Teaching and Learning Practices and Student Engagement in one Dental Institution

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Abstract *– This study aims to assess the teaching and learning practices and student engagement in one dental institution, identifying teaching and learning practices of the clinical instructors with respect to learning environment, reflective practices, feedback and modelling, determining the clinicians' engagement. It tested the relationship between the teaching and learning practices and student engagement and proposed an action plan based on the results. Respondents were 100 Dentistry students in Lyceum of the Philippines University in Batangas City. Using descriptive method, the study determined the teaching and learning practices of clinical instructors and the dental clinicians' engagement. Based on the results, it was concluded that: teaching and learning practices of the clinical instructors as to the learning environment, reflective practice, feedback, patient management and modeling were positively assessed. Dental clinicians' level of engagement on affective liking for learning, in school, behavioral as to effort and persistence and extracurricular and cognitive were high. The better the teaching and learning practices of clinical instructors with respect to learning environment, the more that the students are engaged on affective liking in school as well as extracurricular. The better the teaching and learning practices of clinical instructors with respect to patient management, the more that the students are engaged on affective in liking for learning. The better the teaching and learning practices of clinical instructors with respect to modelling, the more that the students are engaged cognitively.*

Keywords *– teaching, learning practices, student engagement, dental institution.*

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INTRODUCTION

The way teachers teach has a big impact on how students learn and in attaining the desired outcome, as one of the primary goals of educational institutions. Development of appropriate teaching and learning practices determines the level of competencies of a specific educational program. To provide the best learning experience for students, teachers attempt to follow the principles of effective teaching practice. This also tends to describe the students and how they are motivated in acquiring necessary knowledge and skills. Teachers must adhere and show commitment in pursuing student learning through effective, relevant and improved techniques in providing instruction.

Teaching and learning are a mixture of learn from behavior, knowledge, experience and skills of clinical instructors [1]. Teaching involves a strategy for enhancing an institution's educational life and promoting academic quality. A crucial purpose of academic institutions is to prepare health professions faculty for teaching responsibilities. It is critical to look for a setting where students, clinicians, and professors can all learn together [2]. The learning and skills which students received in clinical setting is important to develop their competence as health care practitioners [3]. As a result, the instructor approaches to clinical education are crucial in offering high-quality clinical learning opportunities.

Faculty development enhance teaching effectiveness and prepare instructors for potential teaching and learning strategies, which commonly employ evidenced-based techniques [4]. Faculty development is essential as it is a tool for improving the educational vitality of academic institutions through attention to competencies needed by individual teachers to promote excellence.

Dental schools train students to be competent and compassionate dental clinician. Dental Education environment is necessary for effective instruction and change and to shape dental education setting, innovation and advancement in evidence-based dental care assessment, enhancing the faculty and health care professionals. All these elements affecting the dental education are essential for change and must be systemic in nature.

Patient – and – student centered dental school balanced between the basic clinical and behavioral science facets of dental care. To train highly skilled oral health care practitioner, to bring top quality dental care, combines

training in advanced dental practices, expert faculty, committed to advancing knowledge and innovation [5].

The development of cognitive, knowledge, motor skills and artistic sense in order to dental related problems, like restoration of lost tooth structures is fundamental for dental professionals. The goal is to promote and foster active learning, critical thinking and engagement among students [6]. The conduct of this study is to assess the teaching and learning practices of clinical instructors based on learning environment, reflective practices, feedback, patient management and modelling. The researcher wants to determine the level of student engagement for further development of instruction and to create culture and framework in clinical teaching. The researcher also aims to identify different factors that affect student engagement to learning processes and identify specific approaches that will tend to enhance learning commitment among dental students.

OBJECTIVES OF THE STUDY

The primary objective of this research is to assess teaching and learning practices as well as student engagement in a dental institution. More specifically, the study identified the teaching and learning practices of the clinical instructors with respect to learning environment, reflective practices, feedback and modelling; determined the dental clinicians' engagement; tested the relationship between the teaching and learning practices and student engagement and proposed concrete action plan based on the findings.

MATERIALS AND METHODS

Research Design

Descriptive method is used to determine the teaching and learning practices of clinical instructors and the dental clinicians' engagement.

Participants

The respondents of the study were 100 Dentistry students in Lyceum of the Philippines University in Batangas City, specifically Dental Clinicians from Dental Proper II– Dental proper IV of School Year 2019-2020.

Data Gathering Instrument

An adapted standardized questionnaire [7] was divided into two parts. Part 1 presented the teaching and learning practices of the faculty members of the College of Dentistry. Part 2 was about student engagement, and it was adapted from an earlier study [8].

Data Analysis

The data were tallied, encoded and analyzed using different statistical tools. These include weighted mean which was used to assess the teaching and learning practices as well as student engagement. Pearson Product Moment Correlation was used to determine the relationship between the two variables. All data were treated using a statistical software known as SPSS version 23 to further interpret the results.

Ethical Considerations

No specific identities were revealed in the study to protect the confidentiality of the interviews and data collection. No identity of the respondents was revealed except that they were students and faculty of College of Dentistry. No personal opinion was given by the researcher, only information and results based on the data gathered.

