guides the process of learning and teaching in classrooms of different educational levels. It has the capacity to predict successful learning and teaching outcomes for learners and teachers in contemporary classrooms (Author, 2024b).

3. DESCRIPTION OF TEACHING THEORY

Figure 1 provides a visual representation of teaching theory. According to teaching theory, there are three engagement levels where learning and teaching take place. Different actors are situated at these engagement levels. For instance, at the first engagement level which is called the learner level, students and course content are located. At the second engagement level which is called the peer level, students and their peers are located. At the third engagement level, which is called the classroom level, students, teacher, and class are located.

74

Moreover, there is a reciprocal relationship between students and course content at the learner level (the first engagement level). For instance, students learn course content in different ways and through various modalities. Teachers also make changes in the course content based on students' experiences, understanding, feedback, and classroom dynamics. Students also modify course content to make it more understandable and easier for themselves. For instance, students create written notes for themselves, record lectures, and use external resources, such as websites, software and calculators to grow their learning of the course content and perform well in the course.
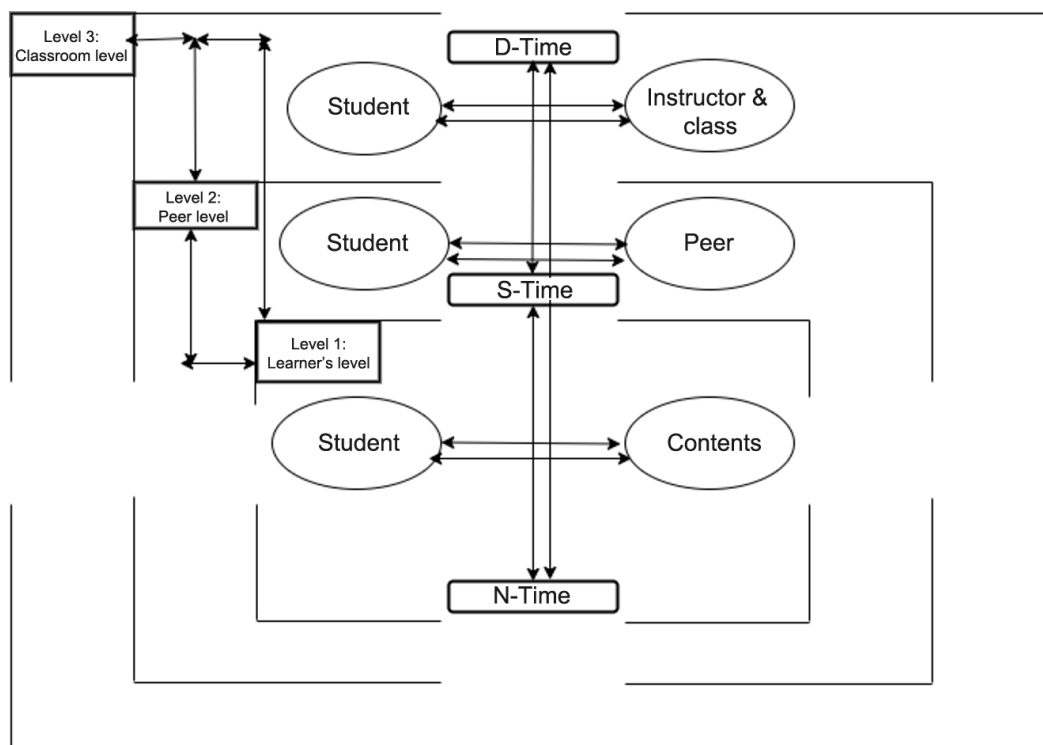

Figure 1. Teaching theory.

Note: D-TIME represents developmental time/context; S-TIME represents sociocultural time/context; and N-TIME represents need-based time/context.

Similarly, course content affects students' knowledge, skills, and critical thinking. For instance, when students enroll in a new class, they learn new knowledge and skills. There is a new textbook they study, they watch videos, and they complete assignments for a semester. Hence, the content of a course improves students' knowledge, provides them with a new lens, and increases their critical thinking about the topic they learn in class. For instance, when students complete their assignments such as a personal reflection, they apply the course content to their personal experiences, share their personal stories, and reflect on their personal experiences. Consequently, they learn new things about the topic, personally, and interpersonally. Hence, the course content also affects students in class. Therefore, there is a reciprocal relationship between students and course content at the first engagement level (the learner level) of teaching theory .

At the peer level (the second engagement level), students and their peers are located. Students support and affect each other in a classroom. Teachers divide them into small groups, and students work with their group members throughout the semester. During this process, students learn from each other. Sometimes, when students learn from the other's perspective, they may challenge their own worldview which further changes their beliefs and behaviors. For instance, when students who belong to individualistic cultures learn the strengths and dynamics of collectivistic culture, they try to find some commonalities between the two cultures and practice some of the qualities offered by the collectivistic culture. Consequently, they are influenced by their peers and vice versa.

75

Similarly, if there are new activities that they find in a new class such as small group discussion which provides them with opportunities to interact with their peers, share their real-life personal experiences, and apply and reflect on the prompts provided for the small group discussion by the instructor, they share their own perspective and learn each other's perspective. When students reflect on their personal experiences, they find out their current situation, which helps them to decide which route and goals they want to pursue for the future. For example, in a couple relationship course, when students learn that their communication skills are not quite effective with their partner after applying the course content and reflecting on their personal experiences, they learn the dynamics of their current relationship and determine what they need to do to foster their relationship. Hence, there is a reciprocal relationship between students and their peers at the peer level.

