



ADEE

Promoting Dental
Education in Europe



UiO : **Faculty of Dentistry**
University of Oslo

ADEE 2018
University of Oslo,
Norway
FREEstage and
Topic Related
Papers

Introduction:

Each year the ADEE editorial panel make a selection of four Topic related presentations from the submitted abstracts. Additionally a number of FREEStage presentation slots are offered to share new and evolving dental education related research.

In Oslo, we have 4 Topic related presentations focusing on 'Dental Education in a Changing Society'. These presentations cover a wide array of topics including, Diabetes, Simulation, Academic Integrity and the Arts.

Additionally we have 12 fifteen-minute FREEStage presentations covering a vast array of innovative practice and technologies. Make sure you get the opportunity to visit some of these sessions.

This document contains the schedule and abstracts for both FREEStage and Topic related presentations.

We hope you enjoy the session.

Professor Deborah White

ADEE Editor

Dr Ronald Gorter

Chair FREEStage

Topic Related Presentations

Thursday 23 August 14:00

| | Title | Presenter | Institution |
|--------------|--|-------------------|---|
| 14:00 | Screening for and Monitoring Diabetes: The Maryland Experience in a Changing Society | G. Hack | University of Maryland School of Dentistry, Baltimore, United States |
| 14:15 | Human Factors and Simulation training: Lessons we can learn from medicine and aviation | T, Halai | UCL Eastman Dental Institute, Eastman Dental Hospital/University College London, London, United Kingdom |
| 14:30 | Impact of Pre-Dental School Academic Integrity Violations on Dental School Honor Code Provision Perceptions | C. Feldman | Rutgers School of Dental Medicine, Rutgers, The State University of New Jersey, Newark, United States |
| 14:45 | Using the arts to reflect on practice: The views of dental technology students | J. Lewis | Cardiff School of Sport and Health Sciences, Cardiff Metropolitan University, Cardiff, United Kingdom |

FREEstage timetable:

Thursday 23rd August 16:15 to 18:00

| | Title | Presenter | Institution |
|--------------|--|-----------------------------------|---|
| 16:15 | Walking through the OSCE: Creating an Immersive Virtual Experience | Dr Ilona G Johnson | Cardiff University |
| 16:30 | Self-perceived Preparedness of New Dental Graduates | Mr Kamran Ali | Peninsula Dental School |
| 16:45 | Expediting expertise – use of video to afford synthetic clinical experience for student learning | Assoc Prof Michael Botelho | University of Hong Kong |
| 17:00 | Clinical Dentistry Tutors perceptions of a Peer Observation of Teaching scheme: differences between those with and without a Postgraduate Teaching Qualification | Dr Alison Cairns | Glasgow Dental Hospital and School |
| 17:15 | Investigating Serious Modification for Training Dental Professionals in Child Protection | Mrs Christine Park | Glasgow Dental Hospital and School |
| 17:30 | Teaching Orthodontic Emergencies Using The “Flipped Classroom” Method – A Mixed Methods Randomised Controlled Trial and The Creation Of A National Orthodontic Emergencies Curriculum | Dr Grant Isherwood | University of Liverpool Department of Dental Sciences |
| 17:45 | Use of Telehealth Electronic Health Records to Improve Interprofessional Experiences | Prof Lynn A. Johnson | University of Michigan School of Dentistry |

FREEstage timetable:

Friday 24th August 14:00 to 15:45

| | Title | Presenter | Institution |
|--------------|--|---------------------------------------|---|
| 14:00 | Can the use of student created videos enhance learning in oral radiology? Student experiences based on a pilot study | Mr Gerald Torgersen | Universitetet i Oslo |
| 14:15 | Accessing dental education via online video content | Dr Marco Antonio Dias da Silva | Birmingham Dental Hospital |
| 14:30 | Implementing an objective digital analysis software in dental education | Ms Maximiliane Schlenz | University of Giessen - Dental School - Department of Prosthodontics |
| 14:45 | A national approach to collating assessment load information in United Kingdom & Republic of Ireland dental schools | Dr Upen Patel | University of Birmingham |
| 15:00 | Withdrawn | | |
| 15:15 | Digital Media and its Continuing Impact on Dental Education | Dr Jonathan San Diego | King's College London Dental Institute |

