

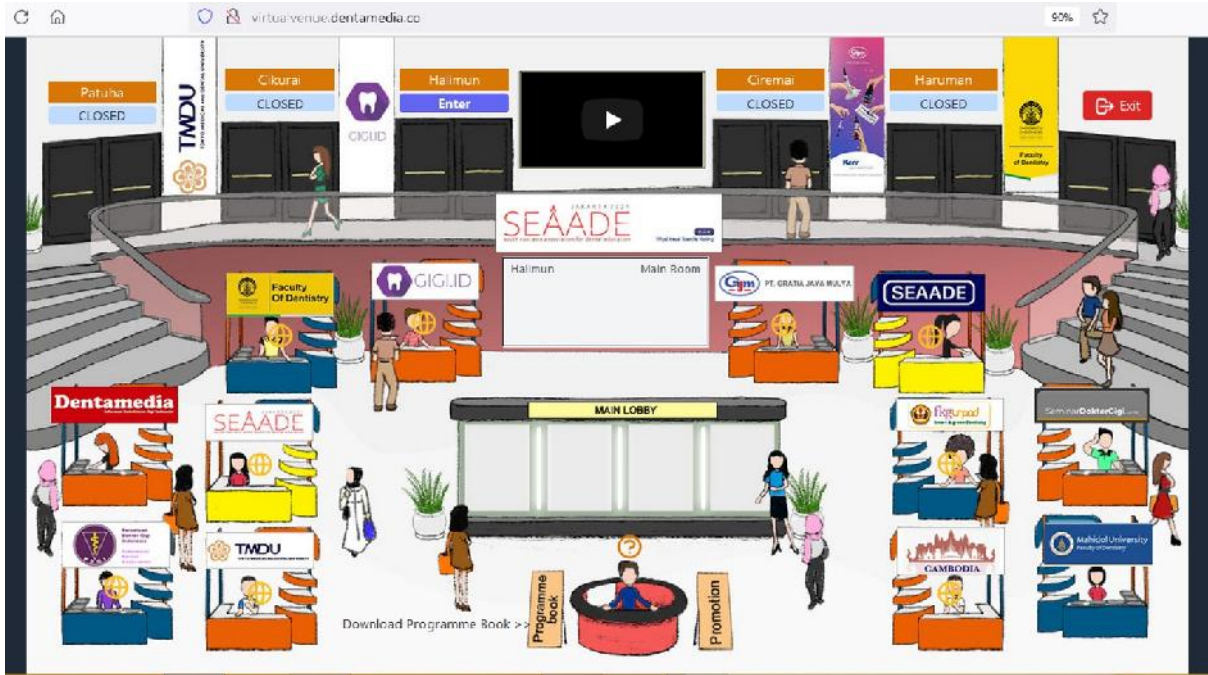
# PROGRAM BOOK

**The 32nd Annual Scientific Meeting  
of The South East Asia Association for Dental Education**

**"Transforming Dental Education Through Innovation,  
Learning Strategies During and Beyond the Covid-19 Pandemic"**

4 - 5 December 2021





## Contents

Message from President of SEAADE	4
Message from Chairperson of SEAADE 2021	5
SEAADE	6
Councils & Committee	8
Schedule of Pre-conference	9
Schedule of Conference - Day 1	10
Schedule of Conference - Day 2	13
Abstract	15



## Message from President of SEAADE

Dear Friends and Colleagues

It is my great pleasure to extend a warm welcome to you all to the 32nd South East Asia Association for Dental Education (SEAADE) Annual Scientific Meeting under the theme “Transforming Dental Education Through Innovation, Learning Strategies During and Beyond the Covid-19 Pandemic”.

As we all know, this year event have to be fully virtual due to the COVID-19 pandemic which does not allow us to enjoy the full meeting experience through on-site and in-person participation. However, with great appreciation to our host, the virtual 32nd SEAADE meeting has been successfully organized and proved that regardless of the situation, we are still able to find a way to continue our close collaborations and contribute to the improvement of Dental Education for the benefit of our students and graduates.

Therefore, the event this year will take place to highlight the difficult, yet remarkable, challenges that we now experience in dental education especially for Online learning. The lessons that we have learned and the innovations that we have created during the pandemic give us the opportunity to change for a better new normal in Dental Education.

I am looking forward to meeting with all of you virtually and I am certain that we will have a fruitful and enjoyable time together. Please stay safe, and take care of yourself and your loved ones. Hopefully, we will be able to meet each other face-to-face next year in Cambodia.

Thank you very much.

Emeritus Clinical Professor Passiri Nisalak  
President  
SEAADE



## Message from Chairperson of SEAADE 2021

Dear Friends and Colleagues

It gives me an immense pleasure to welcome all delegates, participants, sponsors to the 32nd SEAADE meeting to be held virtually from 4 to 5 December 2021 from Jakarta, Indonesia.

With the theme “Transforming Dental Education through Innovation - Learning Strategies During and Beyond the COVID-19 Pandemic”, hopefully we can more inspired to transform our dental education in the challenging time during COVID-19 Pandemic by bringing together dental educators, reseachers, clinical practitioners, partners in the industry and all the academe to discuss, and to exchange knowledge, share ideas and collaborate on new learning strategies and development the advancements to improve our dental education. It offers a broad scientific program, excellent keynote lectures, oral and poster presentation from various dental disciplines, workshops and scientific competition. SEAADE currently have more than 60 member schools, make it possible to share the latest knowledge and technologies.

On behalf of the organizing committee of the 32nd SEAADE meeting, I would like to invite everyone to participate in this important international event of the dental education. I looked forward to welcoming you to our virtual meeting from Jakarta

Sri Angky Soekanto, DDS, PhD  
President Elect, South East Asia Association for Dental Education  
Chairman, Local Organizing Committee

## SEAADE

The idea of forming an association of dental educators in the South East Asian Region arose from the need to improve communication between the various dental institutions. During the IADR (South East Asian Division) meetings in the late eighties this idea was discussed and accepted. The delegates who attended these meetings then, proposed that an association be set up to further develop the close relationship of the member countries in the education field. This will provide a more formal platform in which problems of dental education and research could be discussed.

The South East Asia Association for Dental Education (SEAADE) was formed in 1990 at the Singapore meeting of the 78th FDI World Dental Congress. The early proponents of this organization included many leading educators in the region and they formed the Founding Council of SEAADE in Singapore.

The Constitution was then drafted by Toh Chooi Gait and accepted at an annual general meeting the following year and with it the preparation of the First Edition of the Directory of Dental Schools and Research that was led by Keng Siong Beng and Teo Choo Soo. They continue to update the directory until the 4<sup>th</sup> edition that was published in 1999.

The Blue SEAADE logo with the ring surrounding the letters was designed by Keng Siong Beng and used to represent the close circular bond among the association of dental schools.

The formation of the South East Asia Association for Dental Education (SEAADE) created a milestone for dental education and research in this part of the world. Since its inception in 1990, the association has grown from strength to strength with more and more member institutions joining each year and annual scientific meetings held in various countries in the region.

In year 2001 President Toh Chooi Gait (Malaysia) together with FC Smales (Hong Kong) and Krassanai Wangrangsimakul (Thailand) formed a steering committee to develop a school visit program with a self-reporting analytical tool to introduce the SEAADE Peer Review and Consultation Program. The first SEAADE Peer Review and Visitation was led by then Chair of the Peer Review and Consultation Program, Professor Toh Chooi Gait to Centro Escolar University, Philippines in July 2005. Professor FC Smales served as the rapporteur and other panel members included Professor Margaret Comfort and Associate Professor Keng Siong Beng. Subsequent visits were conducted in University of Indonesia (November 2005), Universiti Sains Malaysia (August 2006), Mahidol University (August 2007), Sultan Agung Islamic University (October 2012), International Medical University (December 2014), Our Lady of Fatima University College of Dentistry (Jan 2015), University of the East College of Dentistry (June 2015), University of Medicine and Pharmacy at HoChiMinh City (July 2017), Hue University of Medicine and Pharmacy (July 2017) and Hanoi Medical University (July 2017).

Year 2006 was also significant as the first SEAADE – GC sponsored student competition in Preventive Dentistry was inaugurated with the meeting in Jakarta. The keenness of the competition was reflected in the many participants from the dental schools. The standard of presentation was high and Dental Schools soon earmarked this as a highlight of student

research activity. The GC Asia Dental continued to support this very worthwhile annual event until year 2016. This event was initiated by President Rahimah Abdul Kadir during her term of office and continued under her purview until 2016.

During the term of President Leung Wai Keung in 2011 and 2012 a leadership training program known as The Dental Leadership Experience Program DLEP was instituted between SEAADE and Colgate. The program for Deans and Heads of institution was held at the 22nd Annual Meeting in Singapore in 2011 and a similar programme was conducted at the 23<sup>rd</sup> Annual Meeting in the Hong Kong in 2012.

The SEAADE is affiliated to IFDEA (International Federation of Dental Educators Association).

The SEAADE annual meetings are usually held back to back with meetings of the IADR (SEA Division) as both associations attract similar participants i.e. the dental educators who are also active in research. During the years when the IADR (SEA Division) would join the hosting of IADR (General Session) or IADR (APR) meeting in the region, SEAADE would hold its annual scientific meetings. Since its beginning in Singapore, annual meetings have been held in Hong Kong (1991), Taipei (1992), (Kuala Lumpur (1993), Manila (1994), Pataya (1995), Jakarta (1996), Phuket (1997), Jakarta (1998), Singapore (1999), Taipei (2000), Kuala Lumpur (2001), Hong Kong (2002), Ho Chi Minh City (2003), Koh Samui (2004), Malacca (2005), Jakarta (2006), Bali (2007), Manila (2008), Chiang Mai (2009), Taipei (2010), Singapore (2011), Hong Kong (2012), Bangkok (2013), Kuching (2014), Bali (2015), Ho Chi Minh City (2016), Taipei (2017), Danang (2018), Kuala Lumpur (2019).

## **Councils & Committee**

### **COUNCILS**

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Sri Angky Soekanto, DDS, Ph.D - President Elected (Indonesia)

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Prof. Rahimah Abdul Kadir - Ex-officio Member (Malaysia)

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Prof. Sunil Muddaiah - Country Representative (India)

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Assoc. Prof. Sri Angky Soekanto - Chairperson

Assis. Prof. Citra Fragrantia Theodorea - Secretary

Assis. Prof. Lisa Rinanda Amir - Scientific

Assis. Prof. Melissa Adiatman - Program



## Schedule of Pre-conference

Friday, December 3rd 2021

Time (GMT+7)	Cikurai Room Virtual Venue					
	Cikurai BOR 1	Cikurai BOR 2	Cikurai BOR 3	Cikurai BOR 4		
08.00-08.30	Exhibition Opening					
08.30-09.00	Workshop Opening Ceremony					
09.00-11.00	Workshop : Caries Management Using ICDAS And ICCMS Technology (Prof. Rahimah, Dr. Yolanda)	Workshop : Challenge-based Learning in the Community (Prof. Toh Choi Gait, Prof Khoo Suan Phaik)	Workshop : Teledentistry for Dental Education And Social Service (Dr. Armelia Sari Widyarman)	Workshop : Teaching Cariology in the dental undergraduate program (Dr Ollie Yu)		
11.00-13.00	Break					
Time (GMT+7)	Cikurai Room Virtual Venue			Ciremai Room Virtual Venue		
	Cikurai BOR 1	Cikurai BOR 2	Cikurai BOR 3	Ciremai BOR 1	Ciremai BOR 2	Ciremai BOR 3
13.00-13.30	Workshop : Learning And Assessment Strategy On Teaching Evidence-Based Dentistry In Dental Education (Dr. Dani Rizali Firman)	Workshop : The design and evaluation framework of serious games in dental education (Dr. Kawin Sipiaryuk)	Workshop : Rubber Dam As Standard Isolation In Dental Education (Dr. Aditya Wisnu Putranto)	Annual General Meeting		
13.30-13.45					Plenary Dean's Meeting	
13.45-14.45				Dean's Meeting Commission A	Dean's Meeting Commission B	Dean's Meeting Commission C
14.45-15.00					Plenary Dean's Meeting	