RESULTS AND DISCUSSION

Table 1
Teaching and Learning Practices of the Clinical Instructors with Respect to Learning Environment

Indicators	WM	VI	Rank
1. Treated me with respect	3.65	SA	2
2. Maintained a positive attitude towards me	3.56	SA	7.5
3. Fostered an environment of respect in which I felt comfortable participating	3.56	SA	7.5
4. Established a good learning environment (approachable, focused, non-threatening, professional and enthusiastic)	3.62	SA	3.5
5. Demonstrated humanistic attitudes in relating to patients (integrity, compassion, respect)	3.67	SA	1
6. Was approachable for discussion	3.62	SA	3.5
7. Showed genuine concern for my professional well - being	3.60	SA	5.5
8. Had reasonable expectations of students	3.47	A	11
9. Had good communication skills	3.60	SA	5.5
10. Was open to student question and alternative approaches to patient management	3.54	SA	9
11. Gave me opportunity to offer opinions on patient problems or treatment	3.49	A	10
12. Adjusted teaching to my needs (experience, competence and interest)	3.44	A	12
Composite Mean	**3.57**	**SA**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 1 presents teaching and learning practices of the clinical instructors with respect to learning environment. Based on the result, the composite mean of 3.57 implies that the respondents strongly agree on the indicators mentioned above. Demonstrated humanistic attitudes in relating to patients obtained the highest weighted mean score of 3.67 and rated strongly agree. This only shows that clinical instructors' humanistic behavior demonstrate interest in and respect for patients' psychological, social, and spiritual concerns and values.

It is important to respond to obstacles with intuitive and purposeful actions that improved connections and helped others, including identifying suffering in patients and learners, and providing comfort or expressing their own experiences, to be highly humanistic and identifiable [9]. Their behaviors were also consistent with and reaffirmed firmly held ideas and ideals, such as compassion and honesty.

It was followed by treated me with respect, established a good learning environment and was approachable for discussion. Establishing respect enables good relationship between the teacher and student, which makes the environment conducive to learning. Clinical instructors, as experts in their field, are also expected to be helpful and accessible in giving feedback during discussion of clinical procedures.

However, items such as giving me opportunity to offer opinions on patient problems or treatment (3.49), had reasonable expectations of students (3.47) and adjusted teaching to needs (experience, competence and interest) (3.44) rated the least. This only proves that good teacher communicates a deep regard for students' lives, a regard infused with unblinking attention, respect, even awe. An engaged teacher begins with the belief that each student is unique, each worthy of a certain reverence. Regard extends, importantly, to an insistence that students have access to the tools with which to negotiate and transform the world. The result is congruent that learners come from a variety of backgrounds and conditions, which influence how they respond to classroom activities and management processes. While schools should be a safe and secure environment, they frequently create possibilities for student-on-student bullying and improper relationships between kids [10].

As seen from Table 2, the respondents strongly agree about reflective practice on teaching and learning practices of clinical instructors. All items were assessed strongly agree and asking questions to enhance learning obtained highest weighted mean score of 3.75. Teachers have long used questions to assess pupils' knowledge, improve comprehension, and encourage critical thinking. Well-crafted questions lead to new discoveries, spark discussion, and promote a comprehensive analysis of the subject.

Table 2
Teaching and Learning Practices of the Clinical Instructors with Respect to Reflective Practice

Indicators	WM	VI	R
1. Was an effective clinical teacher	3.69	SA	3
2. Encouraged me to think	3.68	SA	4
3. Promoted reflection on clinical practice	3.62	SA	6
4. Emphasized a problem- solving approach rather than solutions	3.53	SA	7
5. Asked questions that promote learning(Clarifies, probes, reflective questions etc.)	3.65	SA	5
6. Asked questions to enhance my learning	3.75	SA	1
7. Encouraged learning and active participation	3.71	SA	2
Composite Mean	**3.66**	SA	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Questions are asked by teachers to assist students in discovering more on what they have learned, to thoroughly investigate the subject matter, and to spark conversation and peer engagement [11]. Students' higher-order learning is boosted when they ask questions that force them to absorb information, connect seemingly disparate concepts, and clarify their viewpoints. It was followed by encouraged learning and active participation and was an effective clinical teacher.

However, items such as asked questions that promote learning (3.65), promoted reflection on clinical practice (3.62) and emphasized a problem- solving approach rather than solutions (3.53) got the lowest mean values and rated the least. Problem-based question stresses learning as a process including problem solving and critical thinking in real-world situations. It allows students to work on larger learning objectives geared at preparing them for engaged and competent application of skills. Students acquire experience solving real-world issues, with an emphasis on using communication, teamwork, and resources to build ideas and reasoning abilities. This method is in contradictory in most medical programs. Students begin with a series of biology and anatomy lectures, followed by a field experience as a medical resident at a hospital or clinic. Medical residents generally struggled to adapt what they learned in the classroom to real-world problem-solving scenarios. He claimed that the traditional paradigm of learning medical information first in schools through studying and testing was too passive and detached from context for meaning to emerge [12].