Topic Related T01

Title: Screening for and Monitoring Diabetes: The Maryland Experience in a Changing Society

Presenter: Dr Gary Hack

Authors: *Hack GD

Affiliations: Advanced Oral Sciences and Therapeutics, University of Maryland School of Dentistry, Baltimore, United States

Background: Over 422 million people worldwide have diabetes , per year. Dentists are in an ideal position to assume an expanded role in providing diabetes screening, as well as monitoring blood sugar control in patients with diabetes. There is a bidirectional relationship between periodontal disease and diabetes. Patients with diabetes are three times more likely to develop periodontal disease. Moreover, periodontal disease is one of the earliest signs of diabetes, and many patients will see their dentist in a given year, but not see a physician. Also, periodontal treatment improves the management of diabetes. Treatment of periodontal disease, and the associated reduction of oral inflammation improves blood sugar control. Among diabetic patients, approximately 50% are not well controlled.

Aims and Objectives: Preparing oral health care providers to screen and monitor for chronic diseases like diabetes and hypertension, and referring to physicians when appropriate, will have a positive impact on the diabetes pandemic

Materials and Methods: For the past five years, all sophomore dental students (N=700) at the University of Maryland School of Dentistry were taught how to use a glucose meter in order to screen for and monitor diabetes in their dental patients, as well as how to refer when appropriate and discuss their findings with physicians.

Results: The main findings of this study were that the student's attitudes related to diabetes counseling, monitoring, screening, and referral were very positive, and that the students were eager to implement these activities with their current dental school patients, and in their future dental practices.

Conclusions: The importance of hand-on training in blood glucose management was evidenced in this study. Dental practices are ideal places for diabetes monitoring and screening.

Topic Related Paper T02

Title: Human Factors and Simulation training: Lessons we can learn from medicine and aviation

Presenter: Miss Tina Halai

Authors: *Halai T, Savla A, Shah A, Eyeson J

Affiliations: Oral Surgery, Eastman Dental Hospital/University College London, London, United Kingdom

Background: The aviation industry and medicine have given substantial prominence to Human Factors Training as the majority of adverse incidents are attributed to Human Error. Medical trainees also undergo simulation training whereas this is infrequently used in dental education. Dental education has therefore been trailing behind medical education and aviation in terms of both Human Factors and Simulation.

Aims and Objectives: Assess the impact of a pilot Human Factors simulation-in-situ training session applying principles used in medical and aviation education.

Materials and Methods: Two three-hour simulation-in-situ sessions were held using a voice-controlled simulation manikin and actors. Each scenario incorporated various elements of Human Factors and had defined learning objectives. The format of the sessions was as follows: Introduction to HF, Video-recorded scenarios, Session debrief and Feedback survey. Questions included self-reported confidence and stress levels with 1 being not confident or stressed and 10 being very confident or highly stressed.

Results: There were 59% females and 41% males. Most participants were Postgraduate oral surgery trainees (58%). 90% had no prior experience of Simulation or Human Factors training. The mean overall confidence before the training session was 5/10 and the mean confidence after increased to 8/10. The largest increase was for the Anaphylaxis scenario: Mean confidence before: 5/10 and after: 9/10. Mean stress before: 7/10 and after: 4/10. The overall mean rating of the training was 9/10. 100% participants felt the training should be provided again and 59% suggested this should be annually.

Conclusions: The training increased confidence in managing medical emergencies, difficult relatives and colleagues, wrong site surgery and compliance with Duty of Candour. In a changing society where there is much emphasis on clinical and theoretical learning, this study highlights the benefits of Human Factors simulation training as an adjunct to dental education, following the examples set by medicine and aviation.

Topic Related Paper T03

Title: Impact of Pre-Dental School Academic Integrity Violations on Dental School Honor Code Provision Perceptions

Presenter: Dr Cecile Feldman

Authors: *Feldman CA, Bender M, Shuying J

Affiliations: Rutgers School of Dental Medicine, Rutgers, The State University of New Jersey, Newark, United States

Background: Upholding academic integrity while in dental school provides a solid foundation for acting with integrity throughout a graduate's dental career.

Aims and Objectives: Specific aims were to understand students previous academic integrity violations in high school and college and to determine if previous participation in academic integrity violations would impact student perception on a dental school's honor code provisions.

