Original Research Paper

University J Dent Scie 2021; Vol. 7, Issue 3

Parents Perceptions and Support for E-learning of Dental Undergraduate Students During Covid-19 Lockdown

Abstract:

Objectives: The study's objective was to implement effective education strategies and to record parents' perceptions of e-learning based on their children's advantages and challenges in attaining knowledge during the lockdown.

Methods: A total of 363 parents of students participated in the study. Based on the academic year of their children, 363 parents of dental students were categorized into four groups as parents of I BDS (93), II BDS (89), III BDS (93), and IV BDS (88). After introducing the e-learning system to all the students, the effectiveness of e-learning tools was evaluated by feedback forms. Demographics and background information, online teaching and learning methods, benefits and challenges, technical support by the faculty were assessed from the parents through Google forms to know whether their wards benefited through online teaching.

Results: 85.9% of parents said that their wards were well engaged due to the online education system. 80.2 % of parents were satisfied with the institution's overall online education pattern. On a scale of 0 to 5, 33.9% of parents rated excellent for the faculty and management's efforts during online classes. 86.2 % of parents believed that their wards were benefited due to the online education system.

Conclusion: The new system of e-learning managed to share the material, conducted assignments, and discussed exceptional cases of dental specialties to retain knowledge among the dental students during this lockdown. All the parents were happy enough that their wards had benefited absolutely from the online education system.

Keywords: COVID-lockdown, Digital Learning, E-learning perception, Microsoft teams, Parents perceptions

Introduction:

E-Learning can be defined as using computer and internet technologies to deliver a broad array of solutions to enable learning and improve performance. E-learning is mainly divided into knowing and integrating its components into a professional organization, designing an e-learning course, creating interactive content, and evaluating the learning activities. [1,2,3]

Traditional learning methods are just teacher-centered, which transmits information or knowledge to the students. But Covid-19 infection resulted in a lack of collaboration and communication with students, resulting in a lack of knowledge among dental students needed in every work environment. [4,5,6]

Access this article online

Website: www.ujds.in

Quick Response Code

DOI: https://doi.org/10.21276/ujds.2021.7.3.8

As we all know, technology is changing continuously faster. Dental professionals need to cope with this advanced technology during pandemic situations like Covid-19 by shifting the traditional education system to advanced e-learning techniques. Hence, there is a need for all the dental

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Received : 27 August, 2021, **Published :** 31 December, 2021

How to cite this article: T, D. S. B., Guduri, D. V., Pasupuleti, D. M. K., Alla, D. R., N, D. R., & R, D. S. (2021). Parents perceptions and support for e-learning of Dental undergraduate students during Covid-19 lockdown. UNIVERSITY JOURNAL OF DENTAL SCIENCES, 7(3).

institutions to change to e-learning methodology for all the dental students to acquire and retain knowledge and skills to face the global advancement in every profession. [7,8]

All the parents were worried about their children's professional progression, and they had several doubts about the teaching and learning methods of their wards. Many health universities asked all the professional colleges to follow the online education system during lockdown to retain students' knowledge.

A team approach for the progression of the profession even in pandemic through e-learning methods promotes continuity of care that is comprehensive, convenient, cost-effective, and efficient. All the dental and medical institutes provided a high level of education and clinical training required for earning the degree. [9,10]

The medical profession's high academic standards faced challenges to overcome the pandemic situation in terms of quality education. Every Institute's motive became introducing online education system Worldwide. It is not only in the hands of medical sciences faculty and management but also parent's encouragement, and support played an important role in achieving academic goals at the end of the academic year. [11]

To prepare students for the safe and effective practice of modern oral health care and continue dental education during this pandemic, every Institute should have an efficient e-learning team to design and introduce an online classes system with sufficient course content effective teaching and learning practices. All the trained faculty on the online education system should develop the student course content and train in conducting online tests designed to improve students' cognitive abilities, attitudes, critical thinking, and logical reasoning. [12]

The study's main aim was to record parents' perceptions of e-learning methodology based on the advantages and challenges faced by their children in attaining knowledge during the lockdown.

Methodology:

E-learning system was introduced to all the students of dental colleges by the Dr. NTR University of Health Sciences during the lockdown period. The online education system was designed so that online software educational tools were introduced to the faculty and were well trained before the launch of online classes.