At the third engagement level of teaching theory which is also called the classroom level, students, teachers, and classes are located. Each aspect of this level has reciprocal relationships with one another. For example, students provide their feedback, bring their background into the class, and share their perspective, which guides teachers to make appropriate changes to facilitate positive student learning experiences. Teachers also devise specific teaching methods and techniques that students need to follow to successfully perform in a course. For instance, students need to complete specific assignments in their course to successfully complete the course, which are provided by their instructor. Successful teachers carry out a collaborative learning and teaching process in a classroom but at the same time, they also make sure to address each student's needs particularly if it is essential for the student such as students with special learning needs. For instance, if there is a student with a disability, the teacher carries out appropriate actions to facilitate that student's learning and to address their unique and individualized needs. Hence, students, teachers, and classrooms reciprocally influence each other.

Since the three engagement levels of teaching theory are reciprocally related, one can influence the other and vice versa. For instance, learning and teaching at the first engagement level (e.g., the learner level) can influence learning and teaching at the second engagement level (e.g., the peer level) and vice versa. At the learner level, when students actively engage in their course content, their knowledge about the topic is improved, and their critical thinking is developed. Consequently, they actively participate in small group discussions and influence each other's perspective and viewpoint at the peer level. They may be more likely to help and support their small group members in different activities, such as small group service-learning projects. Therefore, learning and teaching at the first engagement level can reciprocally influence learning and teaching at the second engagement level.

Similarly, learning and teaching at the first engagement level (the learner level) reciprocally influence learning and teaching at the third engagement level (i.e., the classroom level). For instance, when students learn the course content and actively engage in it, they will feel more confident and interested in the course content. Consequently, students will more likely participate in large group discussions, ask questions, and share their perspectives. They will also provide useful suggestions to the teacher for the class. They will take the lead in the class for the course. They will assist students who need additional support to perform well in class. Hence, learning and teaching at the learner level reciprocally influence learning and teaching at the classroom level.

Further, learning and teaching at the second engagement level (i.e., the peer level) reciprocally influence learning and teaching at the third engagement level (i.e., the classroom level). When students work together in small groups and encourage their peers in the learning process, they contribute to a healthy large class discussion. The entire class environment will be healthier, classroom outcomes will be successful and it will also help the teacher to further facilitate students in their learning process. The teacher will also be more organized, structured, and prepared since students are more interested and engaged in the course content. They will want to explore and

76

discover the topic and apply it to real-life situations. Hence, there is a reciprocal relationship between the second engagement level and the third engagement level in terms of learning and teaching according to teaching theory.

In addition, these engagement levels are influenced by students' developmental context. For instance, teachers need to consider the age and educational level of their students and provide them with age-appropriate learning and teaching activities in the classroom. If students are studying at an elementary educational level, they need specific modalities and ways to learn the course content compared to students who study at a higher education level. When teachers provide age-specific course learning activities at all engagement levels, it will engage students in course content, with peers, and in the class. Consequently, it will foster their learning, and result in positive student learning outcomes. Age-appropriate learning and teaching practices foster learning and teaching at all engagement levels.

Similarly, learning and teaching at all three engagement levels (i.e., learner, peer, and classroom levels) are influenced by sociocultural context. For instance, when learning and teaching techniques and practices are culturally relevant, students will feel they are more relevant, useful, and meaningful to their personal lives. Consequently, they will engage in course content and perform well in class which results in positive student learning outcomes. Hence, considering and applying sociocultural context and using culturally appropriate learning and teaching methods and techniques at all three engagement levels will foster learning and teaching for learners and teachers at these engagement levels.

In addition, teachers also need to consider issues of diversity, equity, and inclusion and address these issues at all three engagement levels in their classroom. For instance, teachers should include course content that highlights such issues with respect to the topic. For instance, if the topic is about gender, teachers can include course content about women's marginalization in the past, women's wages in the workplace, and women's inclusion in different areas of life such as leadership, politics, and economics. These courses can provide students with a historical perspective on the topic. Similarly, teachers can include these aspects in the prompts that they provide for conducting small group discussions with students. In a large group lecture and discussion, teachers can include content that gives students a historical view of the topic. The historical context promotes students' self-reflection and critical thinking and increases their engagement at all three engagement levels of learning and teaching. Since the reciprocal relationships between students, teachers, content, and classroom within and between the engagement levels change over time, it is also important for instructors to devise effective teaching methods and techniques to implement the historical context at all three engagement levels ofteaching theory .

Further, learning and teaching and their reciprocal relationships within and between the engagement levels are influenced by the need-based context. Teachers need to address students' individualized needs at each engagement level. For instance, students with special learning needs require additional support and facilitation to address their needs. Hence, teachers need to devise effective methods and techniques to implement a need-based context at all engagement levels. For instance, at the learner level, teachers need to make sure that the course content are accessible to students with disability. They can also modify course content, change modes of delivery (lecture videos, transcripts, and translation software), and provide additional resources (lecture notes) to facilitate and support the learning of students with special learning needs. Additionally, teachers make sure that typical students encourage students with disabilities to actively participate in small group discussions. Small group members also play an important role in creating a supportive and welcoming environment for these students. At the third engagement level, teachers can provide these students with opportunities to share their reflections and conclusions on the topic in class particularly before, during, and after lectures and class discussions. Moreover, teachers coordinate with the disability resource center and the program to carry out joint efforts to ensure the success of

such students. Hence, when the need-based context is implemented at all three engagement levels, learning and teaching outcomes will be improved.