Materials and Methods: Between 2007 and 2017, students were asked to complete a 92 question anonymous survey, which included whether a number of questions about cheating while in high school and college and whether they felt that activities, such as copying answers or using assistance to complete a project even though they were instructed to complete it alone should be a violation of the Rutgers School of Dental Medicine's honor code. Data was entered into Excel and exported into SAS. This research was considered exempt by the Rutgers University IRB.

Average number of yes answers for sections asking about engaging in academic violations while in high school and college and the average number of yes answers for questions asking whether certain violations should be part of the school's honor code were calculated and then correlation coefficient determined.

Results: 1135 questionnaires were completed. Sections asking "When you were in High School did YOU ever" and "When you were in COLLEGE did YOU ever" respectively, are significantly and negatively correlated to their current opinion of of honor code violations at the $P < 0.0001$ level. Correlation coefficients ranged from -0.12115 to -0.22190.

Conclusions: Students' previous history influences their perceptions of what should be in their school's honor code. Understanding these experiences and beliefs is important to consider when developing curricula. Faculty need to emphasize to students that their beliefs may not correspond to their school's expectations and they must adhere to their code even if they do not believe in its provisions.

Topic Related Paper T04

Title: Using the arts to reflect on practice: The views of dental technology students

Presenter: Dr Kirsten Jack

Authors: *Lewis J¹, Jack K²

Affiliations:

¹Cardiff School of Sport and Health Sciences, Cardiff Metropolitan University, Cardiff, United Kingdom

²Nursing, Manchester Metropolitan University, Manchester, United Kingdom

Background: Reflective capacity is a requirement for registration as a dental professional in the United Kingdom. Reflective practice involves learning by thinking about events and looking at them differently and is a well-known concept in other professions such as Nursing and Social Work. However less is known about reflective practice in the dental professions although a review of CPD by Barnes et al (2013) suggests that reflection needs to be given more attention.

Aims and Objectives: The aim of the research was to explore the thoughts and feelings of a cohort of students studying BSc (Hons) Dental Technology about the use of the arts to support reflective practice.

Materials and Methods: Interpretive phenomenology was the chosen approach for this research as it can support in depth exploration of the lifeworld of the participants. Students were asked to take a creative approach, write a poem/story, develop a picture/collage or create a sculpture. Using an open ended interview they discussed their creative work and the meanings behind it.

Results: A range of creative work including poems, pictures, comic strips, animations, short stories and sculptures were submitted. Participants then described both the successes and challenges surrounding their practice. All participants preferred this method of reflection to the traditional reflective templates.

Conclusions: A range of creative work including poems, pictures, comic strips, animations, short stories and sculptures were created. Participants then described both the successes and challenges surrounding their practice. All participants preferred this method of reflection to the traditional reflective templates. As the concept of reflection gains international momentum, it is important that the dental professions explore ways to embrace it. Otherwise there is a risk that it becomes a tick box activity rather than an avenue to develop professional practice in a positive way.

FREE Stage Presentation 01

Title: Walking through the OSCE: Creating an Immersive Virtual Experience

Presenter: Dr Ilona G Johnson

Authors: *Johnson IG¹, Crawford O², Llewellyn C³

Affiliations: ¹School of Dentistry, Cardiff University, Cardiff, United Kingdom

²Centre for Educational Innovation, Cardiff University, Cardiff, United Kingdom

³School of Dentistry, Cardiff University, Cardiff, United Kingdom

Abstract:

Background: Dental students are increasingly using multimedia and video to prepare for assessments.

Aim: This presentation will demonstrate an immersive virtual dental OSCE and will explain the process of staff-student design, development, and evaluation of this experience.

Method: Multimedia virtual OSCE content was identified through a qualitative study and direct input from undergraduate dental students. Dental staff, students, and learning technologists developed a range video-based mock stations including "good" and "poor" performances. 360 video and drone footage were developed to create a virtual environment and a sense of movement within the clinical OSCE setting. An interactive 8 station virtual OSCE experience was then created with "see it", "try it", "mark it" and "feedback" interactions. The virtual OSCE experience was shown to students with no experience of OSCE assessments (year 1 dental students) and to students who had recently undertaken an OSCE (year 2 dental and year 1 hygiene and therapy students). Following ethical approval, paper-based questionnaires were used to collect data.