## Schedule of Conference - Day 1

Saturday, December 4th 2021

Time (GMT+7)	Halimun Room Virtual Venue			
07.30-08.00	Exhibition Opening			
08.00-08.30	Opening Ceremony			
08.30-09.40	Keynote Speaker Prof. Ilze Akota – ADEE President			
09.40-10.40	Online/Blended Learning In Dental Education During The Covid-19 Pandemic: What Have Learnt So Far? (Dr. Supachai Chuenjitwongsa)			
10.40-10.40	Break			
10.40-11.40	Transforming Assesment: The Role of Portfolio Development And Assessment Within Programmatic Assessment (Dr. Diantha Soemantri)			
11.40-12.40	Serious Games in Dental Education: The Promising Learning Tools In The Pos- Covid-19 Era (Dr. Kawin Sipiwaruk)			
12.40-13.00	Break			
Time (GMT+7)	Patuha Room Virtual Venue	Cikurai Room Virtual Venue	Ciremai Room Virtual Venue	Haruman Room Virtual Venue
13.00-13.15	Influencing factors of examiner: examples from certificated orthodontists board examination (Dr. Tai-Chang Chen)	Perception and Experience of Cambodian Graduates from Overseas and Local Postgraduate Dental Education (Dr. Seng Mawin)	The Use of Mobile Text Messaging for Improving Oral Health Behaviors of Students at University of Puthisastra (Dr. Soparith Soeun)	2021 SEA ADEE STUDENT COMMUNITY ENGAGEMENT COMPETITION 11 FINALISTS' PRESENTATIONS 1. Tadika Visit (Muhammad Zuheem Hamzah) 2. Your Oral Health is Our Priority Despite this Pandemic's Uncertainty (Francine Jane C. Mesinas) 3. MAHSA University Virtual Community
13.15-13.30	Student Perceptions Following Introduction of Dental Clinical Competency Assessments at the University of Puthisastra (Dr. HORN Rithvitou)	Hybrid Learning Model for International Lasers in Dentistry Education (Dr. Sajee Sattayut)	Trace the Spread: An educational board game for odontogenic orofacial space infections (Dr. Dittakul Pojmonpiti)	

13.30-13.45	Online assessment for the final-year dental students in Vietnam: challenges and opportunities (Dr. Tri Hoang Vu)	The formative feedback for learning in students' perspective (Dr. Juthamart Sujitrom)	The Use of Video Demonstration in Teaching Restorative Dentistry (Dr. Joseph Acosta)	Project 2.0 - VCP 2.0 (Tan Guang Ping) 4. The 3-Month Toothbrush (Phan Thien Nga) 5. Motion Comics As Mode Of Imparting Good Oral Hygiene Among Children Aged 3-5 (Galiste, Angelika Kaye V) 6. Gigi Sihat, Senyuman Menawan - Healthy Teeth, Charming Smile (Nurul Nadiah Mohd Shukor)
13.45-14.00	Mini Osce Methods as Innovation for Preclinical Students Dental Skill (Dr. Fani Pangabdian)	Dental Student Perceptions of the Healthy Kids Cambodia Project (Dr. Meng Bunleng)	Is a Hybrid Combination of E-learning better than Conventional Lecture for ICDAS Training? (Dr. Mohd Faiz Nasruddin)	
14.00-14.15	Innovation-integrated Community-Based Learning in SCD education during the Covid-19 pandemic (Dr. Aminda Faizura Omar)	Use of Computer Simulation in Dental Training with Special Reference to Simodont (Dr. Angie Leung)		
14.15-14.30	Tooth Decay Prevention Education Program through Zoom Meetings in the Era of the Covid-19 Pandemic (Dr. Talitha K Ardinda)	Virtual Simulation of Clinical Procedures as an Innovation to Enhance Educational Outcomes in Clinical Students (Dr. Chaterina Diyah Nanik)		
14.30-14.45	Social Smoking: A Case Study in the Dental Practice (Dr. Nurul Asyikin Yahya)	Use of intraoral scanner as students' learning aids in indirect restoration course: Teachers' perspectives (Dr. Ollie Yiru Yu)		
14.45-15.00	Differences in caries experience, oral hygiene status, and sCD14 level before and after oral hygiene instruction (Dr. Dudi Aripin)	The effects of drilling speed on tactile sensation training in classifying bone quality (Dr. Tong-Mei Wang)		
15.00-15.15	Innovations and Strategies in Teaching Endodontics in a Purely Online Class During the Covid 19 Pandemic (Dr. Iluminada Vilorio)	Can Preprocedural Mouthrinses Reduce SARS-CoV-2 Load in Dental Aerosols? (Dr. Priscilla Tanvis)		
15.15-15.30	Mixed Video Conference and Virtual Discussion as Innovation for Small Group Discussion During COVID-19 Pandemic (Dr. Meinar Nur Ashrin)	Failure Rate of Extra-Alveolar Bone Mini-Implant in Orthodontic: Systematic Review (Dr. Ngo Viet Thanh)	2021 SEAADE STUDENT COMMUNITY ENGAGEMENT COMPETITION 11 FINALISTS' PRESENTATIONS 7. The Dental Home Project: A Step to	

15.30-15.45	Blended Learning with Rolling Group Modification as an Innovation for Dental Co-Assistant in Professional Degree During COVID-19 Pandemic (Dr. Aulia Dwi Maharani)	Setting Time Improvement of Alginate Impression for Dental Students by Addition 2% Trisodium Phosphate (Dr. Zwista Yulia Dewi)		Brighter Smiles for Escuela Pia Preschoolers (Christine Joyce D. Hautea)
15.45-16.00	Implementation Upgrading and Updating Oral Physiology Module During a Pandemic (Dr. Kartika Indah Sari)	Antibacterial Activity and Fluoride Release of Chitosan-Modified Glass Ionomer Thermo-cured (Dr. Cheryl Vania)		8. Promoting Awareness of Impacted Wisdom Tooth via Social Media (Sarah Batrisyia Binti Ridzwan)
16.00-16.15	Validity of online dental final examination during the COVID-19 pandemic (Dr. Hoang Trong Hung)	Assessment Effect of Low-Level Laser Therapy After Impacted Mandibular Third Molar Surgery (Dr. Kim Thi T. Nguyen)		9. A retrospective clinical study on the failure and associated factors of posterior light-curing pit and fissure sealant in a pediatric dental clinic setting over 12 years: a multilevel analysis (Siriwat Tiatrakul)
16.15-16.30	Special Care Dentistry education during COVID-19 pandemic- the impact of online peer learning (Dr. Tun Yasmin Iffah)	Effectiveness of Low-Level Laser Therapy in Recurrent Aphthous Stomatitis Treatment (Dr. Pham Le Cam Tu)		10. Knowledge and Utilization of Sugar substitutes among the subjects attending the Dental College (Samantha Ganapathy)
16.30-16.45	Student Literature Review Project: A Coping Strategy on COVID-19 Pandemic Education (Dr. Kristanti Parisihni)	The Efficacy of Diode Laser Therapy in Chronic Periodontitis (Dr. Tuan Nguyen Minh)		11. Beautiful Smile Begins at Childhood (Vanitha Subramaniam)
16.45-17.00	Adaptation of Dentistry Learning during the Covid-19 Pandemic (Qualitative Study) (Dr. Nyka Dwi Febria)	A Comparison of Angiogenesis in The Bone Healing Process of Wistar Rats After Implantation Of 20, 40, And 60 Mesh Tooth Derived Bone Graft Material (Dr. Malianawati Fauzia)		
17.15-19.00	Break			
Time (GMT+7)	Halimun Room Virtual Venue			
19.00-21.00	Cultural Night			

## Schedule of Conference - Day 2

Sunday, December 5th 2021

Time (GMT+7)	Halimun Room Virtual Venue	
07.30-08.00	Exhibition Opening	
08.00-09.00	What The Future of Dental Education Might Look Like? (Dr. Cortino Sukotjo)	
09.00-10.00	Preparing Future Dental Graduates for Comprehensive Management of Patients With Special Health Care Needs (Dr. Mas Suryalis Ahmad)	
10.00-13.00	STUDENT COMMUNITY ENGAGEMENT COMPETITION : 3FINALISTS' PRESENTATIONS	
13.00-14.00	Building Special Dental Care Capacity in Asia- Development on An Undergraduate Programme (Prof. Raman Bedi)	
Time (GMT+7)	Patuha Room Virtual Venue	Cikurai Room Virtual Venue
14.00-14.15	Core clinical competencies for dental graduates in Taiwan (Dr. Eddie Lai)	Making Dental School Health Systems Disaster-proof: A National Survey among Malaysian Dental Deans (Dr. Haslina Rani)
14.15-14.30	Student's and Faculty's perceptions on integration of peer assisted learning in the dental curriculum (Dr. Aida Nur Ashikin)	Redesigning Curriculum in the Covid-19 Pandemic Era to Achieve Vision of Faculty of Dentistry Universitas Hang Tuah (Dr. Kharinna Widowati)
14.30-14.45	Workforce Survey of Young Cambodian Dentists One Year after Graduation (Dr. Kong Kalyan)	The readiness and preparedness among dental faculty for the online final exam for students (Dr. Phuong Thi-Thanh Nguyen)
14.45-15.00	Comparison of Students' Perspectives toward Internationalization between Thai and International Dental Programs (Dr. Aimwadee Kiatsukasem)	On-Line Training in Soft Skills Developmental Among Students in School of Dentistry Universitas Muhammadiyah Yogyakarta During Pandemic Covid-19 Era (Dr. Indri Kurniasih)
15.00-15.15	COVID-19 Pandemic's Impact on Eating Habits among Dental Students in Indonesia (Dr. Asyurati Asia)	Predicting Dental Students' Interest To Use Teledentistry, An Application Of The UTAUT Model (Dr. Hania Azzahra Dewanto)

15.15-15.30	Motivations and Academic Performance of Dentistry Students (Dr. Irish Anthony Mascarenas)	Knowledge, Perceived Risk, and Preventive Behaviours Amidst COVID-19 Pandemic Among Dental Students in Malaysia (DrNur Hanisah Ismail)
15.30-15.45	Effect of Stress on Clinical Performance in Dental Students (Dr. Patchara Pichitpreecha)	Relationship of Grit and Resilience to Indonesian Dental Students' Academic Achievement (Dr. Joyce Carol)
15.45-16.00	Relationship between Online Learning during the COVID-19 Pandemic to Academic Burnout of Undergraduate Dental Students Universitas Indonesia in 2021 (Dr. Hanatasya Tania)	Introduction of Medical Health Screening in UP Dental Clinic (Dr. Leang Sokchea)
16.00-18.00	Award Competition Announcement	

## Abstract

# Innovation-Integrated Community-Based Learning In Scd Education During The Covid-19 Pandemic

Aminda Faizura, Omar, Tun Yasmin Iffah, Mohd Suria Affandi, Mas Suryalis Ahmad, Mohd Isyrafuddin Ismail, Ilham Binti Wan Mokhtar

## ABSTRACT

**Introduction:** The concept of SULAM (Service-Learning Malaysia-University for Society), which advocates for service/community-based learning, was developed by the Ministry of Higher Education, as one of their High-Impact Educational Practices. This concept was adopted in the teaching and learning of Special Care Dentistry (SCD) at Universiti Teknologi MARA, via the conduct of group innovation project. **Objectives:** This study was undertaken to analyse the student's perceptions, and the impact, of SULAM teaching for SCD training during the COVID-19 pandemic. **Methods:** All final year dental students (n=90) were divided into 8 groups to develop innovative products for different categories of SCD patients. At the end of the project, students were invited to answer a validated online feedback survey on their perceptions of the SULAM activity. Quantitative data were analysed using SPSS for frequency, while qualitative data were analysed via thematic analysis. **Results:** A total of 82 students (Response rate= 91.1%) responded to the survey. Most students agreed that the activity was interesting (90.2%), improved their understanding of SCD (89.0%), allowed interaction (90.2%), supported sharing of ideas and experience (97.6%), encouraged student-lecturer interaction (95.7%) and enhanced knowledge integration and application (93.9%). Nevertheless, half of them (53.7%) felt neutral about having an increased workload from this activity. Students expressed that the learning activities were beneficial in enhancing creativity and innovation, improving knowledge, and understanding of SCD, instilling interest and positive attitude towards learning SCD, and encouraging teamwork. However, a few students noted facing some limitations in completing their projects (technological challenges and reduced physical access to purchase materials). There were differing perceptions in terms of time and financial commitments, as well as supervisors' and patients' involvement during the project development process. **Conclusion:** Students perceived that the SULAM-based innovative project was beneficial in multiple aspects of SCD training during the COVID-19 pandemic.