Finally, open areas from all four sides of the teaching theory diagram signify open communication, effective collaboration, and consistent coordination of students and teachers with other stakeholders' groups outside of the classroom who are relevant and useful in fostering positive learning and teaching experiences of learners and teachers at all three engagement levels. For instance, when teachers are implementing small group service-learning (SL) projects in their classroom, they partner with different community organizations so that their students successfully implement their projects. Students also explore and build their partnerships with such organizations because sometimes they need to find their community partner themselves.

Similarly, teachers can get mentoring from a senior teacher who is more expert in service-learning to successfully implement SL projects in their classes. The senior teacher can assist the junior instructor and review their course throughout the semester. Additionally, students can also seek help from a librarian if they need to find articles on their topic to develop their program. Advanced technological assistance can be received from outside of the class to facilitate classroom learning and foster students' positive learning experiences, particularly for students with learning disabilities. Hence, learners and teachers need to look for such collaboration and engage with those stakeholders who are relevant and can make important impacts on learning and teaching at all engagement levels of teaching theory .

4. METHODOLOGY

The current study used qualitative research methodology (Creswell & Creswell, 2018). An evaluation design called the post-test evaluation design was used to assess the effectiveness and application of teaching theory in higher education classrooms (Remler & Van Ryzin, 2022). The objective of this study was to gain in-depth and rich information from participants about the application and implementation of teaching theory at multiple engagement levels for achieving successful learning and teaching outcomes. Therefore, a qualitative research methodology was chosen for the current study (Remler & Van Ryzin, 2022). Qualitative research was also used in previous studies which aimed at obtaining in-depth and rich information from participants (Raza et al., 2020; Rodgers & Alice, 2023). A self-reported survey called "The MCEM and classroom assessment survey" was created and used to collect data from participants. The survey consisted of many open-ended questions. Participants from undergraduate and graduate level courses participated in this survey. There was one seated class and two online classes. The seated class was an undergraduate class whereas one online class was an undergraduate class and the other online class was a graduate class. The survey was created and conducted using SurveyMonkey. The sample survey questions include

1) Please share your overall learning experiences of the course, classroom engagement, course content, etc. For instance, what do you personally like to do in this course that fosters your classroom engagement, learning of course content, and overall class experience?

2) Please share your overall learning experiences of the course, classroom engagement, course content, etc. For instance, what do you like to do with your classmates that fosters your classroom engagement, learning of course content, and overall class experience?

3) Please share your overall learning experiences of the course, classroom engagement, course content, etc. For instance, what do you like to do with the teacher that fosters your classroom engagement, learning of course content, and overall class experience?

4) Please share your overall learning experiences of the course, classroom engagement, course content, etc. For instance, how do your course-related likes/dislikes discourage or promote your engagement with your classmates and the instructor and vice versa?

5) Please share your overall learning experiences of the course, classroom engagement, course content, etc. For instance, how do your likes/dislikes, with your classmates, and with the teacher change from the beginning of the class to the end of the class?

The study was carried out in a midwest large-scale public university. A formal Institutional Review Board (IRB) application was submitted and approved for this study. After the approval of the IRB application, data collection was conducted. A consent form was also developed for this study. Participants first read and signed the consent form before participating in the study.

Moreover, after collecting the data, data was exported into an Excel file. A codebook developed by Raza was used to organize, manage, and analyze data (Raza, 2020). The author then analyzed the data systematically. For instance, first, the author read all information multiple times. The data was already in English. Hence, no additional actions were carried out to translate the information. After reading and reviewing the transcripts, line-by-line codes were assigned to the data. Data was brought into the codebook. The codebook had many columns with appropriate labels where information was placed accordingly. The codebook can be found in the Appendix. These codes were grouped into larger categories. Then the author developed broader themes. Hence, a thematic analysis was carried out to analyze the qualitative data for the current study. The author also included his reflection in the codebook while performing data analysis.

Moreover, the author systematically operationalized all steps of teaching theory in his classes. The evidence from an undergraduate class and a graduate class is presented in the results section. For instance, at the student level (i.e., the first engagement level), the teacher provided book readings to students. Students completed one chapter each week from the textbook. For the online class (graduate level), students completed a weekly discussion and a reflection paper assignment. Students were also reading additional peer-reviewed research articles for these assignments. Students were also exploring different websites, articles, and sources and sharing relevant resources for the weekly discussion for the online class. For the seated class, students were completing a weekly reflection assignment. For this assignment, students completed an assessment and answered the assignment questions based on their results of the assessment. Students were also writing their personal reflective journals based on the prompts that the teacher was providing to them during the lecture. Hence, students were actively engaged in their course content at the first engagement level (the learner level).

At the peer level (the second engagement level), students in the seated class were engaged in several activities. For instance, there were small group discussions before and after a class lecture. Students were also conducting a separate small group discussion based on the results of their reflection paper assignment. Students were also regularly working with their small group members in their groups on their service-learning project. Hence, there were many activities for students to engage in and work with their peers at the second engagement level. For the online class, students were conducting their small group discussions based on their reflection assignments. The instructor was providing students with specific prompts to conduct their small group discussions. They were also engaged with their small group members in weekly discussions. Students were also involved through a peer-to-peer collaboration, which provided students with an opportunity to help and support each other in promoting their learning, critical thinking, and application of the course content. Therefore, the students were engaged at the peer level (the second engagement level) of teaching theory .