Results: The process of development was successful. A total of 132 students evaluated the experience (over 95% response rate). Nearly all rated all aspects of the experience as important. Students viewed the interactive immersive OSCE experience as a positive contribution to the preparatory material. Students who had experienced OSCEs rated "task done well" and communication-based station video content as being particularly important whereas students with little experience of OSCE assessments rated clinical task-based stations more highly. Interactions involving questions and seeing/using marking criteria were also rated highly. Contextual 360 video was rated positively by most students and some felt that drone footage was not needed.

Conclusion: Staff-student co-production can be used to produce an immersive OSCE experience. Immersive virtual OSCE experiences are valued and are considered to enhance understanding and experience of assessments.

FREE Stage Presentation 02

Title: Self-perceived Preparedness of New Dental Graduates

Presenter: Mr K ALI

Authors: *ALI KAMRAN¹, Cockerill J², Zahra D³

Affiliations:

¹Peninsula Dental School, University of Plymouth, PLYMOUTH, United Kingdom

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Aims: To evaluate the self-perceived preparedness of new dental graduates from the UK with those from a developing country.

Methods: Foundation Dentists in the UK and House Officers from Pakistan were invited to participate in an online study to assess self-perceived preparedness using a validated preparedness assessment scale.

Results: In total 332 qualified responded to the questionnaire and included 212 females (70%) and 91 males (30%). All but 14 of the participants were in the 20-30 years age group (95.38%). The UK-based participants felt more prepared than the Pakistan-based participants across all but one of the 50 skills/attributes. The effect of location of training was significant across 46/50 of the skills / attributes, with this being highly significant ($p < 0.001$) for 34 of the skills / attributes. More than half of the participants based in the UK felt prepared to perform 23 of the 24 clinical procedures on their own while self-perceived competency in clinical procedures was much lower amongst the Pakistani graduates. For items related to professionalism and communication skills, preparedness was also reported to be higher amongst UK graduates.

Conclusions: This is the first study which compares self-perceived preparedness amongst new graduates from two different parts of the globe. The participants reported self-perceived preparedness on a range of cognitive, clinical, and behavioural attributes. The results show that the graduates felt prepared for a wide range of the attributes expected from dentists. However, several areas were identified where graduates from both countries may benefit from further education, training and consolidation. Dental educators need to address deficiencies in training during the undergraduate programme and students need to be assessed appropriately to demonstrate competence prior to graduation. The findings may be of interest to dental educators in Europe and beyond.

FREE Stage Presentation 03

Title: Expediting expertise – use of video to afford synthetic clinical experience for student learning

Presenter: Assoc Prof Michael Botelho

Affiliations: Hong Kong University

Abstract:

Clinical experience in the dental curricula is a costly and precious commodity. Students usually acquire clinical skills in a slow and often haphazard manner usually dictated by the nature of patients' needs, case complexity, clinical supervisors' teaching and happenstance. These experiences will be individual for students over the course of their dental programme. It is common for students to report feeling unprepared with knowledge gaps and a lack of hard and soft skills when first entering clinics.

Video recording of authentic, chairside, in-the-moment clinical teaching episodes between a teacher and student relating to decision making, treatment planning, or assessment of treatment outcomes are a novel way to capture and share clinical dental experience to support other students learning. These clinical experience videos will reduce the repetitive nature of clinical teaching and prepare students better for clinics and demonstrate clinical procedures that students may not have experience of in the simulation laboratory eg. cementation of crowns or bridges or problem scenarios such as poor fitting dentures. A small library of videos recording teacher and students interactions have been captured and uploaded onto a learning management system for students to observe peers interactive teaching moments.

This vicarious learning through video affords students synthetic clinical experiences showing them procedures and problems they have not experience before. This will prepare students better cognitively and emotionally during the clinical care of their patients allowing them to focus on different aspects of their patient care sessions. Student will learn procedural and problem solving skills on how to deal with challenging cases through the observation of their peers cases. The nature of the videos will be presented and preliminary findings reported.