## Special Care Dentistry Education During Covid-19 Pandemic- The Impact Of Online Peer Learning

Tun Yasmin Iffah Mohd Suria, Aminda Faizura Omar, Ilham Wan Mokhtar, Aida Nur Ashikin Abdul Rahman, Mas Suryalis Ahmad

### ABSTRACT

**Introduction:** COVID-19 has caused limitations in the training of dentistry, including in the field of Special Care Dentistry (SCD), which concerns with the management of patients with disability and special health care needs. **Objectives:** This study was undertaken to analyse the impact, and students' perceptions, of online peer learning (OPL), developed as an alternative and innovative approach to SCD training during the COVID-19 pandemic. **Methods:** The OPL session was conducted by two postgraduate students in SCD, on a group (n=90) of final year undergraduate dental students of Universiti Teknologi MARA. The session was supervised by two lecturers specialising in this area of dentistry. A vetted online pre- and post- intervention quiz was conducted to measure impact on students' understanding of the subject. An online validated feedback survey was distributed after the whole session to gauge students' perceptions of the learning activity. Quantitative data were analysed via paired t-test (significance level,  $p < 0.05$ ). Qualitative data were analysed via thematic analysis. **Results:** A total of 68 undergraduate students (Response rate= 75.6%) completed the quiz and 81 (Response rate= 90.0%) of them answered the feedback survey. For the quiz, there was a significant difference in the students' total mean scores, and mean scores of 7 (out of 10) individual items representing the different facets of patient care. A high percentage of students (86.5% to 97.5%) indicated positive reviews in multiple aspects of the OPL session. Students perceived that the OPL session was successful in terms of its 1) content discussed during presentations by both postgraduate and undergraduate students, 2) preparation process experience that encourage teamwork and information-gathering, 3) technology used in teaching, and 4) proactive involvement of lecturers (specialists) in giving feedback to ensure validity of matters discussed. **Conclusion:** Students provided positive response towards implementation of OPL as an innovative approach to the teaching and learning of SCD during the COVID-19 pandemic.

**Keywords:** Peer learning, special care dentistry, training, pandemic

# Core Clinical Competencies For Dental Graduates In Taiwan

Eddi Lai

## ABSTRACT

**Introduction:** Due to the extensive scope in terms of learning for dental students, coupled with regional variations, a common consensus of the educational objectives has been hard to reach. Objectives: The aim of this study is to set out clinical dental education objectives which serve as goals to measure learning effectiveness and to review their use in current curricula. Method: 12 voluntary faculty participants from the School of Dentistry, National Taiwan University classified the 22 dentistry clinical core competencies into two classifications, such as operational and non-operational capacity measures. These were then prioritized in order of importance by the method of nominal group technique( NGT

**Results:** The top 3 non-operational capacity measures are: intellectual inquiry and readiness to respond, treatment planning, systemic dental disease handling; the top 3 operational capacity measures are: tooth-filling, infection control, and needle protection. Conclusion: In order to provide helpful future reference to the design of clinical courses and clinical assessment of dental students, more dental teaching faculty from other dental school should be invited. Further research and discussion on designing a comprehensive curriculum and establishing appropriate assessments with validity are deemed necessary.

# The Use Of Video Demonstration In Teaching Restorative Dentistry

Dr. Joseph M. Acosta, Dr. Maria Lourdes E

## ABSTRACT

To improve the effectiveness and quality of teaching among dental students, innovative methods such as video demonstrations have been proposed. This study determined the effectiveness of video demonstration as a method of instruction in teaching restorative dentistry. The pre-test, post-test control and experimental group design was utilized in this study. The study involved all the 30 preclinical Dentistry students enrolled in the course Restorative Dentistry 1 for the First Semester, Academic Year 2019-2020 at the University of Baguio School of Dentistry. The level of performance of students were recorded before any lecture and intervention made (Pretest), after which utilization of traditional face-to-face lecture and live demonstration were implemented to the control group while face-to-face lecture and video demonstration were implemented to the experimental group. Both groups performed a practical examination and were assessed in relation to their performance on their cavity preparation (Post-test). The scores of the experimental and control groups were compared using the test for independent samples. The pre-test level of performance of students in the control group and experimental group were both poor. This indicates that they cannot execute proper cavity preparation for Class II and that they are in need of thorough knowledge about the different features as to outline form, resistance form, retention form, and finishing of the cavity walls. The post-test level of performance of students in the control group was poor and the experimental group was fair. The experimental group got a higher mean difference than the control group. This means that considering the mean differences between the pre-test and post-test of the two groups, the experimental group performed better. This proves that the use of video demonstration as a means of instruction in cavity preparation in restorative dentistry is effective in enhancing students' performance.

**Keywords:** Restorative dentistry, video demonstration, blended learning, face-to-face lecture, Class II, cavity preparation

# Social Smoking: A Case Study in the Dental Practice

Dr. Nurul Asyikin Yahya

## ABSTRACT

Research show that social smokers generally categorize themselves as non-smokers when asked by family, friends, or healthcare providers. Since they do not view their smoking as a marker of personal addiction, social smokers may fail to recognize the health risks associated with their tobacco use. Despite being light smokers (< 10 cig/day), they are still associated with considerable harm, including increased risk of CVS disease, cancer, respiratory tract infections, osteoporosis, and impaired fertility. This report presents a case study of a 30-year-old male social smoker seen in the dental clinic for the management of smoking cessation. The 5A's (ask, assess, advice, assist, arrange) behavioural intervention on smoking cessation was conducted on this patient. A personalise advice was given to the patient based on their general and oral health assessment and tobacco use assessment and readiness to quit. Patient was assisted with a quit plan and was given counselling. After 2 follow-ups, the patient quit cold turkey for 5 months since the first counselling. Educate on the dangers of secondhand smoke rather than on personal health risks would be a suitable intervention for social smokers.

# Motivations And Academic Performance Of Dentistry Students

**Dr. Irish Anthony G. Mascarenas, Dr. Joseph M. Acosta**

## ABSTRACT

Academic performance of students is the end-product or outcome of all educational endeavors. The outcome based paradigm of education in the 21<sup>st</sup> century has continued to challenge all those involved in the educational system. With the increasing diversity of students pursuing the dentistry program, there is a growing interest in the factors predicting academic performance. This study was conducted to determine the relationship between academic performance and motivation, since motivation has been identified as one of the potent factors that affect academic performance. This study made use of descriptive- correlational research design. The students of the School of Dentistry, University of Baguio, who were enrolled during the first semester of SY 2019-2020 composed the population of the study. A total of 490 Dentistry students composed the population of the study. The data-gathering tool for motivation was the university student motivation questionnaire, which was validated and reliability-tested. The grade point average (GPA) of the students was used to determine their level of academic performance. The very high level of motivation of the Dentistry students reflects a purposeful motive-driven school environment in the School of Dentistry. The good level of academic performance indicates that the dentistry students are in the right direction towards the completion of their degree program, however, the level of good is not enough, and must be raised to a higher level. The slight level of coefficient of correlation between motivation and academic performance indicates that there exists a weak relationship between motivation and academic performance. As such, a high level of motivation does not necessarily produce a high level of academic performance.

**Keywords:** Motivation, Academic Performance, Intrinsic motivation,

## Use Of Intraoral Scanner As Students' Learning Aids In Indirect Restoration Course: Teachers' Perspectives

Grace Ching Kiu Ip, Stephanie Sze Wing Ng, Hollis Haotian Chai, Ollie Yiru Yu, Chun Hung Chu

### ABSTRACT

**Introduction:** This study aimed to explore the teachers' perceptive of the use of intraoral scanners (IOS) as students' learning aids in the indirect restoration course in the simulation laboratory. **Methods:** 10 IOSs were introduced in the indirect restoration course as the learning aids of 80 year-3 dental students in the simulation laboratory in 2020-2021. Students scanned their tooth preparations and got reports on their preparation as feedbacks. On the completion of the course, 6 teachers who taught the indirect restoration course were invited to join a semi-structured in-depth interview. The interview was recorded and transcribed. The transcribed data were analyzed. **Results:** The teachers agreed on the introduction of IOS in the simulation lab because of the increasing popularity of digital intra-oral scanners in clinical use. As the students' learning aid, the IOS provided an objective and accurate measurement for students' self-evaluation of their tooth preparation. The generated reports could be a supplementary guideline for modification of the preparation and facilitate communication with students. However, the interpretation of the scanning results required clear guidance from the teachers. The use of IOS is time-consuming because students required extra time to scan their tooth preparations. In addition, the IOS is generally expensive and the number of the IOS was not enough for the use of the whole class. **Conclusion:** IOS is a promising learning aid for dental students from the teachers' perspective. It supports students' self-directed learning, self-evaluation and facilitates the teaching process. However, several obstacles on scanning procedures, software, reports, and the accessibility of the IOS need to be overcome for the application of IOS in the dental undergraduate program.

## Effect Of Stress On Clinical Performance In Dental Students

Pichitpreecha P, Sritrirasri P, Lertsomphol S, Vivatbutsiri P

### ABSTRACT

**Objective** To examine effects of stress on clinical performance and its affecting factors in clinical dental students. **Methods** 179 students from four public dental schools in Bangkok metropolitan region responded to an online questionnaire consisting of demographic data, PSS, modified DES, and clinical GPA as clinical performance. The data were analyzed by ANOVA, T-test, Pearson correlation and Ordinal logistic regression. **Results** The most stressful domain was instructors. Internal factors, faculty and administration, workload and performance pressure were significantly related to clinical performance ( $p<0.05$ ) comparing the fair group with the good and excellent groups. Psychiatric consultation, instructor factors, internal factors and workload were predictive of the perceived stress level. **Conclusion** The stress in dental schools might worsen students' clinical performance and increase their perceived stress. Therefore, mental status should be prioritized to improve students' competencies.

