Effective Learning, Leadership and Professionalism Series (ELLPS) nurturing early clinical year development: Transformation based on medical students' feedbacks.

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Effective Learning, Leadership and Professionalism Series (ELLPS) nurturing early clinical year development: Transformation based on medical students' feedbacks.

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Strengths and limitations of this study (4 points):

- Self-administered evaluation permitted students the total freedom to explore deeper into their views within the contexts without any possible interruption or directed content from the faculty.
- The research team is uninformed of any other qualitative studies addressing this topic within undergraduate medical students in Malaysia.
- It was conducted in one Malaysian medical school. Although drawn from the entire batch of Year 1 medical undergraduates, the number of participating students in giving suggestions and recommendations was small.
- This is a preliminary student-centred framework derived from students' feedbacks. The piloting and evaluation shall follow suit and the findings shall be disclosed in subsequent report.

ABSTRACT (269 words)

Objective To develop an improved early clinical year development programme based on undergraduate medical students' feedback on the existing programme.

Design A one-day evaluation workshop on existing early clinical year development programme was conducted in September 2018 based on a semi-structured qualitative feedback comprising four domains which were the 1) organisation 2) overall programme content 3) comments on each topic content and 4) suggestions on the improvement for future programmes. The domain on comments and suggestions examine the attitudes on 1) what should be learnt 2) when learning should occur 3) what methods should be used 4) how learning should be assessed and 5) what kind of students' barriers are in such development programme throughout their early clinical years.

Participants A total of 220 first-year undergraduate medical students in Year 1 MBBS programme attended the workshop.

Results A total of 211 (95.9%) medical students have participated in the feedback survey. Majority of students (more than 80%) were satisfied with the overall programme. Fifty students (23.7%) have provided their comments and suggestions for future improvement. Three domains emerged: 1) effective learning 2) leadership and 3) professionalism encompass eight inter-related themes: 1) packed sessions 2) interactive session 3) learning style 4) critical thinking 5) student-centred learning 6) innovative learning 7) mental fitness and 8) sharing session.

Conclusions An improved early clinical year development programme is proposed based on the first-year undergraduate medical students' feedbacks. It is a transformation to a student-based curriculum with the integration of advanced use of information technology and management education. These findings offer insights into the students' view of future doctors' development in effective learning, leadership and professionalism in the clinical context.

Keywords: effective learning, medical student, curriculum, ELLPS Programme, feedback

BACKGROUND

Learning is an activity of construction handled with, or in the context of others, driven by learner's agency.¹ Effective learning takes into accounts all the characteristics of learning at their best, in addition to monitoring and reviewing of whether approaches and strategies are proven effective for goals and context. Effective learning involves outcomes such as having more connected knowledge, extensive range of strategies, greater complexity of understanding, enhanced action appropriate to goals and context, increased engagement and self-direction, more reflective approach, more positive emotions and affiliation to learning, more developed vision of future self as a learner, greater facility in learning with others and a more sense of participation in a knowledge community.¹

An effective learner is versatile and can actively utilise different strategies and approaches for different contexts and purposes. The effective learner should have the following characteristics: 1) active and strategic 2) skilled in cooperation dialogue and creating knowledge with others 3) able to develop goals and plans 4) monitors his / her own learning and 5) is versatile across those contexts.² These are the characteristics the Faculty of Medicine, Universiti Teknologi MARA aspires their medical students to acquire during their pre-clinical years in hopes to prepare them for the clinical years of independent learning through apprenticeship.

The transition from teacher-centred learning (TCL) to student-centred learning (SCL) can be a very overwhelming and fearful experience to most students entering university after secondary school. Majority have a significant delay in adjusting into a more independent learning with some failing to adapt, as evidenced by their performance in examinations.³ Furthermore, it has been observed that students entering their first year in medical school often feel overwhelmed by the excessive amount of factual knowledge they are obliged to learn and are mostly unaware of how to learn effectively to improve their understanding of conceptual scientific knowledge that predominate the medical curriculum.⁴

The main problem that medical students face in our faculty is their lack of learning agility in which preventing them a fluid transitioning from pre-clinical to clinical-based learning. The ability of students to intuitively adapt learning styles according to their environment and to proactively acquire knowledge through experience separates the capable students from those that tend to be lost during fast-paced ward rounds, clinical and inter-disciplinary discussions. In addition, their lack of good time management and soft skills prevents them from developing a mature approach towards learning.