FREE Stage Presentation 04

Title: Clinical Dentistry Tutors preceptions of a Peer Observation of Teaching scheme: differences between those with and without a Postgraduate Teaching Qualification

Presenter: Dr Alison Cairns

Authors: Bovill C¹, Bissell V²

Affiliations:

¹Institute for Academic Development, Edinburgh University, Edinburgh, United Kingdom

²Dental School, Liverpool University, Liverpool, United Kingdom

Background: This study is rare within higher education as it deals with a Peer Observation of Teaching (POT) scheme in the complex teaching area of chair-side clinical dentistry. In addition to the traditional dental school environment this study encompasses outreach teaching across 6 Scottish Health Board Areas. It examines the different opinions of, and approaches to, POT between tutors with a postgraduate teaching qualification (PGQ) and those without (Non PGQ).

Aims & Objectives: This study aims to compare PGQ and Non PGQ clinical tutors' perceptions of a clinical chair-side POT scheme.

Materials and Methods: This qualitative study used evaluation research methodology, interview based data collection and utilised NVIVO analysis software. It investigated the views of 39 clinical tutors in 14 clinic locations.

Results: Non-PGQ tutors displayed anxiety regarding involvement in POT. They most valued the reassurance that they were teaching similar content and in a similar way to their peer. PGQ tutors focused attention on self-awareness as a teacher, reflection, teaching styles, student learning and the significance of informal conversations about teaching for scholarly development.

Discussion: Running a POT scheme that brings together both types of tutors will hopefully propagate good teaching practice throughout the Dental School. It is clear that Non-PGQ tutors who have not undertaken a formal teaching qualification or equivalent are unaware of more complex teaching methodologies and focus more on their own performance rather than that of the student.

Conclusions: This POT scheme has been successful on different levels and it acts as a useful tool for personal development of individual teachers no matter what their background. Cross pollination between these groups will hopefully lead to an overall increase in the teaching quality of the clinical tutors

FREE Stage Presentation 05

Title: Investigating Serious Modification for Training Dental Professionals in Child Protection

Presenter: Mrs Christine Park

Authors: *Park CM¹, Welbury RR², Louchart S³

Affiliations:

¹Paediatric Dentistry, University of Glasgow, Glasgow, United Kingdom

²Paediatric Dentistry, University of Central Lancashire/ University of Glasgow, Preston/ Glasgow, United Kingdom

³School of Simulation and Visualisation, Glasgow School of Art, Glasgow, United Kingdom

Abstract:

Not all dental professionals who suspect cases of child abuse or neglect refer cases appropriately. Despite guidance, policies, increased availability of training and inclusion of safeguarding as a recommended continued professional development topic the gap persists, leading us to question whether a more novel method of facilitating learning and training in this area may be appropriate.

Game-based approaches have provided valuable contributions to health domains (i.e. education, attitudes). However, health interventions are often targeted at end-users (e.g. patients /parents) rather than practitioners. This work focuses on developing a better understanding of a professional audience and identifies a process through which a thought-out playful design can be targeted at dental professionals.

In-depth qualitative interviews with dental professionals were undertaken and themes related to attitudes and behaviours in child protection were identified. From these findings a list of criteria and skills desirable in a serious game intervention targeted at dental professionals was developed and a shortlist of current table top games with promising characteristics constructed.

These table-top games were reviewed to identify characteristics and mechanics that might address our pedagogical needs. We discuss the overall pedagogical process and the role of a board game in this approach. We also identify suitable pedagogical approaches for the integration of a serious game and the benefits and purpose of the intervention in this context. We present the current prototype of our game and finally we discuss shortcomings and how a serious modification can lead to a fit for purpose, successful and well-designed serious game for use in teaching and training of child protection for dental teams. Once fully developed the game will be tested and evaluated with dental professionals/ students and we will reflect on the integration of education and game design principles towards health interventions targeted at practitioners.