Table 3
Teaching and Learning Practices of the Clinical Instructors with Respect to Feedback

Indicators	WM	VI	R
1. Stimulated me to learn independently	3.66	SA	1
2. Gave timely feedback to me	3.35	A	6
3. Gave me regular, useful feedback about my knowledge and performance	3.53	SA	5
4. Offered me suggestions for improvement when required	3.56	SA	2
5. Identified areas needing improvement	3.54	SA	3.5
6. Identified my strengths	3.32	A	7
7. Explained to me why I was correct or incorrect	3.54	SA	3.5
Composite Mean	**3.50**	**SA**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 3 presents the teaching and learning practices in terms of feedback. The composite mean of 3.50 indicates that the respondents strongly agree on the feedbacks given by their clinical instructors.

Among the items enumerated, stimulated me to learn independently ranked first with a mean score of 3.66. This implies that clinical instructors provide room for independent learning. Independent learning is linked to or included in a variety of other educational ideas and policy agendas that are now relevant, such as personalization, child- or student-centered learning, and learning ownership. It is a feature of major topics like as the roles and interactions between students and teachers, as well as the function of information and communication technology in education. Theoretical research and practical implementation of autonomous learning principles are arguably most advanced in the United States, although the notion is gaining traction in the United Kingdom. It is one of the most important aspects of customized learning, and it is viewed as critical to the creation of a school system that fosters high-quality, lifelong learning, as well as social equality and cohesiveness [13].

Meanwhile, the least rated items were giving timely feedback and identifying strengths obtained mean score of 3.35 and 3.32 respectively. Students have many kinds of strengths. Sometimes these strengths are obvious, like when a dental student has good dexterity in manipulating an instrument. However, there are strengths that may be harder to notice like being a good listener or working well in groups. Recognizing and talking about these strengths can help students to thrive especially true to students who are struggling in school. It matters how teachers regard and observe students. It has an impact on how teachers interact with, respond to, and anticipate the learning outcomes of their student [14]. College students who are the greatest at leveraging their talents, rely on long-term social support and build on positive experiences that give them the confidence to use their skills in new settings [15].

Table 4
Teaching and Learning Practices of the Clinical Instructors with Respect to Patient Management

Indicators	WM	VI	R
1. Promoted keeping of medical records in a way that is thorough, legible, efficient and organized	3.72	SA	2
2. Encouraged me to assume responsibility for patient care	3.77	SA	1
Composite Mean	**3.74**	SA	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 4 presents the teaching and learning practices in terms of patient management. The composite mean of 3.74 indicates that the respondents strongly agreed on the above mentioned indicators. All items were rated positively and encouraged me to assume responsibility for patient care ranked first with mean score of 3.77. In an increasingly difficult, inefficient, and stressful environment, clinicians and health-care employees seek to offer the best possible therapy for their patients. Despite this, the structure, incentives, and culture of the system in which they work are often inadequate to support their efforts to prioritize patient needs. In a learning health care system that understands the significance of concentrating on the patient, patients and their families are important drivers of the design and administration of the learning experience. The experience of care and economic results may all be significantly enhanced when patients, their families, other caregivers, and the society are full, active partners in care.

For optimum treatment, both patients and professionals must be involved [16, 17]. Clinicians provide information and advice about treatment options, as well as prognosis, depending on scientific expertise. Patients, their families, and other caregivers have firsthand experience with the appropriateness or inadequacy of various therapies for the patient's circumstances and choices. They require information from various sources to decide on the best treatment option. It is important to note that patient-centered care does not necessarily mean health care professionals have to agree to all of the patient's requests; rather, it entails meaningful engagement in order to facilitate a better understanding of the patient and good communication with the patient.

The indicator promoted keeping of medical records in a way that is thorough, legible, efficient and organized (3.72) was also positively assessed. Patients and the public from a wide range of demographic groups have shown a desire to be more involved in their treatment and better educated about their health [18].

Increased interest in health provides an opportunity to expand patients' engagement in their own treatment, the care of their loved ones, and the entire system's development. It also emphasizes new responsibilities for health professionals in collaborating with patients to share trustworthy online health resources [19]. Patient-centered medical homes, health homes, and accountable care organizations provides chances for patient participation. This section looks at patient participation on a variety of levels, including patients' personal relationships with their health care workers, how their health care organization provided services, their interactions with larger system, and their management of their own treatment.

Table 5
Teaching and Learning Practices of the Clinical Instructors with Respect to Modelling

Indicators	WM	VI	R
1. Demonstrated knowledge of current medical and manual therapy literature	3.71	SA	1
2. Demonstrated osteopathic, clinical examination and rehabilitation knowledge and skills	3.65	**SA**	2
Composite Mean	**3.68**	**SA**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

As seen from Table 5, the respondents strongly agreed (3.68) the teaching and learning practices of clinical instructors as to modeling. Dental education programs have a responsibility to ensure students are exposed to the realities of the contemporary healthcare system and to prepare them for practice with competencies necessary to promote and preserve patient safety. The clinical experience is an integral component of undergraduate dental education program. In preparation for clinical experience, students are taught and practice the required clinical skills in the laboratory under the supervision of a university or college instructor.