Before the online class, learning objectives were given, and the students were taught in detail through Microsoft teams. Activities were planned at the end of the course, and feedback was taken immediately after finishing the discussion topic.

All the online classes were interactive and planned in interesting ways so that students were active during learning. Teaching methods included keynote presentations, animations, videos on dental surgical techniques, etc. Activities were planned through Socrative and Edmodo Apps.

The data for this study were based on the parent's experiences with e-learning methodology. Responses from the parents on the online education system were taken through Google forms. Google forms, which assessed the parent's awareness, knowledge, and perceptions on their ward's online education, were based on demographics and background information, online teaching and learning methods, benefits and challenges, technical support by the faculty.

Results:

Only 283 parents responded to Google forms. The rest of the parents did not reply due to the network's unavailability and their busy schedule. All the responses were based on the following objectives. Demographics and background information, Online teaching and learning methods, Benefits and challenges, technical support by the faculty were assessed from the parents through Google forms to know whether their wards benefited through online teaching.

Demographics and background information:

28.3% of I BDS student's parents, 23.7% from II BDS, 22.3 % from II BDS, 25.8% from IV BDS student's parents responded to the Google forms created to know their wards benefits on online education system. When asked about the residence, 37.8% were from urban, 31.4% from semi-urban, and 30.7% from rural areas.

When asked about whether parents' wards were exposed to the online education system, 83.4% of parents responded that they were unaware of the technology and online system. All the parents were worried about how their wards will cope-up with the academics during this long lockdown period, which they were never faced during their education period. Parents' knowledge of the internet also plays a vital role in helping their wards during online education. Surprisingly, only 7.4% of parents know better about the internet facilities and knowledge towards the network.

Online Teaching and Learning methods by the Institute:

The online lectures sequence: 86.2% of parents responded that online lectures were well planned during the lockdown period. 13.1% responded that only sometimes it was well organized, and 0.7% was not satisfactory with the online work plan.

Online class presentation: 85.9% of parents said their wards were well engaged due to the online education system. 13.8% responded that only sometimes students were engaged, and 0.3% was not satisfactory about their wards' interest in online education.

Teaching/learning format during a lockdown: 80.2 % of parents were satisfied with the institution's overall online education pattern. 15.2% of parents were pleased with the online education system provided by the Institute.

The effort by the faculty & management into these online classes: [13] On a scale of 0 to 5, 33.9% of parents rated excellent, 50.9% rated very good, and 13.8% rated good, 1.1% rated satisfactory, and 0.4% rated low for the efforts taken by the faculty and management during online classes.

Benefits and Challenges:

86.2 % of parents believed that their wards were benefited due to the online education system provided by the Institute during the lockdown period. Whereas 11.7% said it was benefited only sometimes and 2.1% responded that this online education system was not useful for their wards knowledge.

The challenging situation in providing internet::

Only 20.8% of parents faced no challenges in delivering internet to their wards, whereas 62.2% of parents faced problems sometimes due to various simple reasons. But 17% of parents faced challenges in delivering internet throughout the lockdown period.

Dental Colleges with the quantum of e-learning::

When asked parents about the e-learning education provided by other colleges compared to the provision our management provided, 66.8% of parents said they never came across this type of guidelines e-learning system supplied to the students. 33.2 % of parents knew about the online education system, followed by even other dental colleges in India.

Technical Support:

When asked about the faculty's support towards technical issues during online classes, 90.8% of parents said that the faculty responded to the students' technical problems during the online education system.

All the parents were happy with the online education system followed by the Institute. There were no suggestions towards the steps we had taken to introduce and implement an e-learning system. All the highest percentage of responses were tabulated in Table:1.

Table: 1 Demonstrate parent's level of satisfaction with the online education system

Domain	Highest Level of satisfaction in %
Response to the feedback	28.3% of I BDS student's parents
Area of residence	37.8% were from urban
Awareness of online education system	83.4% of parents responded that they were unaware of online education before the launch by our Institute
The sequence of the online lectures followed	86.2% of parents responded that online lectures were well planned
Online class presentation	85.9% of parents said that their wards were well engaged
Teaching/learning format during the lockdown	80.2 % of parents were satisfied with the overall online education pattern
The effort by the faculty & management into these online classes On a scale of 0 to 5, 33.9% of parents rated excellent	On a scale of 0 to 5, 33.9% of parents rated excellent.
Benefits and Challenges	86.2 % of parents believed that their wards were benefited due to the online education system
The challenging situation in providing internet	62.2% of parents faced problems sometimes due to various simple reasons in providing internet
Dental Colleges with this quantum of e-learning	66.8% of parents said they never come across this type of guidelines and e-learning system than other institutions.
Technical support by the faculty	90.8% of parents said answered that the faculty responded to the technical issues

