



ADEE 2019 Berlin

FREESTAGE Presentation Schedule

FREEStage

at ADEE

Conceptualised as, an informal and interactive short oral presentation followed by a questions and answer session to share new/evolving initiatives in education, (sometimes still in the process of development), and discuss possibilities with colleagues and peers; FREEStage at ADEE continues to prove popular with delegates and presenters alike.

It allows academics share their current education activities in a more relaxed and supportive environment.

Each selected participant will be allowed up to 15 minutes (including questions and answers, presentation should be no more than 7 minutes in duration) to present their work and findings and engage with the audience in an interactive manner.

Sessions will be chaired by ADEE Executive Committee Member Dr Ronald Gorter who will encourage a facilitative, supportive and collaborative platform for discussion, with an ultimate aim to share your research, best practice and evolving concepts with your peers.

Places are limited and successful delegates have been selected through evaluation of the abstract submitted based on:

1. Creativity of concept
2. Relevance to dental education
3. Possibility for transfer within the European environment
4. Alignment with the aims and objectives of ADEE



FREEStage 2019 has three sessions over two days of the Berlin programme and you can find the allocated time for each presenter in the following tables.

We hope you enjoy the sessions and we encourage you to engage with the presented in a collegial and encouraging manner.

FREEStage Session 1; Thursday 22nd
August 09:30

FREEStage Session 2: Thursday 22nd
August 16:15

FREEStage Session 3: Friday 23rd
August 14:00

FREEStage Session 1: Timetable

Presentation 1.1: 09:30

Presenter: Mr Douglas P Bean
Institution: University of Aberdeen Dental School
Title: Scottish Dental Education Online (SDEO)

Presentation 1.2: 09:45

Presenter: Dr Clement Seeballuck
Institution: University of Dundee
Title: Dental M.U.M.S., unusual pens and the challenges of invention.

Presentation 1.3: 10:00

Presenter: Mr Maarten Wieberdink
Institution: Radboudumc Nijmegen Dental School
Title: Interprofessional education: not a goal on its own.

Presentation 1.4: 10:15

Presenter: Dr Matthew Dingle
Institution: Liverpool University Dental Hospital
Title: AUTOTRANSPLANTATION - EQUIPPING OUR STUDENTS TO BE DENTISTS OF THE FUTURE

FREEStage Session 2: Timetable

Presentation 2.1: 16:15

Presenter: Dr Nina Lundegren
Institution: Malmö University
Title: Examination outcomes after changing the Malmö Modell in 2019 from strict problem-based learning (PBL) to modified case-based learning (CBL)

Presentation 2.2: 16:30

Presenter: Withdrawn

Presentation 2.3: 16:45

Presenter: Dr Vivian I Binnie
Institution: Glasgow Dental Hospital and School
Title: CiDERS: Designing a Community in Dental Educational Research and Scholarship: benefits and barriers

Presentation 2.4: 17:00

Presenter: Assoc Prof Ajay Telang
Institution: Penang International Dental

College

Title: e-Learning @PIDC #4IR

Presentation 2.5: 17:15

Presenter: Dr Melanie Nasseripour
Institution: King's College London FoDOCS
Title: Impact of educational changes on caries risk assessment and patient focused care

Presentation 2.6: 17:30

Presenter: Dr Sally Hanks
Institution: Peninsula Dental School
Title: Developing a national group to support dental professionalism teaching and teachers

Presentation 2.7: 17:45

Presenter: Dr Marco Antonio Dias da Silva
Institution: Birmingham Dental Hospital
Title: A smartphone and £20 in equipment is all that is required to start producing dental educational video content.

Presentation 2.8: 18:00

Presenter: Mr Nicholas Beacher
Institution: Glasgow Dental Hospital and School
Title: The Learner's Perspective in the Comparison of Traditional Case Based Learning and Technology Enhanced Case Based Learning

FREEStage Session 3: Timetable

Presentation 3.1: 14:00

Presenter: Dr Shabana Younas
Institution: The Royal London Dental school
Title: How students make connections between different kinds of learning and prepare for labs, my thinking journey.