At the third engagement level (the classroom level), students were also engaged in several activities with the entire class. For instance, in the seated class, students were working as an entire class during the lecture. Students were asking questions, responding to the prompts, and sharing their reflections with the class. Additionally, students were sharing their reflective journal and practice with the class. This was an assignment for students to practice before every next class and students shared how they practiced the course content that they found the most important in a class lecture. Additionally, students performed role plays before the class. One member from each group participated in each role play and students performed these role plays based on the case studies that the teacher provided to them. The goal of role plays was to demonstrate a real-life application of the course content. Additionally, students were also engaged as an entire class during their final service-learning presentations. For the online class, students were engaged as an entire class while completing their weekly discussion. Students reviewed their classmates' discussion and provided them with their feedback. Moreover, students were also engaged as an entire class when they presented their service-learning projects. Students also reviewed at least two other classmates' projects and provided them with their feedback.

Further, the teacher was engaged with the students through different modes. For instance, students interacted with the teacher before and after the class, The teacher had his office hours to meet with the students. Email correspondence was quite frequent between students and the teacher. Students also met online with the teacher. Hence, the teacher provided students with many ways to interact with him for a semester.

The teacher provided developmentally appropriate activities at all three engagement levels (i.e., student, peer and classroom levels) to foster learning and teaching at these engagement levels. The teacher provided students with opportunities to learn the course content, apply it to their real-life experiences, and reflect on their personal experiences by using the course content. For instance, for both seated and online classes, students reflected on their personal experiences when they were answering the reflection questions and completing their reflection assignments. Students also systematically developed, implemented, and evaluated their service-learning programs which provided students with opportunities to apply the course content to real-life situations and evaluate their program. Hence, higher-level learning and critical thinking were promoted through application, reflection, and evaluation among students which was according to their age and educational level.

In addition, students' culture was considered and promoted as all student groups' cultures were discussed in class. The teacher made the class discussion inclusive by discussing all ethnic groups, their family dynamics, and cultures. For instance, the strengths and challenges of all ethnic groups were discussed. Interracial relationships and gender dynamics were part of the discussion in the seated class. Diversity issues in schools were discussed in online class. Specific readings on culturally appropriate classrooms and pedagogical practices were assigned to students. Cultural strengths and challenges were highlighted through the prompts that the teacher provided students for both seated and online classes to conduct small group discussions. Hence, sociocultural context was applied at all three engagement levels of teaching theory .

Finally, a need-based context was applied by facilitating students in addressing their individualized needs. For instance, additional time was provided for students who had learning disabilities to successfully complete their assignments. Additional support from the college and university was provided to these students to ensure their success. A consistent collaboration between the teacher, disability resource center, and the program was maintained to support these students. The assignments were also modified according to the abilities and needs of students with special learning needs. Students with learning needs were urged to actively engage during the small group discussions with their peers and in the entire class. They were encouraged to share their reflection, feedback, and

conclusions particularly after small group and large group discussions. Hence, the need-based context was also implemented at all three engagement levels of teaching theory .

Open areas from all sides of the teaching theory's diagram, which shows consistent coordination, effective collaboration, and open communication with relevant stakeholders outside of the class was implemented by initiating and maintaining good communication and relationships with the disability resource center, community partners, counselling services, and other useful resources to facilitate students' positive learning experiences.

5. RESULTS

This section provides empirical evidence of teaching theory which demonstrates the application of teaching theory in different types of classrooms and with diverse groups of student population, who have unique learning styles, needs, and backgrounds.

Below are selected assumptions, concepts, and propositions from the theory.

5.1. Assumptions

One of the assumptions of teaching theory is that learning and teaching occur at multiple engagement levels in a classroom and various actors and forms of interactions are involved in this process.

This assumption states that there are multiple engagement levels (three engagement levels of teaching theory) in a classroom. At each engagement level, there are different actors which reciprocally interact with one another and are involved in a process of learning and teaching. Hence, a multilevel engagement is assumed between actors within and between the engagement levels of teaching theory .

5.2. Concepts

5.2.1. Learning

Learning is a process that learners carry out and experience at multiple engagement levels during which learners are actively engaged in learning, application, and reflection on the course content to acquire substantial knowledge and skills which are offered in a particular course.

The concept of learning states that learners are engaged at three engagement levels through which they learn, apply, and reflect on the course content and also attain relevant knowledge and skills from the course. Although learners are enough to be responsible for their own learning, both educators and learners are equally important in fostering learning and teaching at all three engagement levels.

5.2.2. Teaching

Teaching is an engaging process of educating learners and transmitting specific content, knowledge, and skills to them through effective learning, application, and reflection at multiple engagement levels which are required or necessary for a particular course.

The concept of teaching states that teaching is also carried out at three engagement levels. It is an engaging process for teachers who transmit specific content, knowledge, and skills by fostering learning, application, and reflection for learners at multiple engagement levels which is essential for them to succeed in the course. Although teachers are the core who devise effective pedagogical methods and techniques to foster positive learning experiences for learners, both learners and teachers are equally important to carry out an effective learning and teaching process at all three engagement levels because these engagement levels are reciprocally related to one another in terms of learning and teaching.

5.2.3. Propositions

The following is one of the propositions of teaching theory .

