



Student presentation: A conceptual model.

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ABSTRACT

This communication is a concept study. It suggests a language-based conceptual model on student presentation, as a curriculum learning strategy. Student presentation promotes understanding that can be enhanced if the student is not under stress. In any given medical school, we assume, if the student mother-tongue language is not similar to the school education language, then the student is likely to be stressed. The aim of this work is to contribute ideas towards quality enhancement in medical education. We suggest a model where the student is encouraged to utilize his/her mother-tongue language sources for in-depth understanding of the presentation topic, whenever he/she understands the topic partially. Research has shown that some students, during activities using non-mother-tongue language, were unable to completely understand the subject and/or unable to fully participate in discussions. The present study represents a reaction to a frequent call from medical education experts, around the world, that any given school develops curriculum learning strategies that best meet its mission. Future research exploring on the role of linguistic factors in student presentation, is likely to lend support to our approach, towards quality enhancement in medical education.

KEYWORD

Student presentation
Model
Medical education

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Introduction

This communication is a concept study. It suggests a language-based conceptual model on student presentation, with the objective of contributing ideas towards quality enhancement in medical education. Student presentation is a learning strategy whose philosophy is part of the concepts and theories of motivation. It is utilized in medical education within problem-based learning (PBL) curriculum. The student is usually motivated to learn by the need to understand in-depth the subject of the health

program. In-depth understanding is enhanced when the student is not under stress. We assume that, when the student mother-tongue language is *not the same* as the school education language: then such student is likely to be stressed. In support of this assumption, it has been reported that the sole use of non-mother-tongue language communication during education activities was found to be a cause of student stress (1). Similarly, it was found that students during activities using non-mother-tongue language were not able to completely understand the subject and/or unable to fully participate in

discussions (2). Furthermore, research has shown that people retain information far better in their mother-tongue language (3). The language, in scientific communication, has been described as an important factor for knowledge to be effectively applied (4).

Student presentation is a useful and enjoyable learning activity that exposes the student to the skills of communication, presentation, as well as to content understanding (5,6). It is part of the student-centered learning techniques which motivate medical students to become critical thinkers, problem solvers, life-long learners, and directed self-learners. Student presentation has been perceived by medical students from Nelson R. Mandela school, South Africa, as informative, creative, fun, innovative, and most importantly, beneficial to their learning (7). We think this situation holds more true when the student mother-tongue language is *the same as* the school education language. However, when the student mother-tongue language is not the same as the school education language, then low level of proficiency in the latter language can pose considerable learning problems for some students. In the face of above dilemma, a successful novel approach from the University of Airlangga, Indonesia, has introduced the dual use of student mother-tongue language and school education language in communication during its medical education activities (8).

Student presentation, as a learning strategy, is essentially similar to PBL strategy, since students, taking responsibility for their own learning, are at the heart of the process in both strategies (9,10). Student presentation represents a natural cognitive process of mind. The topic of the presentation is first selected and defined. Next, the key information to understand the topic is searched, identified, studied, integrated, and understood. Next, the information is processed in the student mind to develop into knowledge which is presented to a peer audience in a subsequent meeting. The presenter student will enjoy the privilege of being a teacher as well as a learner. However, again, the issue of the right blend of student mother-tongue language versus school education language communication

comes into play. We think that depending on the ratio of these two languages, then the quality and quantity of outcome learning can be evaluated.

Based on long teaching experience, our primary drive for this work was to expose an unjustified stress on some students whose *linguistic* abilities do not match their scientific talents. We are suggesting that whenever the student mother-tongue language is *not similar* to the school education language, then medical educationists encourage students to utilize student mother-tongue language sources. This way, taking student presentation as an example, then student in-depth understanding is enhanced, knowledge fully gained, future doctors will, ultimately, give optimal care to their patients and to the community.

Method

This is a concept study.

The Model (see Figure 1)

1. Does the student understand the presentation topic in-depth?
2. Information needed to understand in-depth the presentation topic: From school education language sources. Otherwise, from student mother-tongue language sources.
3. In this way, the student understands in-depth the presentation topic.