Presentation 3.2: 14:15

Presenter: Withdrawn by author

Presentation 3.3: 14:30

Presenter: Dr Lydia Eberhard
Institution: University of Heidelberg
Title: German Admission Test for Medical

Studies – application and predictive value in studies of dentistry

Presentation 3.4: 14:45

Presenter: Dr Susan Parekh

Institution: UCL Eastman Dental Institute

Title: Distance Learning post-graduate clinical teaching: developing a model of delivery

Presentation 3.5: 15:00

Presenter: Dr Gillian Barker

Institution: University of Liverpool
Department of Dental Sciences

Title: Left and right-handed dominance in Oral Surgery and its perceived effects on undergraduate dental education

Presentation 3.6: 15:15

Presenter: Miss Paulina Hofer

Institution: Universidad de La Frontera (UFRO)

Title: Controlled Professional Dental Practice. A Chilean experience from University of La Frontera.

Presentation 3.7: 15:30

Presenter: Dr Tarik Shembesh

Institution: University of Brescia

Title: The affordances of learning technologies in enhancing the reflective practices and learning experience of European Dental Students

Presentation 3.8: 15:45

Presenter: Dr Michael Botelho

Institution: Hong Kong University

Title: Video Vox – a contemporaneous, interactive video player and learning management tool.

Presentation 3.9: 16:00

Presenter: Prof. Dr. Francesc Pérez Pastor

Institution: Escola Universitària d'Odontologia ADEMA

Title: Experiences in launching a new Dental School

Abstracts for each presentation are listed in the following pages.

Freestage Session 1:

Thursday 22nd August at 09:30

Presentation 1.1: 09:30

Presenter: Mr Douglas P Bean
Institution: University of Aberdeen Dental School
Title: Scottish Dental Education Online (SDEO)

Abstract:

Scottish Dental Education Online (SDEO) is an innovative collaborative project funded by the Scottish Government, aimed at developing bespoke, high-quality digital dental undergraduate and postgraduate learning and teaching resources.

It has recently been made available to anyone in the world and is free to access.

Resources include a range of topic based and scenario based e-learning modules, incorporating video, animation, quizzes and laboratory simulations, over a range of dental disciplines.

SDEO has a growing collection of 3D models and animations, all of which are available to view, some are available to download and 3D print if desired.

SDEO also has a bespoke virtual microscopy platform with over 40 slides. This collection is also still growing.

This 'FreeStage' event would aim to:

- Demonstrate some of the resources available on SDEO
- Demonstrate the virtual microscope
- Show people how to login
- Discuss some of our e-learning 'best practice'
- Discuss our e-learning 'lessons learned'
- Outline SDEO's collaboration opportunities

Presentation 1.2: 09:45

Presenter: Dr Clement Seeballuck
Institution: University of Dundee
Title: Dental M.U.M.S., unusual pens and the challenges of invention.

Abstract:

You have a few ideas on how to teach students prior to clinical practice the basics of managing indirect vision and contra angled instruments/ handpieces, disconnected from the oral environment, yet still developing these core skills. How do you put these ideas into practice?

We implemented a new undergraduate dental curriculum for the 2018-2019 academic year. As part of the new curriculum, students undertook an early rotary skills development course. One of the challenges in this was organising how to engage the students and teach these skills at such an early stage in the course.

Pens were designed to replicate the form of a contra angled handpiece. We also created mazes that the students completed using indirect vision.

We developed the Ambidextrous Modular Universal Mounting System (M.U.M.S), using a readily available, well known construction toy. This allowed us to reuse teeth from previous clinical skills courses. Students could orientate these teeth in a number of ways, making it possible for them to cut the previously unused root surface, and undertake work both on a worktop and intra orally in a cost effective, environmentally friendly way.

This presentation details the progression from early conception, through failed prototypes to final execution of how we developed the tools for this course; modelling contra angled "handpiece pens" from denture acrylic, and raiding the toy box to make a novel mounting system for students to practice cavity preparation.

Examples of the activities that the students undertook with these materials will also be discussed as well as how we can improve the course for future years.