FREE Stage Presentation 06

Title: Teaching Orthodontic Emergencies Using The “Flipped Classroom” Method – A Mixed Methods Randomised Controlled Trial and The Creation Of A National Orthodontic Emergencies Curriculum

Presenter: Dr Grant Isherwood

Authors: *Isherwood G¹, Burnside G², Taylor K³, Flannigan N⁴

Affiliations:

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²Department of Orthodontics, Liverpool University Dental Hospital, Liverpool University Dental Hospital, Liverpool, United Kingdom

³Department of Orthodontics, Liverpool University Dental Hospital, Liverpool University Dental Hospital, Liverpool, United Kingdom

⁴Department of Orthodontics, Liverpool University Dental Hospital, Liverpool University Dental Hospital, Liverpool, United Kingdom

Abstract:

Traditionally, dental students acquire knowledge via lectures. Conversely, the “flipped classroom” method of teaching involves knowledge acquisition occurring outside of the classroom and uses classroom time for problem solving or practical experience. There is little evidence that flipped teaching improves examination performance or levels of satisfaction for undergraduate students in orthodontics. We aimed to establish whether “Flipped Classroom” teaching produces better examination performance and overall satisfaction among students, versus the existing “conventional” lecture based teaching. 78 students were invited to take part. 61 students were enrolled and randomised to the “Flipped” group or the “Conventional” group. The “Conventional” group (n=30) attended a lecture lasting 30 minutes. The “Flipped” group (n=30) were given access to online videos via a Virtual Learning Environment and then 30 minutes of classroom time was spent performing practical tasks related to the management of orthodontic emergencies, e.g. cutting different archwires, placing wax on demonstration models etc. Students then completed a formative examination. Focus groups using a semi-structured interview guide were used to explore student perceptions of the flipped classroom teaching and the conventional lecture. Results - Orthodontic Emergencies Questions (15 questions): the “Conventional” group (n=22), had a mean exam result of 70.5% (S.D. 8.0%). The “Flipped” group (n=11), had a mean exam result of 72.8% (S.D. 12.9%). There was no significant difference (p=0.532, t-test) between the groups. For non-orthodontic emergencies questions (5 questions), the “Conventional” group had a mean exam result of 64.8% (S.D. 19.9%). The “Flipped” group had a mean exam result of 78.3% (S.D. 21.7%). There was no significant difference (p=0.083, t-test) between the groups. Following thematic analysis of the transcript, themes identified were: pedagogy, overall curriculum change and technology assisted learning. Conclusion - Students benefitted from the flipped classroom method of teaching both in terms of examination performance and overall levels of satisfaction.

FREE Stage Presentation 07

Title: Use of Telehealth Electronic Health Records to Improve Interprofessional Experiences

Presenter: Prof Lynn A. Johnson

Authors: *Johnson L

Affiliations:

Dental Informatics, University of Michigan, Ann Arbor, United States

Aims: Dental educators understand the need to bring healthcare professionals together to promote interprofessional collaborative practice and consequently improve health. The University of Michigan (U-M) strives to continuously improve its interprofessional patient experiences. In order to increase the number of interprofessional experiences and guarantee an optimal educational experience the U-M uses the telehealth capabilities of its cloud-based health record.

Materials and methods: The U-M Community-Based Collaborative Care Program consists of direct partnerships between the U-M and health centers located in thirteen cities throughout Michigan. This collaboration allows students to provide comprehensive oral health care in interprofessional settings to thousands of underserved patients. The telehealth capabilities of ICE Health Systems' cloud-based health record allows educators to remain at the university and use secure videoconferencing to discuss students' patient care activities at these locations. Faculty can concurrently view patients' records and students' reflections. Telehealth embedded in a health record has four goals: (1) Increase the number of student interprofessional experiences. The U-M has increased the number of weeks 130 4th year students participant in interprofessional care from 8 to 12 weeks. (2) Reduce costs by decreasing the traveling of university supervisors. (3) Increase the calibration of supervising preceptors at the remote locations. Telehealth allows 100 simultaneous participants. Calibration sessions are regularly conducted with preceptors at numerous locations to ensure consistent grading. (4) Interprofessional consultations with students are enhanced. Conferencing sessions with interprofessional student teams allow secure discussions of a patient while viewing the record.

Results: Telehealth allows an unique interprofessional collaboration between interprofessional health centers and the U-M.

Conclusions: A health record with a secure telehealth functionality increases communication between the university, preceptors at external sites, and students. This in turn has the long-term goal of improving patient outcomes in oral health and all of health.