**Keywords:** Clinical performance, dental environmental stress (des), dental students, perceived stress scale (pss), stress

# Innovations And Strategies In Teaching Endodontics In A Purely Online Class During The Covid 19 Pandemic

Illuminada I. Vilorio

## ABSTRACT

**Introduction:** The outbreak of Covid19 in the Philippines last January 2020 made a very great impact not only in the health of the people but also in the educational system. The universities were closed and lockdown in different places has been implemented by the government. At first, everybody thought that it will only take a week until the WHO declared it as pandemic on March 11, 2020 (1). University of the East likewise followed the order and since then, face to face classes has been suspended up to the present. The university is already on its last two weeks of classes before the end of the semester at that time, thus final examinations were given online using the Canvas platform. Students and faculties had difficulty in doing such, since everybody was new with the use of Canvas, nevertheless, the semester ended well. With the rising of the cases all over the country, the start of the classes has been postponed from June to August. The President of the Philippines declared a purely online class all over the country from elementary to tertiary level. The suspension of the face-to-face classes has never been experienced before thus, putting the educational system in a dilemma on how to conduct classes on a purely online class. The situation calls for innovations and strategies to be able to attain the learning outcomes of the students. Endodontics is a subject that requires actual checking of the procedures from obtaining extracted teeth, pre-operative radiographs, rubber dam isolation, diagnostic tests, access cavity preparation, the long step by step procedure of the cleaning and shaping, obturation and the radiographs to be obtained during the procedure. For better understanding of the procedure, an actual demonstration of the procedures has been done in class during the face to face, which is not possible during the online class. All of these posed a problem on how these procedures will be taught and checked. The objective of this lecture is to share the best practices done in teaching endodontics in a purely online class through the introduction of alternative method of teaching and checking.



## Student's And Faculty's Perceptions On Integration Of Peer Assisted Learning In The Dental Curriculum

Aida Nur Ashikin Abd Rahman, Mohd Amir Mukhsin Zurin Adnan, Nik Mukhriz Nik Mustapha, Mas Suryalis Ahmad

### ABSTRACT

**Background:** Peer assisted learning (PAL) is introduced in the dental curriculum of Universiti Teknologi MARA as one of the learning interventions for adult learners (andragogy). It involves students learning from their senior colleagues and/or postgraduates trainees, under specialist supervision, through clinical observations, practical demonstrations or peer-led seminars. **Objective:** This study aimed to investigate students' and Faculty' perceptions of PAL, in terms of its benefits, challenges and recommendations for implementation. **Methods:** This study involved 1) a focus group interview of clinical dental students representatives who participated in PAL sessions; and 2) an interview of academicians involved with PAL as supervisors. Qualitative data was analysed via thematic analysis involving open and close coding, followed by identification of emerging themes. **Results:** From the students' perspectives, it was cited that PAL enhanced their understanding of patient care in various areas such as 1) behavioural guidance, 2) communication strategies, 3) treatment planning, and 4) time management. They also noted that PAL exposed them to 1) the different clinical specialities, and 2) specialised techniques exercised by other clinicians. From academicians' perspectives, it was noted that PAL was beneficial in 1) providing educational experience in clinical patient care; 2) enhancing professional partnerships between students and their peers; and 3) reducing human resource burden in the Faculty. However, students expressed concern over the reduced clinical time to complete their own requirements, as their academic sessions have been limited by the COVID-19 pandemic. **Conclusion:** PAL is a useful educational approach that may be potentially integrated into the dental curriculum to improve students' learning experience and clinical competency.

# The Effects Of Drilling Speed On Tactile Sensation Training In Classifying Bone Quality

Tong-Mei Wang, Yi-Hao Lan, Li-Deh Lin

## ABSTRACT

**Purpose:** The aim was to evaluate the effects of drilling speed on tactile sensation to classify bone quality. **Materials and Methods:** 30 board-certified dentists with few implant surgery experiences were recruited (mean age: 27.3 years). The protocol was approved by NTUH IRB committee. Each participant drilled the artificial bone blocks (Sawbones®) with a new 2-mm twist drill to 10 mm depth. The drilling resistance was reported by using a 100 mm visual analog scale (VAS, 100 = drilling resistance on 50pcf block, 0 = no drilling resistance). Each participant had 1 test containing 4 rounds with randomly assigned drilling speed: 500, 1000, 1500, or 2000 rpm. In each round, 7 blocks with densities of 5pcf, 5pcf, 10pcf, 10pcf, 15pcf, 15pcf, and 30pcf were tested in a random sequence. Drilling resistance was reported immediately after each drilling. **Results:** Drilling speeds affected the participants' ability in bone quality classification. With lower drilling speeds (500, 1000 rpm), higher accuracy was achieved in the classification, especially in low-medium density blocks (5pcf and 10pcf) ( $p < 0.05$ ). **Conclusions:** The results suggested that operators may differentiate bone quality better with a 1000 rpm drilling speed at most surgical sites and 500 rpm at maxillary posterior area.

## The Formative Feedback For Learning In Students' Perspective

Juthamart Sujitrom, Pornpattra Chulamane, Nongnapat Suppawawisit,  
Anjalee Vacharaksa, Chaiwat Maneenut

### ABSTRACT

Feedback should facilitate students learning and improvement towards desirable performance. However, learning from feedback remains to be difficult for undergraduate students. This study reported students' perception of using feedback, and identified the area to be improved in the process. The 4th (Y4) and 5th-year (Y5) dental students (total=192) responded to the questionnaire on the day of procedure experience. Participants (52.83%Y4, 81.71%Y5) understood the feedback, while some (30.19%Y4, 10.98%Y5) were partly unclear, and some (15.09%Y4, 4.88%Y5) did not understand the given feedback. When the feedback was given by telling, showing, and combination, students reported 66.67%, 66.67%, and 75.64% understanding, respectively. Some participants (60.38%Y4, 75.61%Y5) reported that they can use the feedback in future, but many were unsure, or could not use the feedback. The open-ended answers revealed that students perceived that the feedback was more effective when it was given in combination of telling and showing. A panel discussion was organized to obtain the experts' opinion on the feedback process, then approach for improvement was reported.

## COVID-19 Pandemic's Impact on Eating Habits among Dental Students in Indonesia

Asyurati Asia, Tri Erri Astoeti, Widiyanto, Sudhana, Armelia SariWidjarman

### ABSTRACT

The COVID-19 pandemic has a great impact on changes in lifestyle, potentially causing adverse changes in eating habits. The aim of this survey was to compare aspects of behavior regarding dietary habits between males and females among dental students. Methods: A cross-sectional study was conducted using an online questionnaire about behavior among 351 undergraduate dental students in Universitas Trisakti, Indonesia. Chi-Square tests were applied to perform a comparison. Results: Based on statistical analysis, unadjusted odds ratios (95% Confidence Intervals) of "Did you consume healthier foods?" were 1.7(1.1 to 2.7); "Did you consume sweet snacks?" were 2.0(1.3 to 3.1); "Did you consume unsweet snacks?" were 1.6(1.1 to 2.5); "Did you drink sugarless coffee or tea ?" were 1.6(1.1 to 2.5); "Did you drink coffee or tea with sugar ?" were 2.6(1.7 to 3.8); "Did you use mouthwash?" were 2.2(1.5 to 3.3) for male subjects when compared with females. Conclusion: Eating habits have changed significantly during the COVID-19 pandemic among dental students. Some eating habits were revealed better in males compared to female students.

## Trace The Spread: An Educational Board Game For Odontogenic Orofacial Space Infections

Dittakul Pojmonpiti, Karn Dansirisomboon, Donaya Poosontipong, Kittikorn Jitverananrangsri, Kawin Sipiyanuk, Tawepong Arayapisit

### ABSTRACT

Odontogenic orofacial space infections can be considered as important in dental curriculum, however dental students may have difficulties in applying knowledge into clinical practice. This research aimed to design a board game in learning the spreads of odontogenic infections through orofacial spaces and to compare the educational impact of two different approaches, which were competitive and cooperative playing modes. The knowledge improvement was measured using pre- and post-knowledge tests. The questionnaire survey was also conducted to gather student perceptions toward usefulness, ease of use, and enjoyment. The findings demonstrated significant improvement of knowledge in both groups. However, the knowledge improvement was significantly higher in the collaboration group, compared to the competitive approach. The students also perceived the educational game positively in all aspects. These findings support the potential of 'Trace the Spread' as a promising learning tool in dental education.

**Keywords:** Board game, dental education, educational game, gamification, gross anatomy

# Failure Rate Of Extra-Alveolar Bone Mini-Implant In Orthodontic: Systematic Review

Ngo Viet Thanh, Nguyen Thi Thu Phuong

## ABSTRACT

**Objectives:** To evaluate the scientific evidence related to the failure rate of extra-alveolar bone mini-implant in orthodontic. **Materials and methods:** An electronic searched for articles on the databases PubMed, ScienceDirect, Google Scholar to identify all peer-reviewed articles potentially relevant to the review based on PLOCS framework. Data collected from each article included: author, year of publication, study design, objective, sample size, the characteristics of mini-implant force magnitude, failure evaluation and failure rate of extra-alveolar bone mini-implant (mandibular buccal shelf: BC and infra-zygomatic crest: IZC). Methodological limitations were highlighted and the quality of articles was scored using tools such as: Risk of Bias in Non-randomized Studies - of Interventions (ROBINS-I) for cohort studies and Cochrane Risk of Bias Tool for randomized controlled clinical trials. Meta-analysis was conducted with selected article. **Results:** Eight relevant articles were selected, one was a randomized controlled clinical trial, three were prospective cohort studies and four were retrospective cohort studies. Sample sizes of each study ranged from 30 to 840 patients, with 55 to 1680 mini-implants. Most of studies used 2 mm diameter and 8-12 mm length mini-implants, immediately loaded with 8-14 oz on purpose of distalize the retired dental arch to correct Class II (with IZC mini-implant) and Class III (with BC mini-implant). The failure rate of IZC mini-implant ranged from 6.3% to 27.3% while this percentage of BC mini-implant was 7.2% to 68.7%. The meta-analysis showed that there was no significant relationship of the failure rate between the left and the right side. **Conclusion:** Current studies have low to moderate evidence. Although the failure of extra-alveolar bone mini-implant was low in almost research, it needs more randomized controlled clinical trial studies to evaluate exactly.

## **Comparison of Students' Perspectives toward Internationalization between Thai and International Dental Programs**

**Aimwadee Kiatsukasem, Chanon Laowanichwith, Meghna Burad, Sirirak Supa-Amornkul, Kawin Sipiyanuk**

### **ABSTRACT**

The integration of internationalization within higher education enriches institutional quality. This research explores differences between dental student's perspectives enrolled in local and international programs toward internationalization. A questionnaire survey was conducted on students enrolled in the International (93) and Thai program (216) of Faculty of Dentistry, Mahidol University to record perspectives on performance indicators of internationalization and self-perceived assessments of dental student life, including academic performance, psychological aspects, and extracurricular activities. The data were analysed using descriptive statistics and Mann-Whitney U test. All indicators and self-perceived assessments except Collaboration and Partnership demonstrated significant differences between the two programs. Different levels of expectations of students in different programs lead to differences in self-perceived assessments. Higher expectations of internationalization might also lower level of psychological well-being. The enhancement of internationalization is essential as it affects dental student life.

