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Letter To Editor

Adopting law school pedagogy into teaching and learning of dentistry- my Melbourne experience

Dear Editor,

In 2014, I was fortunate to be accepted into the fully-funded Specialist Certificate in Teaching and Melbourne Teaching Certificate programs at Melbourne Graduate School of Education. ranked world's second-best institution in the field of educational study (QS Top Universities, 2014). In the midst of completing my PhD study at the University of Melbourne, I was determined at taking advantage of the opportunities and gaining as much experience as possible that the University could offer in an endeavor to improve the quality of dental education and practice back home. Meeting other current and future leaders in education, I was overwhelmed by the unique differences portrayed in relation to our academic, career and cultural backgrounds, as well as the enthusiasm expressed by each of the participants. This further inspired me to be adamant in adopting such diversity into establishing symbiotic relationship that would lead to the advancement of higher education.

One of the tasks during these programs was to observe teaching and learning activities of a colleague from a different faculty, which in my case was law. Coming in for this activity with misconceptions about the teaching of law, I then became stimulated with the amount of discussion, debate and brainstorming in the class-

room, brought about by the 'blended learning approach' in teaching. In the teaching of law, the blended learning approach, which integrates face-to-face teaching, independent studying and online learning experience, prepares students to be actively engaged in classroom discussion and brain-storming in discussing examples of legal cases and other learning issues (Hess, 2013). Rather than merely learning the theory or concept outlined in the legal documents, Act or constitution, such learning techniques have been proven effective in preparing graduates with employability skills fundamental to the professional practice of law, including oral and written communication skills, teamwork and time management (Lane, 2016).

From this observational experience, I came to a conclusion that the teaching of dentistry should also adopt an approach such as that of the teaching of law, which emphasized on integrating the fundamentals of scientific theory and professional practice. Such a learning approach is essential, as graduates of Malaysian dental school were reported to be incompetent in applying theoretical knowledge into providing holistic patient care (Yusof, et al., 2010). An effective learning strategy that seeks to focus on comprehensive patient management through evidence-based approach is therefore important in order to prepare students for the future challenges of clinical practice. A learning

environment that stimulates students' active participation in teaching and learning is also integral to developing strong interpersonal skills and professional demeanour, which is crucial for one's future career progression.

Similar to the teaching of law, blended learning approach has been introduced and implemented in dental schools around the world, including Malaysia (Bhardwaj, et al., 2015, Maresca, et al., 2014, Reissmann, et al., 2015). The blended learning approach has been found effective in improving students' clinical skills, understanding and interest in the subject matter (Maresca, et al., 2014, Reissmann, et al., 2015). Self-directed learning approach, adopted in blended learning, also encourages students to become self-sufficient individuals in independent life-long learning undertaking (Faraone, et al., 2013). In addition to blended learning, I hereby opine that problem-basedlearning (PBL) activities should be implemented in integration with the former, and in a larger scale, in order to provide students with opportunities in engaging and applying the theories they learn into managing patients in a clinical setting (Barman, et al., 2006). The current extent of PBL incorporated into the undergraduate dental curriculum in Malaysia should be enhanced, with more sessions conducted to discuss a variety of clinical cases. Case scenarios that include aspects relating to systemic health, socio-economic status, emotional and psychological wellbeing, environmental factors including cultural and social norms, as well as other issues that may affect treatment planning and maintenance of health need to be incorporated in an attempt to prepare students for providing care in a holistic manner. Implementation of blended-learning activities, which reduces the content of learning to be carried out face-to-face, allow for more opportunities for PBL to be conducted.

Besides increasing the amount of student' engagement with PBL, the implementation of PBL should also be assessed, to ensure its' quality and effectiveness. Students' diversity, such as that related to language proficiency, cultural values or technology literacy, need to be assessed and addressed, as some Asian students reported facing difficulty in adapting to this learning method (Sanders and Lushington, 2002). Dental educators, including academic advisors and mentors, need to play a proactive role in identifying students who experience issues in adapting to PBL activities, and develop strategies to remedy issues faced by these individuals. A one-stop academic center that caters for guiding students who experience learning difficulty, such as that available at the University of Melbourne, would be beneficial in supporting students' diversity in any area of learning.

Another suggestion for an improved students' learning experience, adopted in other institutions, is to establish a 'think tank' or a focus group, consisting of student representatives from each academic year to address any pedagogical issues. Such initiative is relevant in Asian countries, where the students are culturally unprepared to be critical and outspoken, especially during teaching and learning (Khoo, 2003). Lack of student-faculty engagement may also occur as a result of superiority standard that exists within the dental fraternity, in which specialists are held in high regard and may be perceived as being too intimidating to be approached (Rowland, et al., 2010). Having

a 'think tank' group and faculty student advocate may bridge this gap as representatives from both sides of the party collaborate to improve the quality of teaching and learning (Pritchard, et al., 2009).