Demonstrated knowledge of current medical and manual therapy literature obtained the highest mean of 3.71 and rated strongly agree. Individual health care practitioners and their patients like manual therapy methods; nevertheless, scientific evaluations do not significantly support their effectiveness. A one-size-fits-all approach to treatment may result in small treatment effect sizes for manual therapy methods. Mechanistic-based manual therapy treatment techniques provide an exciting option for selecting patients who are likely to benefit to manual therapy. However, a lack of understanding of the processes through which physical therapy interventions reduce pain now restricts such an approach. The nature of manual therapy treatments further complicates such an approach, since the underlying mechanisms are likely to be a complex combination of elements including the patient, the practitioner, and the setting in which the intervention takes place [20].

Demonstrated osteopathic, clinical examination and rehabilitation knowledge and skills obtained 3.65 and rated strongly agree. Clinical teaching influences the development of clinical and patient management skills students need for competent, safe and effective practice. At present, little is known about clinical education in osteopathy in non-United States teaching programs [21]. Cognitive apprenticeship model could account for several aspects of the student-clinical teacher interaction within a student-led clinical environment. Clinical education in osteopathy is typically undertaken in a student-led, on-campus clinic environment.

Table 6
Summary Table on Teaching and Learning Practices of the Clinical Instructors

Indicators	WM	VI	R
1. Learning Environment	3.57	SA	4
2. Reflective Practice	3.66	SA	3
3. Feedback	3.50	SA	5
4. Patient Management	3.74	SA	1
5. Modeling	3.68	SA	2
Composite Mean	**3.63**	**SA**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 6 presents the over-all assessment of the respondents on the teaching and learning practices of the clinical instructors. The result was positively rated strongly agree and patient management ranked first with a mean score of 3.74.

When reviewing patient care activities at the dental school, the patient as an individual, as a member of a health insurance plan, and as a member of the community must all be taken into consideration. This triple focus makes the exceedingly difficult balancing act to define patient care in health professions schools even more challenging. Schools must consider not only variety in patient individualities and potential disparities between personal and communal needs, but also differences in the objectives and policies of health plans that increasingly manage or arrange services for employer, governmental,

or other sponsors. Most patient care activities are performed by students in most dental schools. Many institutions transfer responsibility for both coordinating and providing patient care to predoctoral students, while professors supervise a single visit or operation at a time. Faculty may give services accidentally while supervising student care, and allied health professionals may provide care as students or workers. In a few institutions, the patient is assigned to a designated faculty member (typically a general dentist), however the student still provides most of the care. The student and generalist faculty member retain accountability for the patient if a specialized faculty member is summoned for consultation or procedural direction. This situation was practiced by the dental clinicians [22].

However, feedback got the lowest rating of 3.50 although it was positively interpreted. As numerous new hand-skill courses are added to conventional lecture courses and traditional paper-and-pencil assessments, many dental students find the quantity of direct feedback they get in dentistry school to be both strange and unpleasant. When students react negatively to standard professional input, dentistry school professors frequently remark that they are too sensitive. Discussions regarding self- and peer assessment in technique classes help students feel more comfortable sharing their work with their classmates. Furthermore, addressing feedback concerns early in a student's professional education makes them aware of the importance of feedback in their professional growth and assists them in dealing with the emotional effect of feedback [23].

Table 7
Dental Clinicians Engagement in terms of Affective Liking for Learning

Indicators	WM	VI	R
1. I am very interested in learning	3.62	SA	1
2. I like what I am learning in school	3.54	SA	2
3. I enjoy new things in class	3.49	A	3
4. I think learning is not boring	3.01	A	4
Composite Mean	**3.42**	**A**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 7 presents the dental clinicians' engagement in terms of affective liking for learning. The respondents agreed on the above-mentioned indicators as revealed by the composite mean of 3.42.

Among the items mentioned, very interested in learning and like what I am learning in school obtained the highest mean score of 3.62 and 3.54 respectively. The result shows that students show level of engagement as they were interested on what they are learning. Affective engagement is characterized by increased levels of positive feelings during on-campus and off-campus activities, such as pleasure, pride, delight, enthusiasm, openness, joy, euphoria, and curiosity, among others [24, 25]. Students who are emotionally engaged can see the purpose and value of their academic assignments and social relationships [26]. Achievement emotions differ by learning task in e-learning. Positive emotions were also revealed to be linked to behavioral involvement [27].

However, items such as enjoy new things in class (3.49) and think learning is not boring (3.01) got the lowest rating. The affective dimension of engagement refers to students' summative and long-term emotional experiences, and it measures how enthusiastic they are about their postsecondary education [26]. Emotions, on the other hand, are linked to students' learning, achievement, life satisfaction, and health. Optimism, pride, joy, and passion can lead to a long-term psychological investment in a postsecondary education that persists beyond graduation [25].