FREE Stage Presentation 08

Title: Can the use of student created videos enhance learning in oral radiology? Student experiences based on a pilot study

Presenter: Mr Gerald Torgersen

Authors: *Torgersen G¹, Møystad A², de Lange T³

Affiliations:

¹Section for maxillofacial radiology and IT Section, Institute of Clinical Dentistry, Faculty of dentistry, University of Oslo, Oslo, Norway

²Institute of Clinical Dentistry, Faculty of dentistry, University of Oslo, Oslo, Norway

³Faculty of Educational Sciences, Faculty of Educational Sciences, University of Oslo, Oslo, Norway

Background: The context of the study is our bachelor program in Dental Hygiene. The oral radiology curriculum of this program is comprehensive and complex, including both clinical and theoretical components. In an attempt to enhance the students learning process, 3rd semester students were challenged by the teachers to make a learning video assignment on a clinical subject they wanted to learn more about.

Aims and Objectives:The first aim of this pilot study was to evaluate the students learning enhancements of theoretical concepts and clinical procedures by using video as a resource for learning. The second aim was to evaluate the organization of the learning video assignment and the feedback provided to the students during this process.

Materials and methods: The learning video assignment was presented to the students in the beginning of the 3rd semester. They worked in small groups with 2 – 4 participants to produce a short video (3 – 5 minutes), elaborating a self-selected theme in the student clinic. The students received written feedback from the teachers prior to a plenary presentation of the videos. In the plenary session, teachers, peer students from the same semester and 6th term students gave feedback on the video presentations to further enhance the learning outcomes. Empirically the study was based on a semi-structured student focus-group interview, two logs from each student, and the student videos.

Results: The students reported positive learning experiences based on the work with the videos.

Conclusions: Learning videos made by students and teacher feedback may stimulate and enhance the student learning process regarding clinical procedures in oral radiology. Further analysis of how the students work with video productions are needed in order to draw more substantiated conclusion on the learning outcomes.

FREE Stage Presentation 09

Title: Accessing dental education via online video content

Presenter: Dr Marco Antonio Dias da Silva

Authors: *Dias da Silva MA, Pereira AC, Walmsley AD

Affiliations: School of Dentistry, Birmingham Dental Hospital, Birmingham, United Kingdom

Background: Dental schools provide educational learning materials, but the dental student has quick and easy access to information on the Internet. This content is convenient and attractively packaged, but lacks of peer reviewing and may be incorrect.

Aims & Objectives: This study aimed to evaluate if internet users can find open video content offered by British and Irish Dental Schools on its YouTube and public websites.

Materials and Methods: The current list of British and Irish Dental Schools was obtained from the members list on the ADEE website. Searches were performed via an incognito approach to prevent robot learning. Specific keywords related to video and dentistry guided the searches in the public websites and YouTube channels. The first ten results of each search were considered. The video content was watched and characterised as educational or non-educational. The content quality was not considered. A single reviewer located in the UK made the assessment.

Results: Twenty-Two (19-UK and 3-IE) websites were checked. From 298 videos, only 24 were categorised as having educational content. Video content was found in 81% of the websites, but only 9% were characterized as educational. Video length was 3.15min (± 2.37) long. Most of the videos found focused on highlighting the university facilities and students' opinions. Although university YouTube Channels have received more than 32 million views the dental educational content was minimal. From 400 videos watched, only 19 met any educational criteria. YouTube video length was 8.22min (± 8.33) and mean views number was 118,621 ($\pm 353,366$).

Conclusions: If students start searching the Internet for supplementary material, the established UK and Irish Dental Schools do not provide any noteworthy open source content. Further research is needed to understand the nature of the closed educational material and if the students are receiving training on how to find reliable supplementary content online.

FREE Stage Presentation 10

Title: Implementing an objective digital analysis software in dental education

Presenter: Ms Maximiliane Schlenz

Authors: *Schlenz MS, Schmidt AS, Michel KM, Wegner KW, Wöstmann BW

Affiliations:

Department of Prosthodontics, University of Giessen, Giessen, Germany

Aim: Teaching manual skills and self-assessment of preparations are key aspects in dental education. In order to increase objective evaluation, computer-aided learning (CAL) - software was systematically introduced in the education of undergraduate students. The software should not replace dental teachers, but rather give the students an additional training-tool to improve their skills and provide an objective evaluation of their own preparation and learning progress. It was the aim of this pilot-study to evaluate the acceptance of a digital tool in two pre-clinical courses.