Presentation 1.3: 10:00

Presenter: Mr Maarten Wieberdink
Institution: Radboudumc Nijmegen Dental School
Title: Interprofessional education: not a goal on its own.

Abstract:

Background and objective: Society increasingly asks an interprofessional team approach of patients and their (dental) care. Training students in an interprofessional setting contributes to their competencies regarding working within this team. Moreover it contributes to the knowledge of each other's competencies, which are used to the benefit of themselves and their patients.

During the freestage presentation we would like to present the unique Student Run Dental Clinic (SRDC) in Nijmegen, share our experiences in interprofessional education and discuss our challenges.

The Student Run Dental Clinic: The SRDC in Nijmegen (the Netherlands) is an interprofessional clinical workplace where 4th, 5th, 6th years undergraduate dental students work together with 3rd, 4th years students of Oral Hygiene (OH). Supervised by teachers of both professions, they take care of about 600 patients. Working in the SRDC consists of clinical sessions (patient treatment) as well as theoretical sessions (clinical reasoning). Emphasis is on the professional development of the individual students, which is monitored by the use of Entrustable Professional Activities (EPAs), Canmeds reports and (interprofessional) peerfeedback sessions.

Lessons learned & challenges: In the Nijmegen master dental curriculum, we have been working in the SRDC for almost two years now. Evaluation shows that students tend to work together quite naturally. Focus on the educational framework instead of the content alone is a prerequisite to make a SRDC work.

In addition, it seems difficult to grade a student within a team, let alone within a team across both curricula with different culture and exam rules. Challenges are how to create equal and enough attention for both curricula and equivalence for students and teachers of both professions.

Interactive discussion: We would like to invite you to join our freestage presentation to discuss our successes and challenges. And share your experiences in order to learn from each other.

Presentation 1.4: 10:15

Presenter: Dr Matthew Dingle
Institution: Liverpool University Dental Hospital
Title: Autotransplantation - Equipping Our Students To Be Dentists Of The Future

Abstract:

Aims & Objectives: Currently, in our undergraduate curriculum at the Liverpool University Dental Hospital, there is limited emphasis on autotransplantation as a treatment modality. This treatment option has sound evidence base for success and predictability in the management of dental trauma and missing teeth. In the UK, knowledge amongst undergraduate dental students on the subject is varied and is often dependent on the University in which the dentistry programme was undertaken.

Aim: To evaluate and improve undergraduate knowledge on Autotransplantation, through delivery of an educational package.

Materials and Methods: An autotransplantation educational package in the form of an interactive symposium has been designed at LUDH for delivery to undergraduate dental students. Knowledge was assessed both prior to delivery of the intervention and again immediately after the session through a questionnaire. The data was collated with polling software digitally. The resource was then uploaded to the virtual learning environment for future reference and self learning for undergraduates. Following this, a modified version will be delivered to DCTs, SpRs and GDPs with a summary hand-out provided for use in practice.

Results: Knowledge was assessed before and after the delivery of the educational package and the symposium successfully facilitated undergraduate education with evidence of increased knowledge.

Conclusions: This educational package has considerably increased undergraduate knowledge in this area, and therefore ratifies the inclusion of this educational package into the BDS undergraduate curriculum at Liverpool

University Dental Hospital and will be developed for the wider dental community. Information will be delivered through engagement with local dental networks, regional specialist committees and study groups. Through distribution of this package, it is anticipated that knowledge and awareness of autotransplantation in the region will increase, leading to increased referrals and optimisation of patient outcomes.

Freestage Session 2: Thursday 22nd August at 16:15

Presentation 2.1: 16:15

Presenter: Dr Nina Lundegren

Institution: Malmö University

Title: Examination outcomes after changing the Malmö Modell in 2019 from strict problem-based learning (PBL) to modified case-based learning (CBL)

Abstract:

Aims and Objectives: Over recent years an increased failure rate at examinations, and subsequent involuntary dropout, has been seen at the Faculty of Odontology, Malmö University. This has created a need to revise the curriculum to better engage our millennial students. Focus has been to find ways of creating an active learning environment with clear instructions for the students and to make the seminars a better activity for helping the students to understand threshold concepts and stimulate reflection and deeper learning. The aims of this study were to evaluate if examination results improved after a curricular change and determine to what degree the students perceived that the cases and seminars helped in the learning process.