Description Note for Figure 1

The basic idea (applicable for schools where the student mother tongue language is NOT SIMILAR to the school education language) is:

- A. Some students gain Partial Understanding (bottom arrow), because they consult sources in the school education language which is NOT SIMILAR to their mother tongue language.
- B. These same group of students in A, are likely to gain In-Depth Understanding (above arrow), when encouraged to

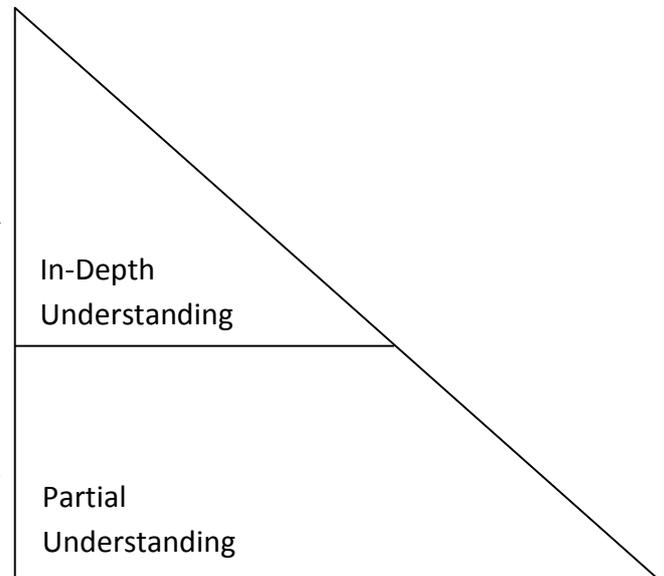
consult sources in their mother tongue language.
 C. This model assumes that the student Progress of Understanding (Right Top)

is directly proportional to the language of education source, *in as much as*, it is in his/her mother tongue language.

Language of Education Source

Progress of Understanding

Student Mother-Tongue Language



School Education Language



Figure1: Language-based conceptual model for student presentation

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Discussion

Medical education experts from around the world, not infrequently, call for each medical school to define and develop curriculum learning strategies that best meet its mission (11-13). The key point within the model of the present study, that the student mother-tongue language sources be utilized by the student to enhance his/her learning, is for discussion and consideration by

medical teachers and curriculum planners along the vision of above call. This key point seems to represent a genuine concern for a good number of medical schools across the globe. The successful experience from the University of Airlangga, Indonesia (7), where dual use of student mother-tongue language and school education language was introduced for its medical student activities, is probably, a reaction to such concerns.

An interesting study from Wuhan University, China, found that when 30% of non-Chinese language was used in bilingual anatomy classes, then more than 70% of medical students expressed satisfaction with the classes, and more than 40% of them scored > 80% in final tests (14). However, when the proportion of non-Chinese language was raised to 50%, satisfaction rates significantly declined to 17% and the percentage of medical students scoring > 80% decreased to 32%. The message from this study supports our view that dual use of student mother-tongue language and school education language, at least in some selected medical education activities, can lead to enhancement of learning.

In a report from Maastricht school, Netherlands, it was noted that there was an unjustified belief among some medical teachers that students are, intrinsically, not motivated to spend time on their own study subjects (15). The model in the present report, potentially, suggests situations where students might prove incorrect what some teachers see correct. The students, being motivated by the opportunity to utilize their mother-tongue language sources, they are likely to feel happy, and thus spend time on their study subjects. We assume that the language is not just used to communicate information to an audience during student presentation activities. It seems to be an important catalyst for the learning process itself. The psychology of motivation to learn seems to be driven up as the language barriers are overcome intelligently and gradually. The extra efforts which are exerted in understanding the language could be utilized to increase the amount of medical knowledge gained (14).

The results of a study from Johns Hopkins University, USA, demonstrated empirically that student presentation, as used in anatomy education, was found to be effective (16). The authors tested 256 medical students on whether they performed better on examination questions on topics covered by student presentation activities, than on other topics. A two-way repeated measures analysis of variance revealed that students performed better on topics covered by their presentations. The difference was

statistically significant, $p < 0.05$. In retrospect analysis, we think it is likely that the student mother-tongue language of most/all 256 student study population was identical to the school education language. Now, the relevant question is: if, say 50% of the student study population (group A) have student mother-tongue language different from the school education language, and were compared to a control matching student population (group B) who have both languages identical to each other, then would the initial study conclusions be one and the same? Using the evidence-based Chinese findings of Wuhan University (14) as referee, then the expected answer for the latter scenario would indicate that group B would perform better than group A on topics covered by student presentations. Overall, this situation lends support to the key point of the model in the present study.

We assume that the intelligent gradual introduction of dual use of student mother-tongue language and school education language during student presentation activities can lead to incredible motivation for the students. Consequently, this state of motivation drives learning and influences the student academic performance and future career. We suggest that future research areas include exploring, evaluating, and measuring the role of linguistic factors in motivation during student presentation activities. Such prospective research is likely to identify local factors with rewarding direct implications to the local community, and which may prove rewarding to the world community as well.

Conclusion

A conceptual model on student presentation activity, as a learning strategy, is discussed. The model suggests that students be encouraged to utilize their mother-tongue language education sources, to enhance in-depth understanding, whenever they need that, and wherever the school education language is *not similar* to their mother-tongue language. This work agrees with a frequent call from medical education experts, in many countries, that any given school

develops curriculum learning strategies that best meet its mission.

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