"When learners and teachers use and implement various teaching methods and techniques to foster learning and teaching at all three engagement levels to learn, examine, apply, and reflect on specific content, knowledge, and skills offered in a particular course and program which they find engaging, relevant, useful, beneficial for themselves personally, interpersonally, and professionally, it fosters learning and teaching processes and leads to positive outcomes."

One of the fundamental ideas of teaching theory is to acknowledge that teaching in contemporary classrooms at all educational levels is complex, dynamic and multilevel. Therefore, teaching theory offers learners and teachers with a scientific framework to attend to the complexities of contemporary classrooms and adequately address their unique learning and teaching needs. For this purpose, teaching theory offers a comprehensive and multilevel theoretical framework that students and teachers can use to carry out their effective learning and teaching process and achieve positive learning and teaching outcomes. This framework guides learners and teachers to understand the complexities, challenges, and opportunities of learning and teaching in a classroom and follow systematic steps or procedures to carry out a meaningful, useful, and beneficial learning and teaching process in a classroom, which fosters their engagement at all three engagements levels and benefits them personally, interpersonally, and professionally.

5.3. The Learner Level

As the above proposition of teaching theory shows to foster engagement of learners and teachers at all three engagement levels of learning and teaching, it is essential for them to use and implement various teaching methods and techniques to learn, examine, apply, and reflect on specific content, knowledge, and skills offered in a particular course. The first engagement level of teaching theory is the learner level where learners engage in and learn the course content, complete assignments, take exams, apply the course content in their assignments and assessments, and write reflective journals to reflect on their personal experiences in relation to a specific topic. Students and teachers are equally important in a classroom who work together to foster and promote a positive learning and teaching experience. Teachers are the ones who facilitate students' learning experiences by providing them with the course content which learners find engaging, relevant, useful, and beneficial for themselves personally, interpersonally, and professionally which not only fosters learners' positive learning experiences, it also shows teaching effectiveness and positive outcomes of learning and teaching. This study illustrates how students find different modes of learning useful, relevant, and beneficial for their learning. Students' responses were gathered to create a concept/theme for demonstrating the first engagement level of teaching theory where teaching and learning takes place:

"P1: I liked learning about all the different types of relationships in today's families. I prefer to go to class and focus on the lecture and take notes every once in a while, being engaged. P2: I liked taking all of the quizzes/assessments that were provided to reflect on and having people in my life take the quizzes as well. This helped me to better understand the content and its real-life application overall. I enjoyed this course because I believe the book with the course is very informative and activist driven. P3: I think the class engagement was good and I learnt a lot from this course. The course was a breeze. Everyone (from whom I have talked to) loved how the professor would go over the exam study guides with us in class & the reflections each week were interesting & easy to get through. I liked the weekly reflections over the material. I feel like it deepened my understanding of the knowledge and allowed me to relate the information to my personal life."

The above response demonstrates that students found different teaching methods and techniques engaging and useful for themselves. As mentioned above, both learners and teachers play an equally important role in fostering learning and teaching at the first engagement level of teaching theory . Teachers facilitated learning by providing students with various modes of learning which helped to accommodate all learners' preferences, learning styles, and needs. Simultaneously, learners also read and explored the content found relevant for themselves, used and applied them to real-life situationsand reflected on their personal experiences. Hence, learners' motivation, engagement, and organization (regularity, focus, punctuality, communication with the teacher) are also essential for them to engage with the course content at the first engagement level and foster their positive learning experience. It is also evident from research that when teachers are punctual, who are available in classes to stimulate students' learning, students show positive academic outcomes. Learners engage with the course content, which develops them personally and improves their personal knowledge and skills of the course content. They also communicate with their instructors and peers to explore, share, and discuss the course content, which develops them interpersonally. When learners find the course content and their application useful and relevant for themselves professionally, it also develops them professionally for their careers. When learners are engaged and doing well in the course, it shows teaching effectiveness and performance of teachers in a classroom and results in positive learning and teaching outcomes.

5.4. The Peer Level

The second engagement level of teaching theory is the peer level where learners engage with each other to learn, examine, apply, and reflect on specific content, knowledge, and skills offered in a particular course. Successful and sustainable learning and teaching take place with learners who are actively engaged with their peers to share, discuss, apply, and reflect on the course content. A teacher's role is to facilitate learners' engagement, sharing, and discussing. To achieve this purpose, they use various methods and techniques, such as small group discussions, discussion board assignments, small group projects, etc. Students learn and practice how to work in a small group setting to accomplish their task which develops them personally and improves their learning of the course content and they also complete their course requirements. Additionally, learners communicate with their peers, learn about each other's experiences, create a safe environment, build trust, and share their personal experiences and reflections which develops them interpersonally. When learners share and explore the course content and their real-life applications and work together on their projects in real-life settings, they come across real-world problems and challenges, and they discover their professional interests, they connect with professional organizations and individuals which develops them professionally.

"P4: It was nice to interact with other students by looking over and responding to their assignments. I enjoyed the discussions and the positive feedback. I liked how a lot of the class and work was done through peer work. P5: I enjoyed working as a group for our final project and this class was overall fun to learn about different relationships. I enjoyed the creative process, coming up with an idea for a small-group program to use the MCEM. P6: I liked doing group discussions with my classmates because everyone has a different experience with things and I liked learning from them."