Overall, the programs have offered me an interesting experience and opportunity to learn from peers across the University, dedicated to development of teaching and learning. I learnt the different educational challenges encountered by other disciplines and the various teaching strategies adopted. Such an experience provided me with a valuable insight into enhancing my own teaching performance, drawn by integrating the various perspectives of academicians of other fields.

Mas Suryalis Ahmad

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References:

QS Top Universities (2014). QS World University Rankings by Subject 2014 - Education. London: QS Top Universities [updated 2014; cited 2015 Apr 16]. Available from: http://www.topuniversities.com/university-rankings/university-subject-rankings/2014/education-

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ing#sorting=rank+region=+country=+faculty=
+stars=false+search=

 Hess GF (2013). Blended Courses in Law School: The Best of Online and Face-to-Face Learning? *McGeorge. Law. Rev.* 45 (1), 51-84.

- Armbruster P, Patel M, Johnson E, and Weiss M (2009). Active learning and student -centered pedagogy improve student attitudes and performance in introductory biology. CBE. Life. Sci. Educ. 8(3), 203-213.
- Victoroff KZ, and Hogan S (2006). Students' Perceptions of Effective Learning Experiences in Dental School: A Qualitative Study Using a Critical Incident Technique. *J. Dent. Educ.* 70(2), 124-132.
- Faraone KL, Garrett PH, and Romberg E (2013). A blended learning approach to teaching pre-clinical complete denture prosthodontics. *Eur. J. Dent. Educ.* 17(1), e22e27.
- Khoo HE (2003). Implementation of problem
 -based learning in Asian medical schools
 and students' perceptions of their experience. *Med. Educ.* 37(5), 401-409.
- Rowland ML, Naidoo S, AbdulKadir R, Moraru R, Huang B, and Pau A (2010). Perceptions of intimidation and bullying in dental schools: a multi-national study. *Int. Dent. J.* 60(2), 106-112.

Compendium of Oral Science Volume 1|2015

SUBMISSION GUIDELINES

Mission and Scope:

Compendium of Oral Science (Compend.Oral.Sci), is the official journal of the Faculty of Dentistry, Universiti Teknologi MARA (UiTM). The goal of Compendium of Oral Science is to publish peer-reviewed, hypothesis-driven, original research articles on a broad range of topics of general interest to those working on the oral science and dentistry. The journal welcomes submissions in a wide array of subspecialties from throughout the world in achieving this goal.

Types of Articles Published

Authors are invited to submit manuscripts for publication as Regular articles (full-length research reports), short communications, case reports, Reviews and Letters to Editors.

Regular Articles: These should describe new and carefully confirmed findings, and experimental procedures should be given in sufficient detail for others to verify the work. The length of a full paper should be the minimum required to describe and interpret the work clearly.

Short Communications: Short communications should aim at being **no longer than two printed pages**. They should contain important, new, definitive information of sufficient significance to warrant publication. Short communications need not follow the usual division into Material and Methods etc. but should have a short Abstract.

Case Reports: Illustrating unusual and clinically relevant observations are acceptable but their merit needs to provide high priority for publication in the Journal. On rare occasions, completed cases displaying non-obvious solutions to significant clinical challenges will be considered. Short papers not exceeding 1200 words, a maximum of three illustrations (with consideration to certain case reports) and five references may be accepted for publication if they serve to promote communication between clinicians and researchers.

The main text of case reports should be organized with Introduction, case report, discussion and conclusion.

A paper submitted as a brief clinical / case report should include the following:

- A short introduction (avoid lengthy reviews of literature);
- The case report itself (a brief description of the patient/s, presenting condition, any special investigations and outcomes);

Discussion which should highlight specific aspects of the case(s), explain/interpret the main findings and provide a scientific appraisal of any previously reported work (if any) in the field. Interpretation of their significance and to draw a **Conclusions** or generalizations about future cases when warranted by the evidence presented, or suggestion for further possible studies.

Reviews: Submissions of reviews covering topics of current interest are welcome and encouraged. Reviews should be concise and no longer than 4-6 printed pages (about 12 to 18 manuscript pages). Reviews are also peer-reviewed.