## Differences in caries experience, oral hygiene status, and sCD14 level before and after oral hygiene instruction

Dudi Aripin, Anne Agustina Suwargiani, Riana Wardani, Sri Susilawati

### ABSTRACT

**Introduction:** Caries experience and oral hygiene status are risk factors for dental caries that must be considered to predict the occurrence or development of dental caries. sCD14 is a marker of inflammation in saliva that plays a role in the prevention of dental caries. These three factors are essential in the analysis of dental caries development risk in every individual. Regular and effective oral hygiene instruction is fundamental to maintain good oral health, thus prevent dental caries. This study was aimed to analyse differences in the caries experience, oral hygiene status, and sCD14 level before and after oral hygiene instruction (OHI). **Methods:** This research was a quasi-experimental research with a pretest-posttest design. The sampling technique was accidental sampling. The samples were taken with the sample size formula used for testing the difference between two paired means. The 95% confidence level was chosen ( $Z_{1-\alpha} = 1.95$ ); power test at 90% ( $Z_{1-\beta} = 1.28$ ). Caries experience was obtained using the DMF-T index; hygiene status was measured using simplified oral hygiene (OHI-S), and sCD14 level was obtained from unstimulated saliva using an ELISA kit. Data analysis was performed using the Kolmogorov-Smirnov normality test, paired t-test, and Wilcoxon signed-rank test. **Results:** DMF-T index before and after administration of OHI was 6.2. The OHI-S index before being given with OHI was 1.06, and after was 1.00. The sCD14 value after being given with OHI increased. Kolmogorov normality test for caries experience was not normally distributed, oral hygiene status data and sCD14 were not normally distributed. The different paired t-test results for dental caries experience cannot be determined due to the similarity of the data before and after being given with OHI. The Wilcoxon signed-rank test result of the oral hygiene status showed no significant differences, while the Wilcoxon signed-rank test result of the sCD14 level showed a significant difference. **Conclusions:** Caries experience before and after the Oral Hygiene Instruction (OHI) delivered showed a similar value, thus cannot be determined. In addition, oral hygiene status and sCD14 also showed no difference.

**Keywords:** Caries, oral hygiene, inflammation, sCD14, Oral Hygiene Instruction.



# Knowledge, Perceived Risk, and Preventive Behaviours Amidst COVID-19 Pandemic Among Dental Students in Malaysia

Azlini Ismail, Nur Hanisah Ismail, Nur Yasrin Maisarah Abu Kassim, Widya Lestari, Ahmad Faisal Ismail, Cortino Sukotjo

## ABSTRACT

The purpose of this study is to assess the knowledge status, perceived risk, and preventive behaviours of dental students in Malaysia on COVID-19. A cross-sectional study across dental schools in Malaysia was conducted through online survey. 93.5% had a high score of knowledge on COVID-19. Regarding perceived risk and preventive behaviours, female students scored higher than the males. Chinese students scored the highest in knowledge of COVID-19, while Malay students had the highest perceived risk score. In terms of preventive behaviors, the mean score did not vary across ethnicity. On-campus students scored higher in knowledge and perceived risk scores whereas off-campus students practiced more preventive behaviors. The mean score for knowledge was higher among clinical students as compared to preclinical students. The final year dental students scored higher in knowledge and perceived risk compared to their juniors. In conclusion, majority of dental students have good knowledge about COVID-19, high perceived risk, and practiced most of the preventive behaviors. Nevertheless, they should always keep up with the latest advancements in COVID-19.

**Keywords:** COVID-19, dental, knowledge, perceived risk, preventive behaviour, Malaysia

# On-Line Training In Soft Skills Developmental Among Students In School Of Dentistry Universitas Muhammadiyah Yogyakarta During Pandemic Covid-19 Era

**Kurniasih I, Lydianna T, Hidayat M, Febria, ND, Triswari**

## **ABSTRACT**

**Background:** Online learning during pandemic Covid-19 era has changed the education world. It has not only positive impacts but also negative ones in learning process. Stressed and surfeited during online learning could lead to demotivation and trigger the violation of academic integrity. The dental students should prepare for their readiness in facing learning process complexity in this era, as one of their soft skills. In the beginning of pandemic covid- 19 era, soft skills training got lower attention from educational institute compared to hard skills learning. **Innovation of curriculum:** From the year of 2021, School of Dentistry Universitas Muhammadiyah Yogyakarta has held soft skills learning reinforcement for new students. The aim of this activity was to increase the readiness and ability of new students as successful learners. Online training of soft skills was included in curriculum matrix in the beginning of learning process. This activity involved psychologist team and focused in academic adaptability, academic integrity dan learning motivation. This activity took 6 hours with several break time for lecture and discussion, case study, simulation and work sheet, inventory and self-report, games, and reflection. **Discussion :** In this training, academic integrity level of students was measured by psychology scale using self-report method and given thinking style inventory. The result showed that academic integrity level of students dominantly in moderate level. The students also received feedback for their pluses and minuses in thinking style in order to establish their characteristic in learning optimalization. At the end of this activity, students were asked for create their goal setting related to learning motivation in accomplish their study. The result of these measurements and goal setting could be used as preliminary data for academic superintendent and student's advisor in understanding the characteristics of new students. **Conclusion:** Soft skills were need to be early trained and developed for dental students in order to prepare the readiness in facing the challenges and problems in world of work.

**Keyword:** Soft skills, online training, dental students, academic integrity

## Assessment Effect Of Low-Level Laser Therapy After Impacted Mandibular Third Molar Surgery

Kim Thi T. Nguyen, Khue Nhut Truong, Thao Thi Do

### ABSTRACT

**Aim:** this study aimed to evaluate the effect of low-level laser therapy in reducing pain, swelling, trismus after surgical removal impacted lower third molars. **Materials and methods:** forty-eight patients above 18 years old who had impacted lower third molar with the difficulty level of easy and moderate (Pederson's classification) and had two roots, was selected. After immediately a surgical extraction procedure, each patient has received an 810nm diode laser, power 0,5W, using a 400 µm handpiece. The tip was applied intraorally at 1 cm from the extracted alveolar in 30 seconds, repeated after 30 seconds, and similar at extraoral at the insertion of the masseter muscle. Patients have evaluated the pain intensity at 2h, 4h, 6h after the anesthetic effect wore off and 1, 2, and 7 days postoperative. Swelling and trismus were measured at 1, 2, and 7 days postoperative. **Result:** the mild-moderate pain level was predominant in the first 6 hours after the anesthetic effect wore off. The intensity of pain decreased significantly after one day just remained mild (70.8%,  $p<0.005$ ), and almost no pain on the seventh day (89.6%). Besides, swelling at peak in 1 day postoperatively, reduced gradually and became normal in 7 days. Average interincisal opening in 1, 2, 7 days postoperative decreased slightly by 2.62mm, 2.34mm, and 0.18mm respectively. **Conclusion:** Low-level laser therapy was effective after surgical extraction to control swelling, and trismus, particularly pain relief. However, we need more study to evaluate the effect on swelling and trismus. Funding by Can Tho University of Medicine and Pharmacy.

**Key words:** low-level laser therapy, impacted third molar, diode laser, surgery.

## Effectiveness Of Low-Level Laser Therapy In Recurrent Aphthous Stomatitis Treatment

Tu Cam Le Pham, Binh Huy Vo Phan, Thao Thi Do

### ABSTRACT

**Background:** Recurrent aphthous stomatitis (RAS) are the most common oral ulceration in lesions of the oral mucosa. The frequency of RAS in the population ranges from 5% to 50%. The lesions can occur in any age, gender, in a healthy or immunocompromised individual. The etiology of RAS is unknown, but several factors have been linked, including local, systemic, genetics, stress, nutritional deficiencies, hormonal changes, immune dysfunction, and infections viruses. Treatment aims to reduce pain and healing time. Current treatment options include analgesics, anesthetics, anti-inflammatory corticosteroids, antibiotics, vitamins. However, long-term and repeated drug use due to RAS recurrence can lead to fungal infections, drug resistance, and other life-threatening complications. Laser therapy began to be applied in medicine in the 1960s and is now widely applied in medicine as well as in dentistry. Low-level laser therapy ability to relieve pain, antiinflammatory, reduce edema, stimulate cell biology, and stimulate healing, low-level laser therapy is an alternative therapy to conventional drug use, promising to help improve the quality of life, improve the patient's quality of life and avoid complications caused by long-term drug use. **Objectives:** The aim of the study was to determine clinical features of recurrent aphthous stomatitis in patients visiting the dental clinic, Can Tho University of Medicine and Pharmacy Hospital. Evaluation of the therapeutic effect of low-level laser on RAS treatment for reduction of pain, size ulcer, and healing time. **Materials and methods:** In a clinical study, 30 patients who presented RAS lesions were treated with low-level laser therapy. The patient was evaluated the size, position, pain score, form of ulcer, healing time before and immediately, 4th, 6th day after treatment. The data was analyzed using SPSS 20. **Results:** The prevalence of RAS in males was 53.30% more than in females that were 46.70%. There occurs mostly (76.70%) in the age under 40 years old. The position was most common in labial mucosa with 36.70%. The effect in eating, drinking, hygiene with severe and mild levels was 63.33%, 50.00%, 50.00% corresponding. The VAS score pre-treatment was  $4.33 \pm 1.65$ , immediately posttreatment was  $1.20 \pm 1.064$ mm. The size of ulcer pre-treatment was  $4.58 \pm 2.349$ , posttreatment 4th day was  $2.47 \pm 2.30$ mm. The healing time was  $5.34 \pm 1.32$  days. **Conclusion:** Low-level laser therapy is effective in RAS treatment to reduce pain, size ulcer, healing time.

**Keyword:** Recurrent aphthous stomatitis, low-level laser therapy, VAS score, healing time.

# The Efficacy Of Diode Laser Therapy In Chronic Periodontitis

Tuan Minh Nguyen\*, Thao Do Thi, Ngan Thuy Phan, Kien Trung Nguyen

## ABSTRACT

**Aim:** To evaluate the clinical effects of diode laser used as adjunctive therapy to scaling and root planing (SRP) to that of scaling and root planing alone for the treatment of chronic periodontitis. **Methods:** Twenty chronic generalized periodontitis patients with greater than or equal to 4mm probing pocket deep were divided into 2 groups due to the midline as follows: group I was treated with SRP, group II was treated with SRP followed by adjunctive diode laser therapy. The following clinical parameters were evaluated at baseline, 1 month, and 3 months after therapy: gingival index, plaque index, gingival sulcus bleeding index, probing pocket depth, and clinical attachment level. **Results:** Two groups also had a statistically significant reduction after 1 month and 3 months gingival index, plaque index, gingival sulcus bleeding index, probing pocket depth, and clinical attachment level parameters contrasted to baseline and there was an improvement in probing pocket depth parameter from 1 month to 3 months. Comparison between 2 groups has no significant differences at 1 month and 3 months after the treatment in probing pocket depth, and clinical attachment level parameters. **Conclusions:** The present study demonstrated that the use of diode laser as an adjunct to conventional periodontal treatment (i.e., SRP) and adjunctive diode laser therapy has several advantages in clinical parameters than non-surgical periodontal treatment alone.

**Keywords:** Chronic periodontitis, Diode laser, Scaling and root planing, Probing pocket depth.

## Validity of online dental final examination during the COVID-19 pandemic

Hoang Trong Hung, Huynh Cong Nhat Nam, Nguyen Thi Thanh Tam, Tu Thi Huyen Trang, Michael Botelho, Nguyen Van Lan

### ABSTRACT

**Objective** During the fourth wave of COVID-19 pandemic in Vietnam, most dental schools were closed due to national lockdowns. This study aimed to evaluate the 2021 DDS online graduation examination in comparison to 2020 onsite traditional assessment at the Faculty of Odonto-Stomatology, University of Medicine and Pharmacy at Ho Chi Minh City, Vietnam (FOS-UMPH). **Methods** The online final examination procedures and guidelines were designed and developed by the scientific committee board in July, 2021. There were two main sessions: Synchronous Online Examination using FOS-UMPH e-Learning for theories and Asynchronous Online Examination using Microsoft Teams for practicum (14 online OSCE stations). All candidates were asked to check their Internet, Computer Availability and Compatibility Checklist for the Exam with extra supervised cameras for both sessions. Theory and practicum scores were recorded by using the same evaluation metrics in 2020. There were 114 and 112 students in 2020 and 2021 (1st time exams) recruited in the study, respectively. The histogram and k-mean clustering were applied to analyze the validity. **Results** In general, there was similarity of histograms between 2020 and 2021. However, 2021 had less failed students (13% vs 28% respectively) especially in clinical problem solving part scores (belonging to theory session) tended to be higher than 2020. Interestingly, MCQ Score showed extract the same patterns. Both sessions of orthodontics, dental public health, pediatrics subjects (prevention and development dentistry) performed the best validity. Clustering produced 3 clusters in data collected in these 2 years showing the same characteristics including: cluster 1 (scattered average and low scores), cluster 2 (high scores but not stable and scattered) and cluster 3 (high and centered scores). **Conclusion:** Analysis revealed the equivalence of online vs. onsite traditional graduation exam results. More improvements need to be performed to standardize this final examination meeting the new normal trend in dental education.