Materials and Methods: The curriculum was changed from PBL to another form of challenge based learning; a modified CBL with continuous quizzes, flipped classroom seminars and concluding lectures. The modification consisted of study instructions with learning outcomes and recommended literature with a clinical application in cases introduced later in the learning process. There was time for self-studies and in between the students met in study groups without a facilitator, to strengthen the collaborative learning. The results of the examination and the parts of the course evaluation concerning student satisfaction with cases (with or without study instructions) and seminars (flipped or non-flipped) in 2019 was compared with the results from 2018 and 2017.

Results: Students' satisfaction with the learning activities, with clearer instructions and flipped classroom, show positive results in the form of increased security and tolerance. Results for student performance will be finalized after the examination in June 2019.

Conclusions: We predict that a revised curriculum with active learning in combination

with introduction and clear and direct instructions, will better engage our millennial students.

Presentation 2.2: 16:30

Presenter: Dr Nina Lundegren

Institution: Malmö University

Title: Can the results of recurrent quizzes during a semester in a dentistry program predict examination results?

Abstract:

Aims and Objectives: The curriculum for a course entitled "Diagnosis and treatment of simple periodontal disorders" in the second semester of the first year, at the program in dentistry at Malmö University is undergoing a curriculum change from PBL to modified CBL. Recurrent quizzes were introduced to promote continuous learning and increase student activity. The aim was to study possible associations between quiz results during the course and the results of the final examination.

Materials and methods: The 65 students were invited to participate in 11 quizzes. These were undertaken in conjunction to flipped classroom seminars and sometimes in connection with cases and concluding lectures. Each quiz comprised 5 to 15 questions with four alternative answers according to the "single best answer" principle. The learning management system Canvas, a platform that could be accessed via computer or smartphone, was used. The total result (%), of all the quizzes combined, for each student was compared with the result of the final course examination for the same student using Wilcoxon rank-sum test. Comparisons were made between the sexes as well as between students newly graduated from upper secondary school and students with other experiences in-between.

Results: The mean number of students taking each quiz was approximately 90%. Preliminary results suggest that it will be possible to identify different groups of students; performing well, performing badly, and those in-between. The results will be finalized after the examination in June 2019.

Conclusion: Recurrent quizzes may provide a valuable tool for students to self-evaluate their progress prior to the high stakes final examination.

Presentation 2.3: 16:45**Presenter:** Dr Vivian I Binnie**Institution:** Glasgow Dental Hospital and School**Title:** CiDERS: Designing a Community in Dental Educational Research and Scholarship: benefits and barriers**Abstract:**

Many European dental schools are looking to develop or expand educational research and scholarship as part of their portfolio of work related to dental education. This paper will outline the process taken during Glasgow Dental School (UK)'s development of a strategy to address the requirements of the institution from student, staff and educational perspectives.

Following meetings with staff, two ways forward were investigated; a focussed approach whereby a small number of educational areas would be prioritised, versus an inclusive approach encompassing a wider programme of work. Various ideological frameworks were also considered.

The ideological framework adopted was based on Community of Practice, as defined by Wenger and Wenger -Trayner (2015) which identifies mutual engagement, joint enterprise and a shared repertoire as important.

The outcome of the process resulted in the development of a strategic map outlining three main areas of focus- Recruitment, Learning and Teaching, and Assessment, in addition to three cross-cutting and supporting themes- Student Participation, Student Support and Simulation & Technology. Ideally, relevant teaching staff would develop scholarship in one of the designated focus areas, aligned to their skill set and experience.

Benefits to date include enabling innovation and evaluation of teaching & learning that aspires to deliver an excellent educational experience for students, in addition to developing interest, skills and motivation in teaching staff.

Barriers include staff who face many conflicting priorities and time pressures, making time for scholarly output, as well as building sustainability into the system for the future.

Plans to evaluate this model will be described, and include consideration of different metrics such as educational papers published, educational doctorates completed, acquisition of grant funding, both internal and external, and qualitative indicators drawn from planned interviews with staff and students.