Table 8
Dental Clinicians Engagement in terms of Affective Liking in School

Indicators	WM	VI	R
1. I like my school	3.25	A	2
2. I am proud to be at this school	3.32	A	1
3. Most mornings, I look forward going to school	3.00	A	4
4. I am happy to be at this school	3.17	A	3
Composite Mean	**3.18**	**A**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 8 presents the dental clinicians' engagement in terms of affective liking in school. The composite mean of 3.18 indicates that the respondents agree on the above-mentioned indicators. Item such as "I am proud to be at this school" got the highest mean value of 3.32, followed by "I like my school". The result only connotes that the dental students really feel that they belong to the school. They appreciate what was given to them. Thus, affective engagement refers to self-reports of dissatisfaction, boredom, interest, rage, and satisfaction, as well as student-teacher relationships and job orientation. Student sentiments, attitudes, and views of the institution

describe emotional involvement. It focuses on loving school, belonging, hobbies, and overall learning excitement. Students' interactions with their professors, classmates, and school are referred to as affective engagement. Teachers, classmates, academics, and school officials give them favorable and bad feedback [28].

"I am happy to be at this school" and "Most mornings, I look forward going to school" obtained the lowest mean scores of 3.17 and 3.00. The result only shows that students' individual emotional responses are likely to have an impact on their learning.

As dental students undergo various responsibilities at school, they are also exposed to engaging with different kind of people at different time of day, and as they handle different kinds of cases for a specific patient. Emotions play an important role in establishing patient rapport and gaining self-confidence in handling different cases.

An analysis of teaching and learning through the lens of affect theory shifts the focus from the psychological to the social and from the individual to the interpersonal. Interest provides the "motivation and energy mobilization for engagement and interaction" [29].

This perspective of interest recognizes the activating and stimulating function it plays in allowing a learner to get involved in a task. When a learner is positively stimulated and becomes receptive to the learning process, they may have a variety of additional emotive experiences, each with its own valence. The strength of the emotion experienced is also a factor in determining the student's arousal level. As a result, complex emotive reactions may emerge from the process of interest.

As can be seen from the result in Table 9, the respondents agreed that there is an engagement on their behavioral aspect as to effort and persistence. Items "try hard to do well in school" and "in class, I work as hard as I can" are assessed as strongly agree with mean values of 3.53 and 3.51 respectively. Results show that the highly interested students are connecting with each other while they participate in the same classroom activities will result in enhanced engagement. Group work and treating complex patient cases as a team is commonly practiced in a dental school to develop extraprofessional collaboration and teamwork. Behavioral engagement refers to the tangible behavioral behaviors taken by students to demonstrate their willingness to participate in classroom activities as well as their willingness to tackle hard content. This facet of research explains the classroom behaviors that lead to student behavioral engagement, such as perseverance, focus, asking questions, and participating to class debate [30].

Table 9
Dental Clinicians Engagement in terms of Behavioral: Effort and Persistence

Indicators	WM	VI	R
1. I try hard to do well in school	3.53	SA	1
2. In class, I work as hard as I can	3.51	SA	2
3. When I'm in class, I participate in class activities	3.26	A	5
4. I pay attention in class	3.34	A	3
5. When I'm in class, I just act like I'm working	2.78	A	7
6. In school, I do just enough to get by	2.61	A	9
7. When I'm in class, my mind wanders	2.65	A	8
8. If I have trouble understanding a problem, I go over it again until I understand it	3.27	A	4
9. When I run into a difficult homework problem, I keep working at it until I think I solved it	3.23	A	6
Composite Mean	**3.13**	A	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Conversely, items like when I'm in class, I just act like I'm working (2.78), when I'm in class, my mind wanders (2.65) and in school, I do just enough to get by (2.61) rated the least. This result shows that the dental students put their focus on their schoolwork and strive to excel and not just get by. Creating a learning environment and classroom rules that promote focus and excellence is important to maintain this indicator in place. Given the positive effect of behavioral engagement on student achievement, two school-level characteristics such as school size and rigid rules were identified to have an association with student behavioral engagement. Though colleges have a significant impact on student behavior, involvement varies significantly within courses within a school. As a result, a significant amount of study has been focused on finding classroom instructional characteristics linked to better behavioral student involvement [30].

In Table 10, there is a positive engagement on behavioral aspects as to extracurricular. This was supported by the composite mean of 3.07. All items were rated agree and indicator "When I study, I try to connect what I am learning with my own experiences" ranked first with mean score of 3.38. The experience itself is the best way to learn because otherwise it would not be us who learned, but rather those who lived the experience.

Table 10
Dental Clinicians Engagement in terms of Behavioral: Extracurricular

Indicators	WM	VI	R
1. I am an active participant of school activities such as sport day	2.67	A	7
2. I volunteer to help with school activities such as sport day and parent day	2.77	A	6
3. I take an active role in extracurricular activities in my school	2.65	A	8
4. When I study, I try to understand the material better relating it to things I already know	3.16	A	5
5. When I study, I figure out how the information might be useful in the real world	3.27	A	4
6. When learning new information, I try to put new ideas in my own words	3.33	A	2
7. When I study, I try to connect what I am learning with my own experiences	3.38	A	1
8. I make my own examples to help me understand the important concepts I learn from school	3.32	A	3
Composite Mean	**3.07**	A	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Learning is progressing and growing by overcoming the difficulties and obstacles, reflecting on the mistakes and overcoming them. To live is to experience and this is part of human essence and instinct of curiosity. Thus, extracurricular involvement is considered part of a well-rounded education because they provide a channel for reinforcing classroom learning and allowing learners to apply academic abilities in a real-world setting. According to recent study, extracurricular activities may boost students' feeling of connection or loyalty to their school, lowering the probability of academic failure and dropping out [31].