The existing students' development programme was established in 2015, targeted to Year 1 medical students and known as Effective Learner's Workshop (ELWS). It has been conducted annually in the middle of first semester of Year 1, MBBS programme. It was designed to specifically address the above issues and it serves as a platform to assist the transition from secondary to tertiary education. The ELWS aims to prepare the students to be more independent and competent at the end of year five of the medical programme. The workshop consists of seven sessions of one-hour duration talks during the first half of the day, with topics revolving around learning techniques and character development. The second half of the day consists of interactive sessions where the students are divided into smaller groups and given activities related to effective learning to be performed and presented to their respective tutors.

Since its establishment, the workshop has benefited more than 1000 medical students in their first year of medical school transitioning from a formal teaching approach to a more students independent learning style. However, this workshop requires evaluation to allow improvement in order to cater the needs of the current and future medical students. Therefore, this study aimed to evaluate the medical students' feedback on the existing ELWS and to propose an improved and comprehensive programme series throughout the pre-clinical years in medical school.

METHODS

Design and setting

This was a cross-sectional study conducted during a one-day ELWS in September 2018. The workshop was designed as a platform to assist students' transformation at the early stage of the medical school years and to improve the quality of students' preparation in order to be more independent and competent learners at the end of year five of a medical programme. The objectives involved 1) the introduction and to promote of the idea of student-centred learning and 2) the students' preparation towards the strategies on how to be effective learners.

Participants

A total of 220 medical students who were enrolled in year 1 MBBS programme in Faculty of Medicine, Universiti Teknologi MARA (UiTM), Selangor, Malaysia, attended the workshop and were invited to participate in the study.

Materials and procedure

The ELWS was divided into two main sessions which were mini-lecture series (20 minutes per lecture) in the morning, followed by interactive sessions (small group discussion and forum) in the afternoon. The mini-lecture series encompasses several topics that cover the transition of TCL to SCL, approaches of an accomplished student, education through guided exploration and discovery, professionalism, critical and analytical thinking, cooperative and collaborative learning and learning styles. Meanwhile, the interactive sessions discussed the theme of the characteristics of an effective learner in the small group discussion, followed by subsequent convene of all students in the auditorium to participate in the forum of effective learning. Three medical students (first-year, second-year, fourth-year) and one alumnus were selected to be the panellist, with one lecturer moderated the forum.

Feedback survey

The online feedback link was given to all students in the 'Google form' format at the end of the workshop. The first part enquired on the demographic and background information, including gender and previous education level. The second part was the feedback questions that covered the overall satisfaction, the organisation, overall programme content, each topic content as well as the relevance of topics presented in accordance to the objectives of the workshop with comments and suggestions for improvement on the future programme.

Discussion on the feedback

The consensus was achieved by modified nominal group methods among experts and members of the Department of Medical Education (DME).⁵ The group members were nominated at the beginning in the designing phase of this feedback survey. Several rounds of discussion on the feedback were conducted among the group members, and all results were analysed for agreement using the standard predefined rules.⁶

Data analysis

The response rate, demographic and personal information data were analysed and reported in proportions according to relevant categories. The feedback components on overall satisfaction, the quality of content and conduct as well as the relevance of topics were analysed in proportions and presented in tabulation. The comments and suggestions for further improvement were analysed according to themes by consensus and shown in graphical illustrations. For qualitative analysis, the consensus agreement was set as a majority of at least 50%.

RESULTS

Participant characteristics

A total of 220 UiTM Year 1 medical students attended the Effective Learning Workshop (ELWS) 2018 held on the 26th of October 2018 at the faculty. Of 220, 211 (95.9%) medical students participated in the feedback survey. There were 77.3% female and 22.7% male from various education backgrounds. The majority were from the university internal foundation programme (90%), followed by national matriculation programme (5.2%) and diploma programme (4.7%).

Content analysis of feedbacks

Majority of the students (more than 80%) were satisfied with the overall programme. Table 1 summarised the overall response of the students regarding the workshop.

Themes from the DME group's discussion on feedbacks

Fifty students (23.7%) provided their comments and suggestions for future improvement. These comments and suggestions were categorised into eight main common themes: 1) packed sessions 2) interactive session 3) learning style 4) critical thinking 5) student-centred learning 6) innovative learning 7) mental fitness and 8) sharing session. The distribution of comments and suggestions according to the theme were illustrated in Figure 1.