Presentation 2.4: 17:00**Presenter:** Assoc Prof Ajay Telang**Institution:** Penang International Dental College**Title:** e-Learning @PIDC #4IR**Abstract:**

e-Learning in Dental Education is now a norm globally to support student learning. As we move faster than we can comprehend into the 4th Industrial Age, higher education in Dentistry stands at crucial point and we at Penang International Dental College, Malaysia have developed a unique e-Learning portal that is very different from the regular Learning Management System (LMS) to support our students. The LMS generally is used by most dental schools to primarily share information. Our e-learning, however was developed in house through feedback of students and staff and is a forum that has evolved over the last few years into a online platform for learning, interaction and helped us build an online community for collaborative learning. This presentation looks at sharing our idea and experience in developing and implementing this unique e-Learning portal that supports dental undergraduate learning for digital natives now and in the future.

Presentation 2.5: 17:15**Presenter:** Dr Melanie Nasseripour**Institution:** King's College London FoDOCS**Title:** Impact of educational changes on caries risk assessment and patient focused care**Abstract:**

Introduction: The paradigm change towards a minimally invasive, patient-focused model of caries management requires education on oral health risk assessment. The aim of this study was to evaluate the knowledge, perception and behaviour of clinical dental students before and after implementation of changes in the caries

risk assessment (CRA) education programme in years 3, 4 and 5 of the BDS undergraduate curriculum at a UK dental school. The enhanced teaching in CRA was expected to improve students' practice of caries risk assessment and patient risk appropriate care plan.

Method: After ethics approval (Ref: MR/16/17-629), anonymous questionnaires, before and after implementation of 2 seminars in year 3/4 and 1 lecture in year 5, were used to collect data on students' behaviour, perception and knowledge of CRA. This was analysed using SPSS software. Anova and Bonferroni post hoc tests were conducted exploring the answers by age, gender, previous degree and year groups.

Results: Statistically significant differences were found ($p < 0.05$) between year groups regarding behaviour and knowledge towards impact of CRA on care planning as well as behaviour and perception towards CRA /Caries Risk Factors.

Regarding feeling having adequate knowledge identifying risk factors 98% agree. They all (100%) correctly identified medical factors as impacting CRA.

Despite 93% recognising CRA tools available for risk assessment they still did not feel confident using any and did not use them when doing risk assessment chairside.

The most notable improvement was regarding knowledge of review protocol which increased from 9 to 72%. It is noteworthy that 76% agree that their clinical teacher guidance was consistent with education received on patients' risk-based management.

Conclusions: The curriculum change had a positive impact on the students' behaviour towards CRA, Caries Risk Factors, perception of Risk Assessment and knowledge of impact of CRA on care planning.

Presentation 2.6: 17:30

Presenter: Dr Sally Hanks

Institution: Peninsula Dental School

Title: Developing a national group to support dental professionalism teaching and teachers

Abstract:

Professionalism is a key area of the curriculum for the development of dental professionals. Despite this, no single approach has been recognised for teaching, learning and assessment in this area. In addition, professionalism issues with students can be particularly challenging to deal with and in some countries can affect a student's ability to register as a dental professional.

This project aimed to develop a UK national forum for the education of professionalism. This forum aims to provide help and advice, a network and resources to facilitate this area of education and support for those required to teach it.

Work was undertaken to determine the nature of the platform to be developed, this involved participation in groups already established to support professionalism education in medicine, liaison with the General Dental Council and networking with teachers of professionalism in the UK. Leads from each Dental School were identified and a pilot meeting was planned. The agenda was created to enable a collaborative approach to the development of the group. The group thoughtfully developed terms of reference, a constitution, and website to support the participants and the meetings. The group was further extended beyond dentistry to include teachers from all university undergraduate and postgraduate clinical dental degree programmes.

The group has been successfully established for two and a half years with bi-annual meetings including sessions led by professionalism topic experts, sharing of teaching practices, discussions of complex issues and liaison with external bodies. The group has been instrumental as a consultative forum to further regulator and educator events and publications.