As the above concept/theme shows empirical evidence and classroom application of teaching theory, learners are engaged at the second engagement level (i.e., the peer level) with each other who learn from each other, share their personal reflection, and discuss real-life applications of the course content. Learners learn each other's perspective and stance on a specific topic, they have opportunities to equally engage with their peers on the course content, express themselves, show respect, and work together like a team, which promotes engagement and inclusion in a classroom. When learners feel engaged and included in relation to their peers, they develop a positive

perception of fairness and inclusion which also shows teaching effectiveness and shows positive learning and teaching outcomes in a classroom.

5.5. The Classroom Level

The third engagement level of teaching theory where learning and teaching take place is the classroom level where learners are engaged with each other as an entire class and with the teacher. Like the other engagement levels, both learners and teachers play an equally important role in fostering learning and teaching at this engagement level. The role of teachers is crucial as they facilitate students by providing them with various teaching methods and techniques to learn, examine, apply, and reflect on specific content, knowledge, and skills offered in a particular course. For instance, learners engage in class lectures, discussions, roleplays, surveys, exam reviews, etc. Learners learn from different modes, which fosters their learning of the course content, and they perform well personally in class. Learners also engage with their peers, communicate with them and perform different activities (e.g., role plays) in class which develop their interpersonal. Additionally, learners and teachers share and discuss real-life applications of course content in different professions which also supports learners to explore different professions and discover their relevance and interest in a particular profession, consequently, learners develop professionally. Below is a concept/theme based on students' responses which shows empirical evidence and application of the third engagement level (e.g., classroom level) of teaching theory in a classroom.

"P7: I think the class engagement was good and I learnt a lot from this course. I personally like that we get to listen to the professor speak and then answer questions together as a group. I enjoyed the classroom discussions and getting inspired by others. P8: My classmates and I learnt a lot in class and about each other. I found the discussion boards great for hearing various perspectives or new ideas about the areas of diversity. My learning was fostered by reading the real-life experiences of my classmates. P9: I thought the teacher was good and had PowerPoints that gave straight up information. I liked how our teacher made us do group discussions because it made me get a different perspective on things that I wouldn't have thought of before. My overall experience with the course in relation to the teacher was how the materials covered such a variety of topics. My instructor was very kind, knowledgeable about our content, and responds fast!"

As the above theme shows learners and teachers worked together and fostered learning and teaching at the classroom engagement level of teaching theory. The teacher facilitated students by offering them various teaching methods (e.g., PowerPoint lectures, class discussions and presentations) to learn, examine, apply, and reflect on specific content, knowledge, and skills offered in a particular course. Consequently, students engage in learning, examining, applying, and reflecting on specific course content as a class which provides them with positive learning experiences. On the other hand, when students have positive learning experiences, it also supports teaching efforts and performance which results in positive learning and teaching outcomes. Hence, the third engagement level (i.e., classroom level) of teaching theory also plays an equally important role in fostering learning and teaching in a classroom.

5.6. Development Context

The teacher implemented the developmental context at all three engagement levels. For instance, based on the age and educational level of students, the teacher provided them with assignments related to assessment and reflection at the learner level. Students completed an assessment on a specific topic and wrote a reflection on it. Students applied the results to their personal lives , reflected on them and explained their personal experiences with respect to the assessment results and assignment questions. This process fostered students' evaluation, application,

84

and critical thinking skills, which are essential in higher education. At the peer level, the teacher provided students with several opportunities to engage with their peers, apply the course content, discuss the prompts, and conduct small group discussions. Students were actively engaged in sharing and learning about each other's perspectives. At the classroom level, the teacher provided students with an opportunity in class to write their personal reflective journal during the class lecture, students were responding to the same prompt but in different ways which also promoted thoughtful discussion and reflection among them. Additionally, students performed role plays in which they demonstrated a real-life application of the course content. The entire class participated in role plays which increased their engagement, real-life application, and active participation in class. Hence, the teacher provided developmentally appropriate activities at all engagement levels of teaching theory . Below are some of the responses from the students:

"P10: In this course, I liked it when we discussed prompts within our small groups. I think narrowing these conversations down to our small group rather than having the entire class discuss together was beneficial to both the understanding of prompts and the relationships within groups. P11: I do like and appreciate the small groups and reflective questions. Chatting with my small group was fun . Because the class was relatively personal, it felt like I was catching up with friends. I enjoyed the discussions and the positive feedback I would receive. P12: This course was very detailed and let students engage in activities pertaining to families and the factors that create them. I liked the weekly reflections.

5.7. Sociocultural Context

The teacher also implemented the sociocultural context at all three engagement levels of teaching theory. For instance, he provided culturally responsive assignments, activities, and class discussions. Students completed a specific assessment of evolving cultures and intimate relationships in an undergraduate course, there were several assignments at the graduate level about culture and diversity that students completed on a biweekly basis. These assessments not only increased students' understanding of the topic and their application to personal experiences, they also provided the instructor with a measure to examine students' performance in class and the degree of skills they were gaining from these assignments. It is evident from research that when teachers carried out assessment practices in classrooms for examining students' understanding, it increased students' performance and skills in class. Students also attended and found diversity events that resonated with their cultures and areas of diversity. Similarly, during small group discussion, culture was explicitly discussed. The teacher provided students with frequent prompts to discuss the role of culture in intimate relationships, family life education and early childhood education classrooms. Additionally, the teachers discussed all ethnic groups and their cultures in almost every lecture which made the discussion relevant and meaningful for the students. Below is a response from the student.

P13: My experience in this course was getting to discuss some current diversity events and reading various perspectives. I was engaged with the options had for articles and appreciated the one on classrooms as it relates directly to my profession. I was engaged because I saw the daily application of what I was learning."