**Key words:** online dental final examination, onsite dental final examination

# The Use of Mobile Text Messaging for Improving Oral Health

## Behaviors of Students at University of Puthisastra

### ABSTRACT

**Objective:** To improve the oral health behaviors of students at University of Puthisastra through the use of text messages over a period of 3 months. Significance of study: If this low-cost intervention is successful in improving oral health behaviors and reducing risk of disease, it could be used more widely to promote health in Cambodia. **Methods:** A longitudinal study was conducted using a convenience sample of 150 students from UP who provided written consent. Participants were interviewed about their diet, oral hygiene practices, visits to the dentist and understanding of oral health. Plaque scores were recorded. During the intervention each participant received oral health related text messages several times per week over 3 months, after which they were recalled for a second interview to measure any change in oral health behaviors, and an assessment of their plaque level. **Results:** Overall improvements in oral health behaviors were observed. There was a significant increase in the frequency of brushing, flossing, use of sugar-free gum, and fluoride toothpaste. In addition, the frequency of sugary drinks and snacks decreased, between baseline and follow up. The amount of sugar added to tea was significantly reduced, but not for coffee. The mean plaque score decreased from 1.9 at baseline to 1.1 at 3 months ( $p=0.001$ ). Knowledge regarding oral health mostly improved at the follow-up interviews, compared to baseline. The greatest improvements were related to tongue cleaning, sugar free gum, gingival bleeding, regular dental visits and water fluoridation. By the 3 months follow-up an additional 6 students had been to the dentist prompted by the text messages. Students were generally very happy with the text messaging program. **Conclusion:** The text messaging program over a period of 3 months resulted in improved oral health behaviors, reduced plaque scores and increased awareness among this group of Cambodia university students.

**Keywords:** Text messages, Improving Oral Health, University students

## Introduction of Medical Health Screening in UP Dental Clinic

LEANG Sokchea, LY Huntean, IENG Sivgech, Soeun Sopharith

### ABSTRACT

**Background:** Regular health checkups in Cambodia are uncommon, especially among people in the low- and middle-income groups. Screening for general medical health problems in dental clinics can alert the dentist and the patient to the presence of certain medical conditions at an early stage, so that appropriate advice can be given, precautions taken, and made. It can also reduce the risk of a medical emergency occurring in the dental clinic. **Aim:** To carry out an audit of health screening in the UP dental clinic over a 6 month period, and to investigate possible benefits. **Methods:** This was an audit of Medical Health Screening on patients coming to UPDC over a 6month period. A total of 477 patient records were selected for audit, an Information Sheet and a consent form to sign, prior to undergoing a series of health screening procedures. These included answering same health related questions, and measuring blood pressure, waist circumference, height, weight, oxygen saturation, and blood glucose level. The data obtained were entered on to computer and analyzed using SPSS. **Results:** Among the 477 participants, 240 were male (50.31%) and 237 were females (49.69%). The mean age for males was 30 (SD13.6) and for females 32 years (SD15.6). Males were an average 5cm taller than females. The mean weight of males was 63.9kg (range 32kg to 100kg) and females 52.6kg (range 31kg to 87kg). The mean BP was higher in males than females, being 120/75 for males and 74/113 for females. 12.6% of males and 13.6% of females were classified as being at “risk” (4.2%) or at “high risk” (15.7%) due to an evaluate WC respectively. 79.5% of patients under 30 and 71.9% over thirty had no symptoms of diabetes. Similar proportions of patients aged under- and over 30 year had 1 to 3 symptoms, however a higher proportion of the older group had 4 or 5 symptoms. Among the 165 patients who reported symptoms of diabetes and had a glucose blood test, 4.2% were categorized as having pre-diabetes and 2.4% diabetes based on an unfasted blood test. 20.1% of patients were judged as requiring special precautions for dental treatment; 33.1% needed health advice, and 5.8% needed a referral to a medical practitioner. **Conclusion:** Many patients attended the UPDC had one or more medically significant health problems, which were identified during health screening. Screening for health problems in a dental clinic can identify patients with potentially serious conditions it promotes earlier detection and better outcomes. Screening can also help prevent medical emergencies in the dental clinic.

**Keywords:** Medical health screening, dental clinic, NCD, hypertension, diabetes, obesity, BMI



## Dental Student Perceptions of the Healthy Kids Cambodia Project

Meng Bunleng, Tort Ravy, Yen Kimlay, Callum Durward, Soeun Sopharith

### ABSTRACT

**Background:** The Healthy Kids Cambodia (HKC) project provides Community Based Experiences (CBEs) for dental students, giving them an opportunity to step away from their dental chairs and understand the larger context in which they are working. **Objective:** The purpose of this study was to explore UP dental students' experiences and perceptions of the HKC project. **Methods:** Following informed consent, a cross sectional survey of 94 UP dental students from years 6 and 7 who had participated in the HKC project was carried out. Each student completed a written questionnaire. Open and closed questions explored their experiences and perceptions of participating in the project. **Results:** Most students believed the HKC project was worthwhile, and that they had benefited from taking part. Students liked helping the children and believed the project was improving the children's oral health. Personal benefits identified by students included developing skills in communicating with and managing children, learning more about prevention, improving clinical skills, and learning how to run a school-based dental program. Some complaints included difficult working conditions, occasional shortages of instruments and materials, transport problems, lapses in cross infection control, and some students being absent or arriving late. **Conclusions:** The HKC project experience not only provided an excellent opportunity for students to develop clinical skills, but also positively affected their attitudes and perceptions more generally. Their participation in the project enhanced their sense of professionalism and enabled them to appreciate the important role the dentist has in helping disadvantaged groups in the community.

**Keywords:** Perceptions, Healthy Kids Cambodia, dental students, community-based learning, primary school

## Perceptions and Experiences of Cambodian Graduates from Overseas and Local Postgraduate Dental Education

Seng Mawin, Sy Chanrithy, Duong Pechdara, Kong Kalyan, Callum Durward

### ABSTRACT

**Background:** Postgraduate (PG) dental training towards specialization in dentistry is very important for every country. Specialists not only provide advanced treatment to patients, but can also contribute to the education of dental students. In Cambodia there are few dentists with postgraduate qualifications. **Aim:** To explore the perceptions and experiences of Cambodian dentists following completion of PG studies. **Methods:** A survey was carried out on 27 Cambodian dentists who had successfully completed their PG studies locally or abroad. They were recruited using a “snowball” sampling technique. Following informed consent an interview was conducted about their perceptions and experiences of PG education either face-to-face or using a phone or social media platform. Quantitative data were analyzed by Microsoft Excel and SPSS. The responses to open questions were transcribed and analyzed thematically. **Results:** 77.8% of participants had studied abroad, most of whom had scholarships from Thailand (11), Japan (3), Australia (3), and Korea (2). The remaining participants had graduated in Cambodia in Orthodontics, Dental Public Health and OMFS. Those who studied overseas faced many challenges, but also gained new experiences and knowledge. Dentists who studied in Thailand were able to treat patients, however those who studied in Japan, Korea and Australia were not. Participants indicated that having an acceptable IELTS score and learning the local language were important for study abroad. Some participants reported that they had experienced discrimination, culture shock, and challenges related to food, adapting to a new environment, study, and language. Most of the participants would recommend postgraduate study (especially overseas) to others, and identified a range of benefits. **Conclusion:** Few Cambodian dentists have postgraduate qualifications. Most had completed their masters or PhD degrees abroad. Most strongly recommended PG study to others, but identified a range of challenges and emphasized the importance of preparing well.

**Key words:** postgraduate education, dentistry, Cambodia, perceptions

## Workforce Survey of Young Cambodian Dentists One Year after Graduation

Kong Kalyan, Chom Thida, Phun Sipha, Srorn Chantrea

### ABSTRACT

**Objective:** to explore the work situation and perceptions of Cambodian dentists one year after graduation. **Significance of study:** Little is known about the employment situation of new graduates in dentistry. Such information can inform educators, policy makers and planners. **Methods:** A cross-sectional study was conducted on 123 new dental graduates from two universities. Following consent, a questionnaire was used to collect information from the participants via face-to-face, phone call or video call interviews. The questionnaire included 38 questions relating to background, employment situation, conditions and challenges, clinical experiences, educational aspirations, and professional support. **Results:** 97 out of 123 graduates (78.9%) consented to participate. 78.4% were male. 88.7% worked only in private practice; 10.3% also worked for government hospitals. Dentists worked on average 49.4 hours and 38.7 hours per week at private and hospital clinics respectively. However, most were under-employed. Most (70.1%) worked in Phnom Penh and 29.9% in the provinces. Two-thirds were registered with the Dental Council of Cambodia (DCC). Of these, 15.6% had rented their name to another clinic. 47.4% of dentists had experienced difficulties in dental practice since graduation. One-quarter of participants said that their undergraduate dental education had prepared them for working as a dentist “a little” or “not at all”. 45.7% earned \$500 per month or less, and 11.3% over \$1000 per month. 61.9% of the dentists expressed a wish to do postgraduate training. The most popular subjects were Orthodontics (55%), Implantology (43.3%), Periodontics (13.3%), and Oral Surgery (11.7%). Most dental graduates identified that cost was a major barrier to further study (75.0%). **Conclusion:** Most graduates were working in private dental clinics in Phnom Penh. They worked long hours but were not busy and incomes were generally low. Most were satisfied with their undergraduate training, and most wished do post-graduate study, particularly in orthodontics and implantology.

**Keywords:** Workforce survey, Young Cambodian Dentist, After graduation

## Hybrid Learning Model for International Lasers in Dentistry Education

Sajee Sattayut, Suwadee Aerarunchot, Patcharawan Srisilapanan, Piychat Patcharanochat, Thao Thi Do

### ABSTRACT

The COVID19 pandemic has limited onsite learning activity and international travelling. The Lasers in Dentistry Research Group, Khon Kaen University, introduced the hybrid learning model for international students aiming to enable their abilities of understand principle of lasers dentistry and basic skills of using lasers in dental practice. The hybrid model of educational design was composed of e-learning modules, e-classroom, online discussion and online simultaneous- stimulation laboratory. The contents were comparable to a 10- hour lecture and a 15-hour laboratory practice. Ten Vietnamese students and 1 Thai student enrolling in the year, 2020. They all passed the written examination, viva examination and practising evaluation using rubric score at the total score of 70 to 90 percent. Subsequently, the graduates were able to perform the basic laser operation via online supervision. Based on the peer educators, the students were satisfied with the learning methods. The success of this hybrid model attributed a well learner preparation, clear contents, appropriate online technology and multi-learning systems.