Meetings are well attended and participants welcome the opportunity to discuss and advance this complex area of curricula and regulation. This collaborative approach has been successful in supporting this area of dental teaching practice.

Presentation 2.7: 17:45

Presenter: Dr Marco Antonio Dias da Silva

Institution: Birmingham Dental Hospital

Title: A smartphone and £20 in equipment is all that is required to start producing dental educational video content.

Abstract:

Students have reinvented the way learn. For instance, Google consumer surveys have shown that 18% of its viewers visit YouTube to improve their professional skills. It is similar in dentistry and up to 90% of the dental procedures found on YouTube come from non-academic/independent sources. The low interaction by academic institutions on this platform may be a result of local difficulties in video production, such as lack of equipment, technical support and training. Easy access encourages high participation and undergraduate students are quick to turn to YouTube for information rather than utilising material from their dental course closed platforms.

The aim of this study is to demonstrate how to produce preclinical dental educational video content using a smartphone and £20 in equipment. YouTube dental educational video usage evaluations were used to discuss the implications of the video features on cognitive load management, user engagement, and the promotion of active learning. The introduction of guidelines for the production of educational videos will improve the student learning experience in a structured and relevant manner.

Presentation 2.8: 18:00

Presenter: Mr Nicholas Beacher

Institution: Glasgow Dental Hospital and School

Title: The Learner's Perspective in the Comparison of Traditional Case Based Learning and Technology Enhanced Case Based Learning

Abstract:

Introduction: Technology is infiltrating all walks of life including Learning and Teaching in Higher Education. Case Base Learning (CBL) is a recognised pedagogical approach in learning and teaching which can foster active learning and enable deep learning. Founded in action research a mixed methods methodology was utilised to understand if from a student perspective, technology could improve the teaching and learning experience of CBL.

Aim: To compare the student perspective of traditional CBL and technology enhanced CBL (TECBL).

Objectives:

- To understand how learners perceive their experience of CBL with and without the use of technology and the effects on assessment performance
- To understand the advantages and limitations of TECBL when compared to traditional CBL
- To understand if technology can overcome the limitations of traditional case-based learning

Methods: A TECBL resource was designed and developed to be used in the project. Students from year three of an undergraduate dental programme were recruited into a two-armed study. Each group was exposed to traditional and technology enhanced CBL.

Four questionnaires were developed, piloted and administered to obtain the student perspective of the different pedagogical approaches. A combination of Likert Scale questions and open-ended questions were used to enable qualitative analysis. Comments provided by students were collated and thematic analysis was undertaken. Additionally, assessment was utilised to determine if technology had an impact upon student performance.

Results: Fifty-eight participants were recruited. This research found that TECBL has no impact upon results obtained in objective assessment. Technology was found to improve educational access and can facilitate active learning and subsequently deep learning.

Whilst learners develop online skills, the inability of technology to develop face to face communication skills was a significant limitation. Learners appreciate peer and teacher fellowship in education. TECBL is one method to provide teaching within a blended learning model.

Freestage Session 3:

Friday 23rd August at 14:00

Presentation 3.1: 14:00**Presenter:** Dr Shabana Younas**Institution:** The Royal London Dental school**Title:** How students make connections between different kinds of learning and prepare for labs, my thinking journey.**Abstract:**

Much of dental education is predicated on conceptions of transfer, with students expected to apply theory to practice with little consideration of the teaching and learning strategies we might adopt to enable them to do this. I was curious about creating an e-learning package to help support learning in labs, but in doing so I had to question my assumptions about how students make connections between different kinds of learning and prepare for labs.

For students to perform invasive procedures safely on patients, they must first acquire the psycho motor skills to do so, in a simulated environment of clinical skills labs. After several years of observing staff and students in this environment, the difficulty of this process was apparent. We are behind the curve of what works according to the pedagogic literature, this was the 'gap' I needed to explore.

Theory alone is not enough to learn skills, alternatively practice alone is not sufficient for a profession such as Dentistry, combining these has evolved work place learning theories, (Evans et al 2011) which have not been fully incorporated into all aspects of university education. How can we bridge this gap between theory and practice and provide students with a link to help guide them through this difficult process, based upon the pedagogic theories we know work?