Letters to the Editor: Letters to the Editor regarding published articles should be received within 2 months of mailing of the journal, letters regarding profession related matters will also be considered. Authors are encouraged to keep letters concise and succinct, with a limit of no more than 750 words. Introduction of new data will not be permitted. Each letter will be submitted to the author of the original paper so that any reply may be published simultaneously with the letter. Letters should have a descriptive title.

Frequency: One issue a year

Manuscript Submission Process

Before submitting your manuscript to **Compendium of Oral Science** (Compend.Oral.Sci), authors should be familiar with the Editorial Policies. These describe our requirements regarding human and animal research, materials and methods disclosure, and prior publication. Information regarding the expectations of reviewers and editors and the review process are also available on this page.

Letter of Transmittal

This letter must be supplied during submission. The signatures of the corresponding author is required. The letter must have following:

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- Type of Manuscript: Regular Article, Short Communication, Case Report, Review and Letter to the Editor.
- Brief Statement of Significance: A statement that describes the significance of the paper.
- Statement of Direct Participation: statement that declares that all of the authors have directly participated in the planning, execution, or analysis of the study and resulting paper, and have read and approved the version submitted.
- Information: Must include information on prior or duplicate publication or submission elsewhere of any part of the work/study; and a statement of financial or other relationships that might lead to a conflict of interest. Copies of any permission(s) to reproduce published material, and to use illustrations or report information about identifiable people must accompany the manuscript.
- Optional- The contact information of any suggested reviewers (names, addresses, and e-mail).

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As an integral part of the submission process, Corresponding authors are required to confirm whether they or their co-authors have any conflicts of interest to declare, and to provide details of these.

Any changes made to the list of conflicts after the paper is accepted must be submitted in writing, signed by the appropriate authors (that is, the corresponding author and the author for whom the conflict exists), to the *Com-*

pendium of Oral Science Editorial Office. Publication of manuscripts will be withheld until all such written approvals are received. Compendium of Oral Science accepts no responsibility for such changes.

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- Animal experiments: When reporting animal experiments authors should indicate whether the institution's, national research council's, or any other law on the care and use of laboratory animals was followed.
- Human subjects: When reporting on human subjects, authors should indicate whether the procedures followed were in accordance with the ethical standards of the Helsinki Declaration (1964, amended most recently in 2008) of the World Medical Association. Manuscripts should include a statement that the patient's written consent was obtained and any information, including illustrations, should be as anonymized as far as possible. Authors should indicate that the design of the work has been approved by local ethical committees or that it conforms to standards currently applied in the country of origin. The name of the authorizing body should be stated in the paper.

Clinical Trials

Authors should indicate that the design of clinical trial study has been approved by local ethical committees / appropriate authority or that it conforms to standards currently applied in the country of origin. The name of the authorizing body should be stated in the paper. The clinical trial registration number and name of the trial register will then be published with the paper.

Funding

All sources of funding should be declared in the Acknowledgements. If a private/commercial sponsor supported the research, authors are advised to describe the role of the study sponsor (s), if any, in study design; in the collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication. If the funding source had no such involvement, this should be stated.

Details of all funding sources for the work in question should be given in a separate section entitled 'Funding'. This should appear before the 'Acknowledgements' section.

The following rules should be followed:

- The sentence should begin: 'This work was supported by ...'
- The full official funding agency name should be given, i.e. 'National Institutes of Health', not 'NIH' (_Grant numbers should be given in brackets as follows: '[grant number xxxx]'
- Multiple grant numbers should be separated by a comma as follows: '[grant numbers xxxx, yyyy]'
- Agencies should be separated by a semi-colon (plus 'and' before the last funding agency)
- Where individuals need to be specified for certain sources of funding the following text should be added after the relevant agency or grant number 'to [author initials]'.

An example is given here: 'This work was supported by the National Institutes of Health [AA123456 to C.S., BB765432 to M.H.]; and the Alcohol & Education Research Council [hfygr667789].'

Evaluation of manuscripts

Submitted manuscripts are subject to peer review and are expected to meet standards of academic excellence. Peer-reviewers identities will remain anonymous to the authors. The Editor-in-Chief's decision regarding publication is based on the recommendation of the reports of reviewers, which will, at the Editors' discretion, be transmitted to the authors.

Authors may suggest the names and addresses of a few potential reviewers. The Editors and Associate Editors will be guided but not necessarily bound by these suggestions.

Form and Style of Manuscript

Manuscripts must be written in English. Manuscript documents should be formatted as follows:

- They should be typed on A4 form (21×29.7 cm or 21.6×28 cm)
- Double spaced
- 2.5 cm (1 inch) margins
- Justify
- Page numbers at the bottom of each page; centered or right-justified
- 11-point font; restrict fonts to Arial throughout the manuscript (Use of other fonts is not recommended and could result in problems with converting your manuscript for review.)