**Keywords:** Online practice, Hybrid dental education, Laser dentistry education, International education model

## A Comparation Of Angiogenesis In The Bone Healing Process Of Wistar Rats After Implantation Of 20, 40, And 60 Mesh Tooth Derived Bone Graft Material

Malianawati Fauzia, Okky Satria Brilliando, Ega Lucida Chandra Kumala

### ABSTRACT

**Background.** Teeth have potential as bone replacement graft materials because they have organic and inorganic components that can stimulate osteoinduction, osteoconduction, and osteogenesis. One of the important indicators of the success of treatment using this graft material is the formation of new blood vessels in the applied area. **Objective.** The aim of this study was to determine the angiogenesis process in bone healing of Wistar rats after implantation of tooth derived bone graft materials measuring 20, 40, and 60 Mesh. **Methods.** Twenty-seven Wistar rats that have 2 mm defect that were created on the femoral dextra condyle were divided into three groups. Group P1(n=9): defect were filled by 20 mesh tooth-derived bone graft material, group P2(n=9): defect were filled by 40 mesh tooth-derived bone graft material, and group P3(n =9): defect were filled by 60 mesh tooth-derived bone graft material. The Wistar rats were sacrificed after 2 weeks then samples were analyzed using IHC kit. Data were analyzed using the One Way ANOVA test which showed differences in the number of new blood vessels in each group ( $p < 0.05$ ). **Result.** The average number of new blood vessels in group P1 was 30.00, P2 was 39.22, and P3 was 21.56. **Conclusion.** the results showed a significant difference in the number of blood vessels in each group. It can be concluded that particle differences in tooth derived bone graft material will affect angiogenesis in the bone healing process.

**Keyword:** tooth derived Bone graft material, angiogenesis, particle size

# Can Preprocedural Mouthrinses Reduce SARS-CoV-2 Load in Dental Aerosols?

Priscilla Tanvis

## ABSTRACT

**Introduction:** Dental healthcare professionals are at high risk of being in contact with SARS-CoV-2 due to the aerosols produced from elective dental procedures. Several studies has proven SARSCoV-2's possible port of entry via oral route through the binding of ACE-2 receptors with oral tissues, as well as SARS-CoV-2 found in the infected patient's saliva. These studies proves to increase the risk of cross-infection between dental healthcare professionals and positive SARS-CoV-2 patients. Both international and national healthcare associations has released numerous guidelines on how to decrease the risk of dental healthcare professionals through the usage of PPE, proper sterilization, airflow, etc. **Objective:** This literature aims to find the possibility of oral rinsing prior to dental therapy to reduce cross-infection of SARS-CoV-2. **Methods:** Author searched published clinical features from PubMed, Google Scholar, and hand searched library online databases, from January 2020 to March 2021. Keywords used were "COVID-19", "Dental protection", "oral rinse", "mouthrinsing", with their combinations. **Result:** Four oral rinses with main ingredient such as chlorhexidine, povidone iodine, essential oils, and hydrogen peroxide were investigated through several references to find it's efficacy in decreasing SARS-CoV-2 load. **Conclusion:** Usage of oral rinse prior to dental therapy may reduce SARS-CoV-2 load and decrease cross-infection risk in a dental setting. Based on the references we have reviewed, there is a possible benefit from using oral rinse prior to elective dental procedures in decreasing SARS-CoV-2 load and cross-infection.

**Key words:** mouthrinse, SARS-CoV-2, prophylaxis.

## "Mini Osce" Methods As Innovation For Preclinical Students Dental Skill

Fani Pangabdian, Aprilia, Diana Soesilo, Chaterina Diyah, Annisa Listya  
Paramita, Yulie Emilda, Moh. Basroni Rizal

### ABSTRACT

**Objective:** Covid-19 pandemic has changed educational method especially in dental skill knowledge. The activities that were usually carried out in the laboratory using phantom have to be done virtually from home these days. "Mini OSCE" is an innovation that was developed to maintain students standard competency in dental skills, despite limited tools and materials. **Method:** The students' score was divided into 2 groups (Control and Treatment group). The score of students' skills without "Mini OSCE" were included in the control group, while the score of students' skills with "Mini OSCE" were included in the treatment group. Statistical analysis was performed by T-test ( $p < 0,05$ ). **Results and Discussion:** There was a significant difference in students' score between those who were given "Mini OSCE" and who were not given "Mini OSCE". "Mini OSCE" learning method was given by a specialist dentist, which required students to simulate and verbalize the procedural techniques before working on dental phantom. This method is expected to minimize errors while doing procedural technique on dental phantom. Students can improve their knowledge, understanding, and ability to plan various dental procedures. **Conclusion:** "Mini OSCE" was effective to increase the dental skills of preclinical dental students in Universitas Hang Tuah.

**Keywords:** "Mini OSCE", learning methods, preclinical, dental skill

## Student Literature Review Project : a Coping Strategy on COVID-19 Pandemic Education

Kristanti Parisihni, Widiasri Prananingrum, Nora Lelyana, Syamsulina  
Revianti, Arya Brahmanta, Sularsih, Noengki Prameswari

### ABSTRACT

**Objective:** Student competency of applying scientific approach and provide scientific writing are exhibited in thesis, which is mandatory for bachelor graduation of Dental school in Indonesia. COVID-19 pandemic affected all research activity projects while student need for research and thesis completion must be attained. The aim of this study was to present a coping strategy for student thesis during COVID-19 pandemic. **Methods:** Student thesis of Faculty of Dentistry Universitas Hang Tuah in academic year 2019/2020 and 2020/2021 were listed and presented as descriptive statistic. **Result:** The types of student thesis in academic year 2019/2020 was 100% original research, ranging from questionnaire based, analytic observational and experimental laboratory research. Thesis types of academic year 2020/2021 was 66% literature review and 33% original research. **Conclusion:** Literature review thesis project could become a coping strategy to ensure student's research competency during pandemic.

**Keywords:** Thesis, literature review, student research, COVID-19 pandemic



# Adaptation of Dentistry Learning during the Covid-19 Pademic (Qualitative Study)

Nyka Dwi Febria, Yely Okta Mariza

## ABSTRACT

**Background:** The COVID-19 pandemic had a major impact on all aspects of human life. This impact is also felt in education. Dental education in Indonesia has begun to adapt to various policies implemented by the government during the pandemic. One of the policies taken to continue implementing learning is the application of blended learning. This learning method applies online and offline. Blended learning is believed to be the right method to be able to continue to carry out learning. Learning is carried out with various modifications of activities carried out for skills lab activities, lectures and tutorials. This encourages evaluation in each activity implementation so that maximum learning can be achieved. The study was conducted to produce an evaluation from the student's point of view about the various adaptations made in learning during the covid-19 pandemic. **Methods:** Qualitative research with a phenomenological approach was taken to find out how the learning was carried out from the student's point of view. Four students of dentistry class 2018 and 2019 were taken by purposive sampling. These students are selected with the inclusion and exclusion criteria that have been set. Data were collected by conducting in depth interviews with research subjects. The data is processed with the quirkos application. **Results:** The research shows the results of using the blended learning method, which is a combination of online and offline. Online learning applied in lectures and tutorials. Skills lab is applied online and off line. Students think that the results obtained are better when compared to full online learning during the beginning of the pandemic. Especially for skills lab activities in dentistry which are considered very difficult to do online. **Conclusion:** Blended learning is an effective method as a learning option during the covid-19 pandemic by adapting to various policies set by the government.

**Keywords:** blended learning, qualitative study, covid-19 pandemic

## Redesigning Curriculum in the Covid-19 Pandemic Era to Achieve Vision of Faculty of Dentistry Universitas Hang Tuah

Kharinna Widowati, Rima Parwati Sari, Kristanti Parisihni, Widyasri Prananingrum, Ayulistya Paramita, Sarianoferni, Sularsih

### ABSTRACT

**Objectives:** Redesign of the dental education curriculum especially in this covid-19 pandemic era is one of the efforts of the mission implementation process to achieve the vision of Faculty of Dentistry Universitas Hang Tuah as a faculty that have advantages in the field of marine science and technology research and/or maritime. **Methods:** This process is a stepwise analysis concept that begins with determining the correlation of graduate's profile with its general and specific descriptions, correlation between independent professional's profile and graduate learning achievement, correlation between science development in dentistry (scientific vision) with study materials and courses, to the stage of curriculum mapping in each semester. **Results:** There is a new curriculum mapping for the entire study period in the dental education study program which is the results of the redesigning process. **Conclusion:** The era of covid-19 pandemic did not reduce the spirit of carrying out some learning missions at the faculty of dentistry Universitas Hang Tuah to produce graduates who have advantages in the field of marine science and technology research and/or maritime.

**Keywords:** Redesign, curriculum, dental education, marine science and technology research

## Virtual Simulation of Clinical Procedures as an Innovation to Enhance Educational Outcomes in Clinical Students

Chaterina Diyah Nanik, Meinar Nur Ashrin, Vivin Ariestania

### ABSTRACT

**Objectives :** Virtual simulation of clinical procedures is a learning method where students simulated the dental procedures that will be carry on to the patient. Its expected that student are able to implement theoretical knowledge, integrate critical and dynamic thinking skills, develop cognitive intelligence and applied it as psychomotor skills. **Methods:** The novel method was applied in full denture' case. Procedures that can't be done in phantom are replaced by this method. Such as, determining the vertical jaw relation. They did it at home, with their parents or siblings as patient' role. The simulation including the universal precaution and appropriate clinical procedures. Students presented it to the dental instructor and discussed together. They will have experiences doing dental procedures on patient. **Results:** There is an improvement of clinical students' score whose doing this method. Proven by higher rate of student who passed final exit exam. **Conclusion:** This method improves teaching delivery of doing dental procedures for clinical students. By consistent doing virtual simulation of dental procedures, will leverage the clinical students' skill.

**Keywords:** virtual simulation, clinical procedures, learning method, educational outcomes, clinical students

## Predicting Dental Students' Interest To Use Teledentistry, An Application Of The UTAUT Model

Hania Azzahra Dewanto, Anandina Irmagita, Yuniardini Septorini Wimardhani

### ABSTRACT

**Background:** Final year dental students play an important role in the implementation of future dental care including those through teledentistry, it is important to know how interested these students are in using teledentistry. Interest (BI) can be predicted by the UTAUT Model's construct. **Objective:** To determine the ability of the UTAUT model in predicting interest and the relationship between the characteristics of dental students with interest in using teledentistry. **Method:** Cross-sectional analytic descriptive study on 430 final year dental students in Indonesia using a questionnaire that has been adapted and tested for its validity and reliability. **Results:** The UTAUT model was statistically significant in predicting the BI of dental students to use teledentistry (Model Fit = 82.5%). Voluntariness of use has a statistically significant relationship with interest in using teledentistry. **Conclusions:** The UTAUT model could predict dental student's interest in using teledentistry. Their voluntariness of use also affected their interest in using teledentistry.