Re-contextualisation of knowledge by learners lies at the centre of understanding what allows students to move knowledge from lectures to labs, and challenges the concept of 'transfer' as a linear process that just somehow happens. My qualitative research examines how a specially designed multimedia e-learning package influences students lab experience. Four post-lab focus groups (22 participants) conducted, template analysis used to analyse data, initial findings indicate e-learning has

potential to help students make valuable connections between the classroom and labs.

Presentation 3.2: 14:15**Withdrawn****Presentation 3.3: 14:30****Presenter:** Dr Lydia Eberhard**Institution:** University of Heidelberg**Title:** German Admission Test for Medical Studies – application and predictive value in studies of dentistry**Abstract:**

Aims and Objectives: Studies of dentistry are highly practical and pre-dental school grades as well as simple dexterity tests seem to have low predictive rates for academic success. In Germany, the Test for Medical Studies (TMS) is an admission test frequently used for dentistry. Aim of our study was to determine the predictive validity of the TMS as well of the other admission criteria like school grades (GPA) and relevant prior professional training.

Material and Methods: In a preliminary analysis, three cohorts of dental students (N=221) were followed for five semesters into their preclinical training and evaluated regarding the outcome measures a) practical preclinical examination (1st state exam) b) oral preclinical examination (1st state exam) and c) duration of preclinical dental studies. The effects of TMS, GPA and professional training were analyzed using factor analysis with Varimax-rotation, Spearman correlation and MANOVA (IBM SPSS Statistics 25).

Results: The factor analysis of the TMS yielded three components: verbal-mathematical (TMS_C1), spatial-figural (TMS_C2) and factual memory (TMS_C3). Only spatial-figural items (TMS_C2) correlated mildly with the GPA ($r=0.26$) and with practical ($r=0.13$) and oral ($r=0.11$) preclinical examination. All other correlations were negligible. The MANOVA revealed a significant influence of GPA ($P<0.001$) and TMS_C1 ($P=0.019$) on the oral preclinical examination. The score of the practical preclinical examination and the duration of studies was not affected by any of the admission parameters. The explained variance was low (corr. $r^2 = 0.03... 0.095$).

Discussion: The TMS seems to have low predictive validity for academic success in studies of dentistry. Specifically, according to this pilot study, practical psychomotor competences seem not covered by the above mentioned admission criteria. Collection of further data is essential to substantiate these results. Adequate admission tests for dental students in Germany would be desirable.

Presentation 3.4: 14:45

Presenter: Dr Susan Parekh

Institution: UCL Eastman Dental Institute

Title: Distance Learning post-graduate clinical teaching: developing a model of delivery

Abstract:

Introduction: A flexible approach to post-graduate teaching is needed to meet the demands of prospective students. The distance learning Paediatric Dentistry MSc was developed and has been running for 4 years. The aim of this study was to evaluate methods of distance learning teaching preferred by students, including synchronous and asynchronous methods.

Methods: Survey of final year and completed students to determine what teaching methods they preferred and why. Reasons for undertaking distance learning vs face-to-face were also explored.

Results: A total of 24/27 students responded (89%). The most preferred methods were pre-recorded online lectures, and online resources for self-guided learning. The least effective was real time interactive webinars, and a twitter based journal club.

Conclusion: Students had a high level of confidence in using lecturecasts and online resources. It is important to design opportunities for students to interact face-to-face early in the course to promote engagement, and enhance student learning.

Presentation 3.5: 15:00

Presenter: Dr Gillian Barker

Institution: University of Liverpool Department of Dental Sciences

Title: Left and right-handed dominance in Oral Surgery and its perceived effects on undergraduate dental education

Abstract:

Introduction: Training dental undergraduate students to perform Oral Surgery procedures requires the use of specifically designed dental equipment. The use of extraction forceps, needle holders and scissors are generally hand specific and anecdotally a level of adaptation is required by left-handed students when teaching occurs with right-handed equipment; leading to more challenging teaching, physical issues and a perceived disadvantage in training. A literature search of English language journals did not produce any papers focusing on this topic in the Oral Surgery setting.