It was followed by when learning new information, I try to put new ideas in my own words and make my own examples to help me understand the important concepts I learn from school. Dental students deem that personalizing and creating familiar associations enable them to comprehend the concepts being studied, since most of the principles in dental science are applicable and relevant to what they would be putting into practice in their clinical years.

On the other hand, volunteer to help with school activities such as sport day and parent day, active participant of school activities such as sport day and take an active role in extracurricular activities in my school obtained the lowest mean values of 2.77, 2.67 and 2.65 respectively. Dental students regarded involvement in school activities as not a priority in their learning engagement. Good behavioral engagement is defined by students' positive conduct, attendance, effort to stay on task, contribution, participation in class discussions, involvement in academic and co-curricular activities, time spent on work, and tenacity and resiliency when faced with difficult tasks [32]. As a result of their interest and participation in university life and extracurricular involvement, behaviorally engaged students demonstrate proactive participative behaviors [33].

Table 11
Dental Clinicians Engagement in terms of Cognitive

Indicators	WM	VI	R
1. When learning things for school, I try to see how they fit together with other things I already know	3.28	A	1.5
2. When learning things for school, I often try to associate them with what I learnt in other classes about same or similar things	3.28	A	1.5
3. I try to see the similarities and differences between things I am learning for school and things I know already	3.25	A	4
4. I try to understand how the things I learn in school fit together with each other	3.24	A	6
5. I try to match what I already know with things I am trying to learn for school	3.26	A	3
6. I try to think through topics and decide what I'm supposed to learn from them, rather than studying topics by just reading them over	3.24	A	6
7. When studying, I try to combine different pieces of information from course material in new ways.	3.24	A	6
Composite Mean	**3.26**	A	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 11 shows dental clinicians' engagement in terms of cognitive aspect. All items were rated agree and when learning things for school, I try to see how they fit together with other things I already know and when learning things for school, I often try to associate them

with what I learnt in other classes about same or similar things both obtained the same mean value of 3.28. One aspect of the teaching-learning process that has been incorporated is student participation. Students must engage in the learning process and demonstrate creativity in the creation process so that their capacity to learn the content will increase. The cognitive component of engagement refers to the set of long-term and active mental states associated with the engagement's main objects [34]. This could include the amount of favorable attention and interest paid to tertiary communications, as well as the time spent planning and managing academic pursuits [35].

Through their views, attitudes, mental processes, and techniques used during academic activities, students who are intellectually engaged display a greater awareness of the value and relevance of academic work [32, 33]. As a result of their capacity to comprehend the content, meaning, and application of academic assignments, cognitively engaged learners are more likely to display higher order thinking [36].

Moreover, items like trying to understand how the things learned in school fit together with each other; trying to think through topics and deciding what is supposed to be learned from them, rather than studying topics by just reading them over, and when studying, trying to combine different pieces of information from course material in new ways obtained the same mean value of 3.24 and rated the least.

Students who are intellectually engaged in the learning process reflect extensively on the newly supplied knowledge and employ self-regulated learning techniques to improve their comprehension. The self-regulatory student can distinguish between facts and abilities that he or she knows and possesses. He or she can appraise the academic assignment and define study objectives. In addition, to guarantee academic achievement, the self-disciplined student assesses and manages his or her cognitions and actions and makes necessary modifications to the learning strategy. Dental students are being trained to adapt their own means of studying the different subjects based what modes of learning best suit them. Some being more adept to theoretical knowledge, while others to practical and clinical application. However, to be able to succeed in Dentistry, students must be able to strike a balance between theoretical knowledge and clinical skills.

Table 12 shows the summary on dental clinicians' engagement. Among student's engagement, affective for learning got the highest mean value of 3.42.

Table 12
Summary Table on Dental Clinicians Engagement

Indicators	WM	VI	R
1. Affective for Learning	3.42	Agree	1
2. Affective in Liking School	3.18	Agree	3
3. Effort and Persistence	3.13	Agree	4
4. Extracurricular	3.07	Agree	5
5. Cognitive	3.26	Agree	2
Composite Mean	**3.21**	**Agree**	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Result shows that students feeling regarding their safety in school and feeling connected to friends and teachers are indicators of affective engagement. Affective for learning interacts with and modulates the learning process. While positive affective states like surprise, happiness, and interest have been shown to aid learning, negative affective states like frustration and disillusionment have been shown to hinder learning. Students who are overwhelmed, very confused or frustrated during learning, experience increase in their cognitive load, while affective states, such as boredom, were associated with poor learning [37].

Learning, on the other hand, can be enhanced when learners are in a pleasant emotional state. Students in a condition of high engagement are completely engrossed in the learning content and so ready to learn.

It was followed by cognitive and affective in liking school. It is important for dental students that they can comprehend the concepts, processes and dynamics of learning. Being able to associate and learn the similarities and differences of concepts is essential to be able to progress in their dental education. Their interest for the things they are learning in Dentistry is also important for the dental students. They are engaged in learning if they found the learning process enjoyable and motivating.