Avoid boldface, underlining, or italics in the manuscript

Other formatting notes:

- We do not publish Appendices.
- Do not embed figures into the manuscript. They must be uploaded as separate files for each figure. Separate pages should be used for the following:(1) title page (s), (2) abstract, (3) text, (4) footnote(s) to the text, (5) references, (6) table(s), (7) legend(s) to figure(s), (8) declaration of Funding and Conflict of Interest. The manuscripts should be arranged in the order indicated above and all pages should be numbered in succession except the figure(s), the title page being page 1.

Indicate the appropriate location in the text of the tables, figures, and other subsidiary materials by marginal notes. Latin words should be italicized (for example: in vitro, i.e., etc., per se). Footnote(s) to the author's name (s) and affiliation(s) should appear on the title page. All footnotes should be numbered in succession with superscript, Arabic numerals, starting from the title page footnote(s). Footnotes to tables should be identified with superscript lower case (a, b, etc.), and placed at the bottom of the table. Acknowledgement (if any) should appear after the main text, and before the References. It is advised that authors note any conflict of interest in this section.

Organization of Manuscript

A desirable plan for the organization of a Regular Paper is as follows: (1) TITLE (2) ABSTRACT, (3) INTRO-DUCTION with no heading, (4) MATERIALS AND METHODS (5) RESULTS (6) DISCUSSION (7) REFER-ENCES.

1. Title Page

Provide a title page, containing the following items.

- i) The type of paper
- ii) Title. The title should be informative and as short as is consistent with clarity. The title should not include chemical formulae or arbitrary abbreviations, but chemical symbols may be used to indicate the structures of isotopically labeled compounds. The numbering of parts in a series of papers is not permitted, but titles and subtitles may be used if necessary.
- iii) Next-line. List full names of all authors. A footnote reference(s) to an author(s), indicating a change of address, should be given on the title-page.
- iv) Next-line. List the institution(s) in which the work was carried out, and the Zip Code / post code, if available.
- v) Running title. Provide a short running title of less than 50 strokes. It should be as informative as possible.
- vi) The name, complete mailing address, telephone number, Fax number, and E mail address of the person to whom correspondence should be sent. To expedite the review, much of the journal's correspondence will be by E mail.
- vii) Abbreviations. Non-standard abbreviations should be defined, even if they are known to those familiar with the field. List all non-standard abbreviations used in the paper in alphabetical order in a footnote on the title page.

Customary abbreviations in wide use need not be defined in text (e.g., RNA, ATP). Define other abbreviations the first time that they are used. Refer to the Journal of Biological Chemistry for recommended abbreviations for biological compounds, Chemical Abstracts for names of chemical compounds, Conn's Biological Stains (10th Edition, RW Horobin and JA Kiernan (eds.), BIOS Scientific Publishers) for nomenclature, and the CSE Style Manual (2006, 7th ed., Council of Science Editors) for scientific abbreviations. Use SI units only. The Journal does not print the degree symbol before temperature symbols. All temperatures are printed as follows: 80C, 37.4F, 276K.

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The Abstract should not exceeding 250 words. Abstract text should be divided into the following sections: Objectives (a brief statement of the purpose of the investigation along with the the working hypothesis)-Materials and Methods (A brief description of the materials and experimental method used); Results (state the results simply and clearly so that significant facts can be readily identified, where appropriate, statistics should be clearly stated); Conclusions (a brief summary of the essential results you believe were demonstrated by the experimental data and the impact of the results). Abstract should be in a form comprehensible to any scientist and suitable for publication without the full article text.

Avoid statements such as "The significance of these results is discussed" that do not help the reader. The abstract should be intelligible to the non-specialist as well as the specialist in your field, and hence should avoid

specialized terms and abbreviations.

ii) **Key words**. Provide 3-5 key words identifying the nature of the subject matter alphabetically in the last part of the summary.

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The main part of an article should start with a brief Introduction, which outlines the historical or logical origins of the study and clearly states the aim of the study and/or hypothesis to be tested, without repeating the abstract or summarizing the results. Avoid giving an extensive review of the literature.

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This section should present clearly but succinctly the experimental findings. Only results essential to establish the main points of the work should be included. Numerical data should be analyzed using appropriate statistical tests.