Aims/ objectives: This study aims to explore left-handedness amongst undergraduate dental students and the perceived issues which arise when trained in a right-handed Oral Surgery environment within a dental school.

Methods: The study design was a questionnaire. Ethical approval was granted. All dental undergraduate students at Liverpool Dental School in academic years 3/4/5 (217 students in total) were invited to voluntarily participate, with pre-clinical years 1/2 excluded. All data was collated and analysed using simple statistical methods.

Results: A response rate of 78%(169) was achieved. The level of left-handedness was 8%(13) within the dental student cohort. 19%(32) of students were aware of the existence of left-handed equipment. Of the issues experienced by left-handed students using right-handed instruments, 32% noted the procedure being more difficult, 36% expressing discomfort during procedures, 14% reported musculo-skeletal problems post procedures and 18% felt their adaptation compromised patient treatment. 46% of left-handed students resorted to using their non-dominant hand when adapting their technique.

Conclusion: We found a high incidence of perceived issues from left-handed students when completing Oral Surgery procedures with right-handed instruments. This study raises the question as to whether these issues are disadvantaging left-handed students in their training and provides further insight into approaches to maximise dental education for all undergraduate students.

Presentation 3.6: 15:15**Presenter:** Miss Paulina Hofer**Institution:** Universidad de La Frontera (UFRO)**Title:** Controlled Professional Dental Practice. A Chilean experience from University of La Frontera.**Abstract:**

The controlled professional practice (CPP) is a dental program subject that includes the final level of preparation of undergraduate dental students, and it is a requirement to obtain the title of general dentist. CPP is a one year subject divided in two semesters (CPP I and CPP II). In both semesters the students can applied to national or international mobility.

Its learning results are: Design collectives interventions of promotion, fomentation and prevention in oral health; to demonstrate integral management of dental programs in life cycle; demonstrations of clinical, ethical and management skills on patients dental interventions.

CPP teaching-learning strategies and methodologies are developed through risk approach clinical care, under professional supervision of dental teams, through clinical dental public health agreements throughout the country and Universidad de La Frontera.

The activities developed by the students in national CPP, includes: clinical dental public health attention, communitarian activities, training oral health monitors in primary schools.

The activities developed by the students in international mobility will depend to the rules and agreements of the foreign dental program that received them (Latin-Americans and/or European dental programs).

The aim of the primary schools training is to promote self care dental health by training oral health monitors on different variables: education, oral hygiene, diet, fluorides, etc.

The aim of communitarian activities is to integrate the student on the community where will develop clinical activities throughout the semester not only on dental activities but also on social activities.

The evaluation process of both CCP I and II, it develops through a full report of the community

where they worked, grades from clinical supervision and a final oral exam in front a commission conformed by university authorities, dental public health authorities and special guests related to the academia or dental specialties.

Presentation 3.7: 15:30**Presenter:** Dr Tarik Shembesh**Institution:** University of Brescia**Title:** The affordances of learning technologies in enhancing the reflective practices and learning experience of European Dental Students**Abstract:**

Reflection is regarded as a core aspect of learning. Moreover, reflective practice is regarded as an essential quality of being a competent dental health professional.

Mann et al conducted a literature review that has found reflection to be common to inform practice among healthcare professionals. However, with different orientations and varying degree of depth and less practiced the more junior the professional. In health professions educational activities are being incorporated in modern curriculums to foster reflective practice with mainly theoretical evidence to support its use. Moreover, that reflective practice can be confidently assessed and that it can be fostered and developed with certain interventions. Nonetheless, research on the effectiveness of strategies to foster reflection was in early development.

The use and development of a variety of teaching and learning techniques that engage students in reflection are popular in medical and dental education. Evidence informed higher education practice is essential to the adoption and implementation of such techniques. In addition it would allow their use with confidence

The aim of the presentation will be to explore how can we empower the future European dental students with technologically enhanced solutions and practices to enhance their reflective practice as well as allow them to develop as professionals and life long learners

Presentation 3.8: 15:45**Presenter:** Prof Michael Bothelo**Institution:** Hong Kong University