However, engagement on effect and persistence and extracurricular (behavioral) got the lowest rating of 3.13 and 3.07, respectively. Engagement in extracurricular activities has been linked to improved academic performance, however dental students may be hesitant to participate in extracurricular activities for fear of affecting their grades, and they may abandon extracurricular activities if their focus is required somewhere else. Some characteristics of students may be deduced from participation in extracurricular activities; for example, those who belong to organizations/clubs are seen to possess better interpersonal skills, whilst those

who serve in community activities are said to be more extroverts.

Extracurricular activities are especially significant for higher education institutions since they contribute to their public image and reputation. By conforming to accrediting requirements, dental schools hope to enhance the learning experience they provide. Extracurricular activities at dentistry schools, which are known for their high stress levels, can serve a dual function by providing stress relief and serving as an unstructured teaching framework for the study enhancement of employability skills [38]. In the context of dental education, students are more inclined to spend their time in their academic pursuits and honing their clinical skills, as observed and quantified in the result.

Table 13
Relationship Between Teaching and Learning Practices of the Clinical Instructors with Respect to Learning Environment and Dental Clinicians Engagement

Dental Clinicians Engagement	r-value	p-value	I
Affective for Learning	0.164	0.112	NS
Affective in Liking School	0.336**	0.001	S
Effort and Persistence	0.134	0.197	NS
Extracurricular	0.210*	0.041	S
Cognitive	0.126	0.225	NS

*Legend: Significant at p-value < *0.05; **0.01*

Table 13 presents the correlation between teaching and learning practices in terms of learning environment and dental clinicians' engagement. Based from the result, there were significant relationship observed on affective in liking school (p-value = 0.001) and extracurricular (p-value = 0.041) since the computed p-values were less than 0.01 and 0.05 respectively. The result only reveals that the better is the teaching and learning practices, the more that they are engaged on affective (liking school) and behavior (extracurricular). Instructors help students develop their sense of competence by offering structure and high-quality task-oriented informative feedback. The volume and clarity of information that teachers provide pupils regarding learning/developmental objectives and approaches to achieve desired results is referred to as structure. Teachers provide structure by consistently providing support and guidance, as well as delivering task-specific and autonomy-enhancing feedback [39].

Teacher relatedness-support actions will become more influential as the environment becomes more interpersonal [40]. Students' motivation will be increasingly dependent on the quality of the connection in circumstances where learning and skill development can only be done via social contact. Clinical learning takes place in a highly social environment where students and teachers spend significantly more time working close to one another than they do in the classroom, doing tasks that require substantial amounts of interpersonal interaction to accomplish effectively and that typically require considerable quantities of interpersonal interaction with others, such as patients. In clinical setting, instructors and students are also far more likely to connect socially on a personal basis [39].

Table 14
Relationship Between Teaching and Learning Practices of the Clinical Instructors with Respect to Reflective Practice and Dental Clinicians Engagement

Dental Clinicians Engagement	r-value	p-value	I
Affective for Learning	-0.007	0.943	NS
Affective in Liking School	0.130	0.208	NS
Effort and Persistence	0.061	0.555	NS
Extracurricular	0.131	0.204	NS
Cognitive	0.149	0.149	NS

*Legend: Significant at p-value < *0.05; **0.01*

Table 14 shows the significant relationship between the teaching and learning practices of the clinical instructors with respect to reflective practice and dental clinicians' engagement. The resulted r-values indicate almost negligible correlation and the computed p-values were all greater than 0.05 alpha level. This indicates that no significant relationship exists and infers that the dental clinician's engagement was not affected by the teaching and learning practices of clinical instructors in terms of reflective practice. A clinical educator's job is complicated. Teachers must navigate a variety of possible sources of conflict and opposing interests to provide adequate health care and student development. Teachers must balance the demands of patients with the objective of providing their students with an effective educational experience. If teachers understand organizational and instructional tactics, then they can deliver high-quality patient care without sacrificing educational quality. Clinical educators' role includes ensuring that patients receive safe and high-quality care.

Students' clinical educational experiences can be favorably influenced by having a depth of patient-care skills and a thorough understanding of general teaching principles. Whatever strategy is chosen, both the

provision of high-quality health care and the learners' educational demands must be satisfied. Time management, both with and without patients, as well as the capacity to detect and capture 'teaching opportunities,' are critical [41].

Table 15
Relationship Between Teaching and Learning Practices of the Clinical Instructors with Respect to Feedback and Dental Clinicians Engagement

Dental Clinicians Engagement	r-value	p-value	I
Affective for Learning	0.055	0.597	NS
Affective in Liking School	0.173	0.093	NS
Effort and Persistence	0.015	0.885	NS
Extracurricular	-0.090	0.388	NS
Cognitive	0.108	0.295	NS

*Legend: Significant at p-value < *0.05; **0.01*

Table 15 shows the significant relationship between the teaching and learning practices of the clinical instructors with respect to feedback and dental clinicians' engagement. It was observed that the resulted r-values indicate almost negligible correlation and the computed p-values were all greater than 0.05 alpha level. This indicates that no significant relationship exists and infers that the dental clinician's engagement was not affected by the teaching and learning practices of clinical instructors in terms of feedback. Students indicate that the clinical context is where they learn the most in dentistry and oral health care education. As a result, good clinical teaching of dentistry is viewed as crucial for student learning [42].