Additionally, when students developed, implemented and evaluated their program, they worked with diverse groups of the population which also raised their cultural awareness. Students spent extensive time reading about their topic, carrying out specific steps and developing their curriculum. All these steps were increasing their awareness about different family structures, cultures, and areas of diversity, such as gender, ethnicity, disability, socioeconomic status etc.

"P14: Some strengths included being prepared by doing thorough research into who I would be working with and how I would be executing my program. I felt successful because of the MCEM, how it was modeled and put

together. P15: Strength- wise everyone was provided with an outline of what was expected of them throughout the program. Without the MCEM, I think students would have been lost and would not have understood what the program was going to consist of.

5.8. Need-Based Context

The teacher also implemented the need-based context at the three engagement levels of teaching theory. For instance, the teacher modified the assignments for students with disabilities, provided them with additional time to complete their quizzes, and assigned extensions to complete their assignments as needed at the learner level. At the peer level, the teacher encouraged other students to assist students with disabilities in their work. There was a cooperation between typical students and students with learning needs which also helped them to perform well in class. At the classroom level, the teacher encouraged students with disabilities to share their reflections and conclusions after the small group discussion with the class, which also helped to accommodate these students according to their needs. Additionally, the teacher was also facilitating typical students based on their needs. For instance, the instructor gave extensions to students due to their emergency circumstances. The assignment load was reduced if students were feeling overwhelmed, and students were referred to counseling center and other students' resources if they were stressed due to the course load. Hence, the teacher carried out specific actions to apply a need-based context at all three engagement levels of teaching theory. The implementation of developmental, sociocultural, and historical contexts fostered students' engagement at all three engagement levels and also improved learning and teaching experiences of students and the teacher which resulted in successful learning and teaching outcomes.

Open areas from all sides of teaching theory's diagram demonstrate open communication, consistent coordination, and effective collaboration between students, teachers, and other relevant stakeholders who are outside of the classroom. For instance, students implemented their service-learning projects with a community partner or organization. It is important to make connections with community partners because they also directly or indirectly affect learning and teaching. The teacher provided students with a list of organizations from which students chose one organization to partner with. Students contacted them, communicated with them to ask for their agreement to become a community partner in their service-learning project, and made a healthy professional relationship with them, which helped them to successfully implement their projects. The teacher also encouraged the students to find a community partner themselves. Similarly, the teacher's coordination with outside sources, such as a disability resource center, counseling services, multicultural organizations, and disability program was consistent and continuous throughout the semester. Additionally, the teacher shared different information about events, such as job fairs, university celebrations, conferences and symposiums, professional development activities, and diversity events with students to encourage their participation in those events because they were also developing students personally, interpersonally, and professionally. Hence, teaching theory promotes collaboration outside of the classroom with relevant stakeholders to carry out a successful learning and teaching process at all three engagement levels and achieving positive outcomes for students and teachers.

The above evidence provides empirical support and application of teaching theory at all three engagement levels of a classroom. As discussed in the theoretical framework section that teaching theory is complex and dynamic. Therefore, the author shared empirical evidence of teaching theory in a straightforward and more simpler way for the readers' convenience and understanding because this is the first time teaching theory has been formally published.

6. DISCUSSION

The current paper presents teaching theory and its three components, including assumptions, concepts, and propositions. It also shares empirical evidence and real-life application of teaching theory and shows its unique contribution to the current literature of pedagogy. Teaching theory is a global theoretical framework that guides an effective learning and teaching process at the three engagement levels and predicts successful learning and teaching outcomes for learners and educators.

Teachers have been using student-centered teaching strategies, such as small groups, flipped classrooms, role plays, etc. to foster students' positive learning experiences (Cooper et al., 2024; Kong & Wang, 2024). The use of advanced technology is also introduced in contemporary classrooms to improve student learning outcomes (Cheng & Yang, 2023; Wu, Yang, & Tinmaz, 2024). Frameworks such as Bloom's taxonomy are quite helpful for teachers to create learning objectives and assess students based on different cognitive levels (Bunt, Grosser, & van Tonder, 2022; Costa, de Almeida, Oliveira, & Fernandes, 2022). Encouraging developments have been happening in classrooms to support and facilitate students with learning disabilities to actively participate in classrooms and become a part of mainstream learning (Pilotti, Harbour, Miller, & Larkin, 2023; Van Ryzin, Murray, & Roseth, 2024). Despite all these developments, there is a lack of scientific theory which provides a multilevel framework to students and teachers for systematically carrying out effective learning and teaching processes and achieving positive outcomes. Teaching theory is the first scientific theory in schooling which provides a multilevel framework to learners and educators for carrying out an effective learning and teaching process at the three engagement levels to achieve positive learning and teaching outcomes.

Teaching theory guides teachers to specifically organize their course content for students which they offer at the learner level (the first engagement level of teaching theory). Although teachers prepare the course content that they offer for each course, a framework like teaching theory further prepares teachers and increases their assessment and accountability. Teachers will be more mindful of the course content that they offer to their students because they understand that according to teaching theory students and course content reciprocally affect each other to foster a successful learning and teaching process at the learner level. Hence, teachers need to create course content, which promote an active reciprocal interaction between them and their students. Research shows that when teachers structured and organized the course curriculum, it fosters students' engagement and results in positive student learning outcomes (Fleck & Richmond, 2024; Singh & Engeness, 2021).