**Keywords:** Teledentistry, Telehealth, Technology Acceptance Model, Dental Education

## Mixed Video Conference And Virtual Discussion As Innovation For Small Group Discussion During Covid-19 Pandemic

Meinar Nur Ashrin, Sinta Puspita, Aulia Dwi Maharani, Dianty Saptaswari, Moh. Basroni Rizal

### ABSTRACT

**Objectives:** Small Group Discussion (SGD) is one of the student-centered learning methods by solving problems or assignments given. The COVID-19 pandemic had implications for education and learning methods. SGD which is usually held face to face between 1 lecturer and a few students in a room now has to be virtual. Innovation needs to be done to continue the SGD process. **Methods:** The innovation of the learning method carried out was holding SGD in mixed virtual learning using video conference by Zoom and online discussion by WhatsApp Group. The study was conducted in 4 courses that have a large credit at each level in odd semesters. Assessments of student comprehension through the evaluation of the Student Comprehension Form Score (SCFS) before and during pandemic were carried out. **Results:** There were no significant differences between the results of the SCFS before and during the pandemic. **Conclusion:** The COVID-19 pandemic did not adversely students' comprehension through the SGD method. Students can still elaborate their critical, dynamic thinking skills, develop social, emotional, cognitive intelligence, and escalate their knowledge

**Keywords:** Small-Group Discussion, Video Conference, Virtual Discussion, Student Comprehension Form Score, COVID-19 Pandemic

# Blended Learning with Rolling Group Modification as an Innovation for Dental Co-Assistant in Professional Degree During COVID-19 Pandemic

Aulia Dwi Maharani<sup>1</sup>, Ayulistya Paramita<sup>2</sup>, Aprilia<sup>3</sup>, Lita Agustia<sup>1</sup>, Vivin Ariestania<sup>4</sup>

## ABSTRACT

**Objective:** Dental education in professional degree during pandemic COVID-19 will not be able to run without the support of dental hospital and the curriculum. All that involved must be modified according to the demands of this situation. Blended learning is combining offline and online activities. Rolling Group were carried out by divided co-assistants into small groups for 3 departments (before: 9) at a time. The aim of this study is to show the difference between blended learning with or without modification **Methods:** The data of co-assistant's ability to complete the requirements in 3 major departments with blended learning is compared to blended learning with rolling group modification. T-test ( $p < 0.05$ ) was performed to analyse the difference. **Results:** There was significance difference between blended learning and blended learning with rolling group modification **Discussion:** This modification is expected increasing co-assistants focus, lighten their work and also minimize the risk of virus transmission. **Conclusion:** The blended learning with rolling group modification is effective in increasing co-assistant's ability to complete all requirements.

**Keywords:** Dental professional degree, blended learning, covid-19 pandemic innovation

## Implementation upgrading and updating Oral Physiology Module during a Pandemic

Kartika Indah Sari, Anggun Rafisa, Sri Tjahajawati

### ABSTRACT

**Objective:** To discuss the adaptations in delivery of Oral Physiology Module (OFM) in Basic Dental Science fourth (BDS4) during pandemic, and to explore measurable materials and tools used in mini-experiment activities. **Methods:** We prepared an upgrading and updating module through FGD and implemented the module in the second years student. At the end, we performed a student evaluation. **Results:** OPM proposed used an approach to discuss the basic theories related to mastication, swallowing, and speech. Students performed mini - experiments, write reports and reflections. **Conclusion:** Oral Physiology Module were successfully performed online, adaptable and got student attention.

**Keywords:** oral physiology, hybrid learning, basic dental science

## Tooth Decay Prevention Education Program through Zoom Meetings in the Era of the Covid-19 Pandemic

Talitha Kyla A, Indah Siti N., Vanya Aurellian, Lila Fairuz, Cut Safira, Habibah Hafshah, Donovan Roberto, Prof.drg.Risqa Rina Darwita, Ph. D

### ABSTRACT

**Background:** Dental caries have been Indonesia's primary oral health problem. Based on the telesurvey done to the community health care volunteers called *Kaders* in Kayu Manis and Kebon Manggis urban villages, prevalence dental caries was 100%. Nowadays, webinars can be an option to educate on caries prevention to avoid transmission of the COVID-19. Scientific evidence has proved that providing education through webinars can improve public awareness and knowledge of oral health. **Objective:** To measure the level of improvement in knowledge and skills of *Kaders* in performing an online dental examination. **Methods:** Education through a one-day training was held via Zoom to 52 *Kaders* of the community health care in Kayu Manis and Kebon Manggis about the importance of maintaining dental and oral health as a form of preventing dental caries. An evaluation was done by conducting Pre-Test, Post-Test, and retention Post-Test (four days after the webinar). **Results:** A post-test score increase was found in 76.9% of *Kaders* who participated in the webinar. In the retention post-test, 50% of *Kaders* managed to retain their previous score. For those who did not participate, an increase in post-test score was seen in 48% of *Kaders*. The post-Test score of *Kaders* who participated in the webinar had a higher average than those who did not participate in the webinar ( $8.14 \pm 1.406$ ). A total of 30 (62.5%) *Kaders* also send intraoral photos with legible results and can generate DMFT status values. **Conclusion:** An improvement in knowledge was established as there was an increase in the mean Post-Test score, and improvement in skill to take intraoral photo by phone in *Kaders* that participated in the webinar training compared to those that did not.

**Key words:** Dental health education, caries prevention, webinar, Zoom



## Student Perceptions Following Introduction Of Dental Clinical Competency Assessments At The University Of Puthisastra

HORN Rithvitou, OUCH Dara, LY Sovanna, CHHON Thavy, SOY Rasy, Kong Kalyan, Callum Durward

### ABSTRACT

**Introduction:** Measuring competency has been an important trend in dental education in recent decades. UP is the only Cambodian dental school with clinical competency assessments, and the perceptions of the students and tutors towards these assessments are unknown. **Objectives:** To evaluate the perceptions of students and clinical tutors regarding the new clinical competency assessments in the University of Puthisastra Dental Clinic. **Methods:** Consenting senior dental students and tutors were interviewed by 3 trained interviewers concerning their perceptions of the competency assessments. **Results:** 100 year 6 and 7 dental students (73% male) and 20 dental tutors were interviewed. 88% of students perceived that the assessments helped improve clinical skills, and 85% clinical knowledge. However only 40% were happy when competency assessments were introduced. 77% believed that if spread over 3 years they were not a burden. 71% felt the assessments were fair, but 93% said they took too long to complete. Most agreed that finding a tutor was sometimes difficult (91%), that some competencies were too difficult (95%) and that there were too many assessments (90%). However few students could suggest items that should be dropped from the list. One-quarter of students wanted tutors to explain each step more carefully before each assessment. Tutors were generally very positive about the competency assessments. **Conclusion:** Competency assessments were believed to be an important part of the dental course by most students and tutors. Most participants believed the assessments helped ensure graduates were competent, and that they should be continued, albeit with some improvements.

**Key word:** Competency assessment, dental education, clinical dentistry.

# Relationship Between Online Learning During The COVID-19 Pandemic to Academic Burnout of Undergraduate Dental Students Universitas Indonesia in 2021

Hanatashya Tania, Melissa Adiatman, Anton Rahardjo, Joyce Carol Gabrielle

## ABSTRACT

**Objective:** To determine the relationship of online learning during the COVID-19 pandemic, internal and external factors to academic burnout of undergraduate Undergraduate Dental Students Universitas Indonesia in 2021. **Methods:** Cross-sectional study in the form of online questionnaires for undergraduate dental students with a total population sampling of 372 students from July to August 2021. The questionnaire consists of 39 questions. The correlation test is used through the Spearman test by looking at the p-value and r (correlation coefficient) for statistical analysis. **Results:** Based on the Spearman test, there was a significant relationship ( $p < 0.05$ ) between online learning and academic burnout, between several dimensions of academic burnout and the duration of education and parental support. **Conclusion:** The better the student's perception of the quality of online learning, the lower the academic burnout value. In addition, there are still many students who have moderate and high academic burnout scores. Then, it was found that the duration of education and social support from parents and peer groups was associated with several dimensions of academic burnout.

**Keywords:** academic burnout, pandemic, COVID-19, dental students, cynicism, online learning

## Relationship Of Grit And Resilience To Indonesian Dental Students' Academic Achievement

Joyce Gabrielle, Melissa Adiatman, Peter Andreas, Hanatashya Tania

### ABSTRACT

**Objective:** To find out the relationship between the grit and resilience of preclinical dental students in Universitas Indonesia with different sociodemographic factors and socioeconomic conditions, and the academic achievements during the pandemic. **Methods:** Cross-sectional study in the form of online questionnaires for Preclinical Dental Students with total population sampling of 372 students collected from July to August 2021. The questionnaire consists of 14 questions. The mean difference and correlation test is used to determine the relationship of all variables and by looking at the p-value and correlation coefficient for statistical analysis. **Results:** Based on the correlation test, there's a significant difference in the relationship between student Grit and GPA scores. There's also a relationship between resilience and academic achievement assessed through participation in competitions during the pandemic. Some other sociodemographic and socioeconomic factors also contribute to the academic achievements achieved during the pandemic. **Conclusion:** Preclinical dental students who display higher grit and resilience scores, achieve higher GPA and more participation in competitions during pandemic. Therefore, it is crucial for dental students to consider these values and the impact that they might have on their overall progress.

**Keywords:** COVID-19, Grit, Resilience, Online Learning, Achievement

## Online assessment for the final-year dental students in Vietnam: challenges and opportunities

Tri Hoang Vu, Trang Thi-Huyen Tu, Phuong Thi-Thanh Nguyen, Hung Trong Hoang, Lan Thi-Quynh Ngo

### ABSTRACT

**Method:** The outbreak of Covid-19 disturbs global education. In the special period of lockdown in Ho Chi Minh city, final-year dental students at the University of Medicine and Pharmacy found obstacles in timely assessment. The students attended the final examination via university MCQs platform (e-learning) and virtual meeting program (MS Teams) as an alternative to traditional campus-based exams. The objective of this study was to evaluate students' preparedness, readiness and perceptions for the online final exam in 2021. **Methods:** During the final examination, two structured questionnaires were developed. The first one was conducted before the exam, focusing on students worries, computer skills, preparedness and readiness. The second questionnaire was completed after the exam, with items related to the students perceptions of the exam both theoretical and practical sessions: preparedness, difficulties, satisfaction. There were 67 final-year students completed both survey. Chi-square test was applied. **Result:** Students were required to equip at least two electric devices with an internet connection and camera, the pre-examination survey showed 100% of students met the demand, however 19.4% encountered economical barriers to prepare those devices. Pre-exam data showed 82.1% worries because of the new test, 56.7% actually felt worries during the test. 80.6% were ready for the MCQs pre-exam, compared to 23.4% evaluate themselves having done after the test. Similarly, 64.2% were ready for the practical session pre-exam, but only 31.3% had confidence having done well in the session post-exam. Overall, on a 10-point scale, the mean of student satisfaction was  $7.3 \pm 0.3$ . **Conclusion:** Due to the new normality after the pandemic, new assessment methods are being devised to impartially evaluate dental students. The online version of the graduation examination was ranked as good for final-year students. Nevertheless, to warrant the new assessment type to the dental education system, further investment and well-conducted research are needed.

## The readiness and preparedness among dental faculty for the online final exam for students

Phuong Thi-Thanh Nguyen, Tri Hoang Vu, Trang Thi-Huyen Tu , Lan Thi-Quynh Ngo, Hung Trong Hoang

### ABSTRACT

The Covid-19 pandemic challenges the traditional face-to-face education system. Since the world-wide outbreak, the use of virtual platforms are being rapidly popularized among teachers. In the University of Medicine and Pharmacy Ho Chi Minh City e-learning, an university MCQ test-site, and MS Teams were adopted in the graduation examination of the dental school. Even though simulated exams were organize, teachers experience difficulties. The objectives of this study was to identify preparedness and readiness among faculty members. **Method:** A cross-sectional study were conducted before the exam in July 2021. A questionnaire was developed. Questions were presented in multiple choice or likert scale form, focusing on difficulties, prepareness and readiness of teacher. There was 43 teachers participated in this study. Chi-square test was applied. **Result:** To monitor the students, teachers were advice to have at least two devices with internet connection and camera. 97.67% respondants had two or more devices, however, 13.95% had difficulty in preparing the devices. 4.65% replied to have difficulty using the softwares. 20.9% of the teachers worried about the upcoming exam, while 25.58% were stressful. In general, 88.37% teachers were ready for their tasks in the student exam, the remaining were hesitant. **Conclusion:** The shift from on-site test to virtual platforms create troubles to educators. To adapt, teachers has to learn new computer skills. Notably, the mental health of teachers should also be cared for, indicated they may need assistance. Despite difficulties, no one have negative feeling about the online version of the graduation exam.