Teaching in dentistry education, on the other hand, has its own set of difficulties. Learners are asked to perform complex and irreversible treatments in the clinical dentistry setting while remaining relatively untrained. As a result, the environment serves as a location of professional health care as well as a teaching and learning environment, putting the clinical teacher in the position of both supervisor and teacher. A high degree of monitoring and teacher-student engagement is essential to guarantee that the clinical setting is a safe and effective one for both students and patients [43].

According to studies on effective clinical teaching approaches in the dentistry setting, teacher feedback is a vital aspect in teacher-student interactions. However, studies demonstrate that students either receive little or no feedback, or that the input they do receive is either useless or insulting [43, 44].

Three of the five most unsatisfactory features of the clinical learning environment are related to clinical teachers' comments [45]. Students' learning was hampered by poor evaluation, and they now desire more thorough feedback to apply and enhance their confidence and learning outcomes. Consequently, there is a clear need to improve feedback mechanisms in the clinical dental learning environment.

Table 16
Relationship Between Teaching and Learning Practices of the Clinical Instructors with Respect to Patient Management and Dental Clinicians Engagement

Dental Clinicians Engagement	r-value	p-value	I
Affective for Learning	0.218*	0.034	S
Affective in Liking School	0.079	0.446	NS
Effort and Persistence	0.083	0.422	NS
Extracurricular	0.160	0.121	NS
Cognitive	0.130	0.21	NS

*Legend: Significant at p-value < *0.05; **0.01*

Table 16 reveals that the resulted r-values indicate almost negligible to weak positive correlation, however, the computed p-value of affective for learning (0.034) was less than 0.05 alpha level. Thus, the null hypothesis under this variable is rejected. This means that a significant relationship exists and implies that the better is the teaching and learning practices of clinical instructor with respect to patient management, the more engaged the students are in terms of affective for learning. By giving structure, an instructor can help a student meet his or her demand for competence. The volume and clarity of information that teachers provide pupils about goals and approaches to achieve the intended objectives is referred to as structure. Instructors give structure by providing continuous guidance and direction throughout learning activities, as well as feedback that is task-oriented and promotes personal control [46].

There is a weak link between relatedness-supporting behaviors and instructional efficacy [47] which supports the idea that they are distinct constructs. The student–instructor connection is openly manipulated or exploited via relatedness methods [48]. Any actions that reveal a lack of concern for the student's well-being and self-worth, as well as those that display negative conditional regard, serve to undermine a student's emotions of relatedness. Relatedness-thwarting conduct is marked by

intimidation, humiliation, embarrassment, ostracism, and rejection.

Table 17
Relationship Between Teaching and Learning Practices of the Clinical Instructors with Respect to Modelling and Dental Clinicians Engagement

Dental Clinicians Engagement	r-value	p-value	I
Affective for Learning	-0.005	0.962	NS
Affective in Liking School	0.149	0.149	NS
Effort and Persistence	0.101	0.330	NS
Extracurricular	0.184	0.074	NS
Cognitive	0.222*	0.031	S

*Legend: Significant at p-value < *0.05; **0.01*

As shown in Table 17, it was noticed that the resulted r-values indicate almost negligible to weak correlation, however, the computed p-value of cognitive (0.031) was less than 0.05 alpha level. Thus, the null hypothesis under this variable is rejected. This means that a significant relationship exists and implies that the better is the teaching and learning practices of clinical instructor with respect to modelling, the more engaged the students are in terms of cognitive. An instructor's influence on a student's learning and growth can be significant.

Instructors may be the single most crucial factor in a student's ability to learn [49]. This is particularly true in health and medical education, where the practice-based clinical component resembles old apprenticeships more than a college classroom. Furthermore, when professors demonstrate understanding of and interest in the student as a person, a student's desire for deep meaningful interactions is addressed. The value of caring and interpersonal proximity in student–teacher interactions is abundantly demonstrated in research literature based on attachment theory, social support, school environment, and parenting [50].

CONCLUSION AND RECOMMENDATION

Teaching and learning practices of the clinical instructors as to the learning environment, reflective practice, feedback, patient management and modeling were positively assessed. Dental clinicians' level of engagement on affective liking for learning, in school, behavioral as to effort and persistence and extracurricular and cognitive were high. The better the teaching and learning practices of clinical instructors with respect to learning environment, the more that the students are engaged on affective liking in school as well as extracurricular (behavioral); the better the teaching and learning practices of clinical instructors with respect to patient management, the more that the students are engaged on affective in liking for learning; and the better the teaching and learning practices of clinical instructors with respect to modelling, the more that the students are engaged cognitively. The researcher proposed a plan of action to enhance the teaching and learning practices and increase student's engagement.

Clinical instructors may consider the presence of student that prefers different teaching and learning methods during clinical supervision. Dental clinicians may improve the culture of their feedback to the concerned body to incorporate or have common effective teaching and learning strategy. Clinical instructors may create many opportunities for hands-on learning in the classroom and laboratory class. Dental schools may practice well-conducted peer observation of teaching in enhancing teaching quality and teacher development in higher education including healthcare teaching.

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