To foster engagement and carry out an effective learning and teaching process at the peer level (the second engagement level), teachers will devise effective teaching methods and techniques to foster peer-to-peer engagement at the second engagement level of teaching theory. Research shows that activities such as small group discussions foster students' engagement and participation in classrooms and results in positive learning outcomes (Li, Zhang, & Parr, 2020; Lin et al., 2022). Hence, it will further prepare those teachers who have already been conducting such activities in their classrooms and also motivate other instructors who do not use such activities in their classrooms and make them accountable because when they will use teaching theory as a framework in their classrooms, they would know that peer-to-peer engagement is essential at the peer level of teaching theory to foster an effective learning and teaching process at this level.

Additionally, teachers will devise instructional strategies to foster engagement between students, instructors, and class at the classroom level (the third engagement level) of teaching theory . Teachers have been using a lecture format in their traditional classrooms which also benefits certain groups of students (Perez et al., 2023; Sarkar, Ford, & Manzo, 2020). Teachers also used flipped classrooms which are nontraditional and more student-centered classrooms and have pros and cons for students and teachers (Fung, Poon, Besser, & Fung, 2024; Tutal & Yazar,

87

2021). When teachers use teaching theory, they will reflect on their approaches and devise effective teaching methods and techniques to foster engagement between students, teachers, and class members because they understand that in order to carry out effective learning and teaching processes at the third engagement level, they need to foster interactions and engagement between these three actors since they are reciprocally related to one another.

The three engagement levels (i.e., learner, peer, and classroom levels) and their reciprocally relationships are influenced by developmental, sociocultural, and need-based contexts. Hence, teachers should use developmentally appropriate teaching methods and techniques at all engagement levels. Teachers can also consider the cultural, social, and historical context and implement them at all three engagement levels, such as culturally appropriate teaching methods and techniques that will be applied at the three engagement levels. Additionally, teachers can consider a need-based context by addressing the individual needs of students, such as the needs of students with learning disabilities. Finally, teachers can be open to all types of collaboration and engagement outside of the classroom and they can also encourage their students to engage and collaborate with stakeholders who are relevant and useful in fostering positive student learning experiences because they understand that such open communication and collaboration will further foster engagement between actors at all three engagement levels and grow their reciprocal relationships according to teaching theory .

7. CONCLUSION

Teaching theory is the first scientific theory in the history of education, which provides a multilevel solution for addressing learning and teaching needs and problems in contemporary classrooms. Teaching theory provides learners and teachers with a multilevel and systematic learning and teaching process for contemporary classrooms at all educational levels (from elementary school to higher education). Because it is a teaching theory, learners and teachers can benefit from this theoretical framework at any educational level. For instance, this theory can guide elementary school teachers to implement their curriculum successfully in classrooms and it can also guide teachers who are teaching at the graduate level to carry out a systematic learning and teaching process at multiple engagement levels and achieve positive outcomes. Given increases in classroom diversity, growing teaching demands, and student-centered learning, a comprehensive, multilevel, and scientific framework like teaching theory is needed, which offers a collaborative process between learners and educators at all engagement levels (learner level, peer level, and classroom level) can foster a successful learning and teaching process between students and teachers that will help to achieve positive learning and teaching outcomes. Teaching theory applies to all disciplines. It brings students and teachers from different disciplines together, and improves efficiency and communication, which results in successful learning and teaching outcomes. Teaching theory is broad enough that it can be applied at different educational levels to carry out a multilevel learning and teaching process and achieve positive outcomes in classrooms. It provides a systematic framework for teachers to operationalize their curriculum and implement it at different engagement levels. Such an engaged and multilevel process predicts positive classroom outcomes at different educational levels. Finally, teaching theory is a new theoretical framework that needs additional testing. Future work will focus on empirically testing the theory and creating specific measures to assess the effectiveness of teaching theory.

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Appendix

Roleplay 1.

Perform a roleplay in which an interracial/diverse couple is having challenges in their relationship. Then they decided to reach out to their family and friends to receive their social and emotional support. After receiving social and emotional support from their family and friends, the couple started to handling the challenges well and having positive relationship experience with each other.

Roleplay 2.

Perform a roleplay in which you demonstrate the similarities and differences between the values, beliefs, and family practices of two different individuals or groups and highlight the importance of learning about each other culture and showing respect for each other to foster healthy interpersonal relationships with those who have different cultural/ethnic backgrounds.

Roleplay 3.

Perform a roleplay in which you demonstrate that a couple is having problems in their cohabitation relationship, but they ignore these problems. After some time, they decide to get married without discussing or resolving the problems. Consequently, they are separated and face a divorce.

Roleplay 4.

Perform a roleplay in which you demonstrate that a newlywed couple focuses on their relationship during the early years of their marriage. Consequently, they build their strengths and resources, which helps them to deal with problems in the future and maintain a happy and successful marital relationship.

Codebook for qualitative data management and analysis.

Research question (s): Write your actual research question or the objective of the study here:

Themes	Subthemes	Open-codes (Include all codes that you assigned to data and grouped them to develop a subtheme)	Transcription (Include the part of transcription based on which you developed a subtheme	Comments (Include any additional information that is necessary. For instance, when you move any open code from one group to another group etc.)	How do open-codes align with the subtheme?	How do subthemes align with the large theme?	How does the large theme align with your research question?	Your personal reflections on the process of developing a large theme
Theme name 1	Subtheme name 1.1	1. Open code name 2. Open code name	Transcription 1 Transcription 2					
	Subtheme name 1.2							