Materials and Methods: Forty-eight students of the Department of Prosthodontics, University of Giessen, received a theoretical instruction in molar preparation, intraoral scanning and digital analyses with the prepCheck-System (Sirona, Dentsply) as a digital tool. Subsequently they used this tool for evaluation of their own preparations. After the course, the students were asked to answer a questionnaire to evaluate the acceptance of prepCheck in pre-clinical education.

Results: Eighty-five percent of the students can imagine using a digital tool for preparations in daily practice. Two-thirds reported to have gain additional motivation through education in digital education. However, only 40.9% of the students see an improvement in their own assessment ability by virtualizing their own preparation on a monitor.

Conclusions: Overall, the results demonstrate an increase motivation among the students but also show that a software tool cannot replace personal teaching by dental teachers. Within the limitation of this pilot-study, CAL-software can be recommended as an additional tool for pre-clinical education.

FREE Stage Presentation 11

Title: A national approach to collating assessment load information in United Kingdom & Republic of Ireland dental schools

Presenter: Dr Upen Patel

Affiliations: School of Dentistry, Birmingham Dental Hospital, Birmingham, United Kingdom

Background: The Dental Schools Council Assessment Alliance (DSCAA) meets biannually with representatives invited from dental schools in the UK (United Kingdom) and the RoI (Republic of Ireland). This approach allows us to share, discuss and disseminate best practice with the ultimate aim to improve assessment in dental education. A concern raised by DSCAA was that the dental schools differ in the number and frequency of assessments used in their dental degree programmes. Whilst this is anecdotal, comprehensive and contemporary knowledge of the assessment load to both students and educators from a national perspective is useful to both inform and optimise curricula in individual institutions.

Aim: The DSCAA aims to produce a contemporary document on the assessment load at national level and provide best practice guidelines for member institutions.

Methodology: Each member dental school was asked to complete a template identifying the assessment load of summative assessments. The template asked for the following information per assessment: (1) when the assessment is held in the academic year, (2) the assessment method, (3) number of question items or words, (4) duration of assessment, and (5) method of standard setting.

Results: Our initial findings have demonstrated that there are indeed variations in both number and the frequency of assessments delivered. This was found from a discussion of the assessment load information where approximately half of the dental schools in the UK and the RoI were represented. Another important finding was the variation in the terminology used to describe different methods of assessments.

Conclusions: In order to further analyse trends and make comparisons, a list of definitions that describe the assessments used in dental education is needed. Further work is ongoing to standardise this information and collect assessment load information from the remaining dental schools in the UK and RoI.

FREE Stage Presentation 12 – Withdrawn

FREE Stage Presentation 13

Title: Digital Media and its Continuing Impact on Dental Education

Presenter: Dr Jonathan San Diego

Affiliations: King's College London Dental Institute

Abstract:

Digital media is changing the way our students learn and our approaches to educating learners, dental professionals and patients. King's College London dental curriculum now has a professionalism course which includes learning outcomes on:

- recognising the significance of digital media to students, to dental professionals and patient care;
- managing digital media in terms of professional identity and privacy;
- discussing the relevant legal and ethical issues and challenges around the use of digital technologies;
- developing a digital media plan for future practice and employment.

In this complex and increasingly digitised society, digital media usage is becoming more and more concerning. At last year's ADEE annual meeting, I presented a Free Stage paper on the current issues, as of 2017, of using social media on the profession, dental care and dental education. 30 conference attendees participated in an interactive poll to answer questions including "the topics which educators felt should be included in embedding digital professionalism in the dental curriculum". Responses included data protection, patients' use of social media, safeguards on data sharing, ethical concerns, regulations and policies, cyber bullying.

Whilst some of the key issues that were identified remain, digital media, however, is ongoingly changing. Technologies such as sensors, wearable devices, artificial intelligence and virtual systems are all coming into play. There is evidence that these technologies have the potential to change provision of healthcare and therefore will change the digital professionalism curriculum. As these technologies are also becoming more and more intrusive, there are significant steps for dental educators to take to recognise and evaluate the impact of these emerging digital technologies on dental education, the profession and clinical practice. Participants in this session will use their personal digital technologies to interactively discuss this topic.