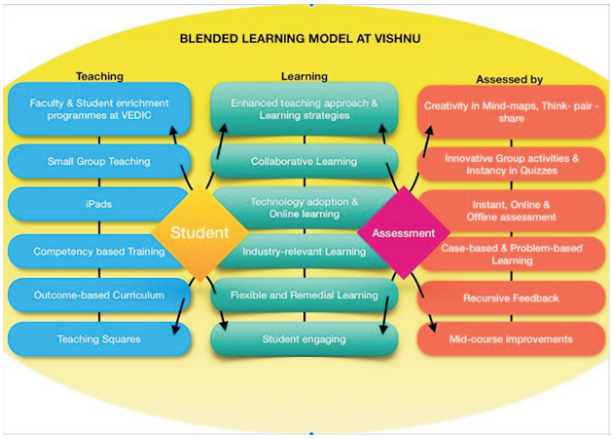
Discussion:

As the world we live in changes to embrace tech futures, how and what we teach in our education system will also be reshaped to keep up to date with the growing demands of the 21st century. [14] Thus, consistent changes demand alteration in teaching methodologies, including customization for a learner-first approach, technology adoption, evidence-based training, and multitasking ability building. [15, 16]

We have designed a curriculum based on DCI and NTRUHS and the regular curriculum, and the institution has included ethical and value-added courses. Since 2017, we have implemented technology in the teaching and learning process to increase millennial' student engagement.

To overcome the challenges during the lockdown period for student education and with parents' permission and interest towards their ward's academic continuity, our Institute adopted an e-learning system with the following design, students-centric. (Figure:1) .

Figure: 1 Demonstrate Blended learning Model followed in our Institute.



Alongside a combination of evidence-gathering and feedback from parents, students, and other professions will enable these plans to be successfully integrated into the education system. As our Institute rides the digital era wave, it is becoming easier for us to get connected with a global reach.

Mirza & Al-Abdulkareem surveyed Zayed University in 2011 to ascertain parents' perception of e-learning implications. The results showed that e-learning showed high social values and expectations. The parents of female students at Zayed University declared positively that e-learning had opened a new and improved learning path. [17]

Students' knowledge of high technology equipment became an important reason for boosting every profession's e-learning methodology usage. These requirements are following Coronato & Antonio, 2010. [18]

According to the World Health Organization, one of the major factors for reducing the quality of teaching is the inadequacy of the teaching methods and educational tools used for e-learning methods used in educational institutions. It is essential to all the teachers and universities to cope-up with the fast-growing technology globally, which helps to use advanced technology used for online education.[19,20]

Simulated hands-on training, small group discussions, online debates, instructional videos, summarized educational and motivation videos, educational replicas, along with useful keynote slides, etc. are some of the important tools to be known by all the academicians, which further helps in the transmission of knowledge efficiently with great interest to the students. It is essential for the faculty not to repeat the same topics of discussion during online education.

Conclusion:

As the focus shifted towards e-learning methods globally due to the present pandemic situation, the parent's support and encouragement all through these tough days made students retain their professional knowledge even during the pandemic. Salute to the faculty and management who taught the new teaching methods and shared experience with the students without breaking even in the pandemic. This study proved that parents are well satisfied with the E-learning methodology.

Recommendations:

The study's significance was to investigate parents' understanding and perception of supporting, encouraging, and adopting e-learning initiative and plan for increasing parents satisfaction levels on their wards knowledge with E-learning education system.

Conflict of interest: None declared

Source of funding: There is no source of funding or grant from any of the organization or institute or individual towards this study.

Ethical approval: Approved by institutional ethics committee on 02-05-20. IEC Ref No: IECVDC/20F/OP/Q15.

Authors contributions:

TSB conceived and designed the study, conducted research, provided research materials, and collected and organized data. VG conducted research, collected and organized data, analyzed and interpreted data. MKP provided research materials, wrote initial and final draft of article, and provided logistic support. RKA provided research materials, Provided logistic support, collected the data. RSR provided research materials, collected the data. RN provided logistic support, collected the data.

All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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