For guidelines on how to report statistical results, see Bailar, JC, Mosteller, F (1988) Guidelines for statistical reporting in articles for medical journals. Ann Intern Med, 108:266-273; Curran-Everitt, D, Benos DJ, (2004) Guidelines for reporting statistics in journals published by the American Physiological Society. J Neurophysiol, 92:669-671; Lang, TA, Secic, M (2006) How to report statistics in medicine: annotated guidelines for authors, editors and reviewers, 2nd edition, Philadelphia, PA, ACP Press; Sarter M, Fritschy JM (2008) Eur J Neurosci 28:2363-2364. compact presentation.

Experimental animals: When experimental animals are used, specify **species**, **strain**, **sex**, **age**, **supplier**, **and numbers of animals** used in total and for individual experimental conditions. The species should be identified in the Title or Abstract.

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The observations should be presented with minimal reference to earlier literature or to possible interpretations. The main statistical results should be reported in the Results section. The description of the statistical results should include the proper statistical term (such as the F statistic) as well as the degrees of freedom and the

P value. The description of statistical results in the figure legends should be limited to important post hoc comparisons.

Statistical methods should be described with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. When possible, findings should be quantified and appropriate measures of error or uncertainty (such as confidence intervals) given. Details about eligibility criteria for subjects, randomization and the number of observations should be included. The computer software and the statistical method(s) used should be specified with references to standard works when possible

6. Discussion

The discussion section presents the interpretation of the findings, this is the only proper section for subjective comments. The discussion section should be as concise as possible and should include a brief statement of the principal findings while avoiding repetition of statements provided in the Abstract or the Results section.

A discussion of the validity of the observations, a discussion of the findings in light of other published work dealing with the same or closely related subjects, and a statement of the possible significance of the work. Extensive discussion of the literature is discouraged.

7. References

Only published and "in press" (i.e., accepted for publication in a specific journal or book) references should appear in the reference list at the end of the paper. The latest information on "in press" references should be provided. Any "in press" references that are relevant for reviewers to see in order to make a well-informed evaluation should be included as a separate document text file along with the submitted manuscript.

References cited in the text should be numbered in parentheses with Arabic numerals in order of appearance. Be sure to verify the wording of any personal communication with the person who supplied the information and get his approval for the use of his name in connection with the quoted information. All references should be listed in numerical order typed double-spaced on a separate sheet under the heading REFERENCES. Please note the following examples.

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- 7. Sanger F, Nicklen S, and Coulson AR (1977) DNA sequencing with chain-terminating inhibitors. *Proc. Natl. Acad. Sci. USA* **74**, 5463–5467
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- 12. Messing J (1983) New M13 vectors for cloning in *Methods in Enzymology* (Wu, R., Grossman, L., and Moldave, K., eds.) Vol. 101, pp. 20–51, Academic Press, New York
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Text citations to references written by more than two authors should be styled for example as, Smith et al. In the reference list, however, the names of all authors (with initials) must be given. If an article has been accepted for publication by a journal but has not yet appeared in print, the reference should be styled as follows:

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Citation of the references written in a language which is usually unreadable for general readers and those published in a journal (or book) to which general reader could not easily access should be avoided.

8. Figure Legends:

Figure legends must be placed after the Literature Cited section. Manuscript document files lacking figure legends will not be reviewed. Do not duplicate material from the text or described in the methods in your figure legends. Indicate scale bar size if it is not indicated on the figure. Figure legends should be prepared for each figure. There should be sufficient experimental detail in the legend to make the figure intelligible without reference to the text (unless the same material has been given with a previous figure, or in the Experimental Procedures section).

- Tables: Tables should be self-explanatory and should not duplicate textual material. Each table must be appended to the end of the manuscript, after the Figure Legends, in either Word or Excel table format. DO NOT embed photographs or image files of tables. Legends or keys must accompany each table and should not be added to the Figure Legends. Tables should be numbered consecutively using Arabic numerals, and should include a brief title. Use footnotes (superscripted lower-case letters) to explain abbreviations, statistics, etc. Place explanatory matter in footnotes, not in the heading.
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Abbreviations should be kept to an absolute minimum. Abbreviations save relatively little space but greatly diminish the readability of a manuscript. In general, abbreviations should not appear in the Abstract, and sentences that contain more than one abbreviation merit careful review. The word must always be written out in full when first used and the proposed abbreviation given in parentheses. A list of all abbreviations used in the text and their meanings must be provided (in alphabetic order).

10. Acknowledgements

A short statement about grant and other financial support should be given, along with a list of contributions from collaborators who are not co-authors (it is implicit that they agree with this mention), and a declaration of competing interests. See above under Editorial Policies for additional items to be addressed in the Acknowledgements.

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