Theme 1: Packed sessions

A packed session refers to intensive session slots or back-to-back with too much content in each session. Half of those who provided comments and suggestions expressed this element and offered some recommendations:

Not to cramp [sic], so many sessions, which are composed of lectures throughout the whole day, please

There are quite a lot of slots

Too much talk in 1 go [sic]

Too packed

Not to have back to back session of lecture slots. It was a very packed session.

Maybe can extend it for two days so that it won't be so packed

Theme 2: Interactive session

This interactive session theme includes any comments and suggestions related to a two-way flow of information as well as the students' involvement in activities, group mobility or dynamicity. Almost a quarter of the participants provided these comments and suggestions:

Less talk and forum. More activities by groups.

Make it more fun and exciting, not just a [sic] lecture.

Maybe after this, we should have involve simple activity [sic] for each slot to prevent the student [sic] from sleeping.

Maybe more active activities can be included rather than lecture; interactive learning would be better

Make the workshop to have more activity-based or small group sessions rather than lecture-based

Give some contents [sic] to the student [sic] as the stimulus to help students to be more focused.

Theme 3: Learning style

Learning style refers to the various preferential ways of participants to effective learning processes. Ten per cent of participants who provided comments and suggestions expressed how beneficial this program was to their learning styles and requested for in-depth sessions rather than superficial exposure to this topic.

Have more sessions to allow students to find [sic] their effective ways of learning

It helps me well [sic] in my learning style

The sessions help me exposed [sic] to various learning styles that might be helpful to me

Focus more on effective study[sic]

Pls add a talk about how students with different learning styles should really do [sic] to study effectively

Theme 4: Critical thinking

This theme assembled two elements provided by the students under the conventional critical thinking definition.^{7 8}

Explain more on how to make us [sic] active in critical thinking as it was not a learning approach before.

Another way of learning... using video, quiz [sic] or work in teams [sic]

Theme 5: Student centred learning

Two students' comments addressed the elements of student-centred learning.^{9 10}

It's interesting to discuss independent learning as many students have that problem now.

This programme has opened my eyes to work harder in my studies

Theme 6: Innovative learning

Another two comments by the students were on the elements of innovative learning.¹¹

| *Include videos*

| *Video or work in teams [sic]*

Theme 7: Mental fitness

One student highlighted the element of stress management.

| *More inputs regarding how to manage stress*

Theme 8: Sharing session

One student recommended sharing session by senior lecturers, specialists and consultants.

| *More sessions based on various specialties, provide videos of surgeries etc. to spark more interest from the audience*

DISCUSSION

In general, the students' feedback regarding the workshop was satisfactory, with substantial suggestions made by the students to improve future programmes to make them more effective, reflective and pragmatic. These suggestions by students encourage members of DME to pursue the improvement of the current programme and impart appropriate recommendations based on the study.

Formation of ELLPS programme

The members of DME recommended that a transformation is to be made from a one day-off programme to a more comprehensive schedule by introducing two new essential subjects i.e. leadership and professionalism. The delivery sessions are to be conducted continuously on a periodic basis throughout four semesters of the pre-clinical years (Year 1 and 2). This newly proposed programme is termed as "ELLPS – Effective Learning, Leadership and Professionalism Series". The evaluation is also recommended to determine the effectiveness of the proposed series. It was consensually agreed that it is best to deliver the programme series at the beginning of each learning module.

The components

Each component will begin with a half-hour introduction which summarises the content followed by an interactive session where students will participate in activities associated with the chosen topic. Every slot will include a sharing session from either an invited lecturers or alumni and end with feedback from the students on the related component.

The content of the sessions in Year 1 will emphasize on the theme of effective learning. This is chosen based on the transformation from teacher-centred learning to student-centred learning. The components of this theme are: 1) student-centred learning 2) learning style 3) critical and analytical thinking 4) cooperative and collaborative learning 5) mental fitness and 6) medical professionalism.

The content of the sessions in Year 2 will focus on leadership and professionalism. These were chosen to prepare them for clinical years. The components of these themes are: 1) leadership 2) technology-assisted innovative styles 3) professional grooming and etiquette 4) presentation skills 5) character building and 6) time management skills.

Student Centred Learning

Education in medicine has undergone evolution, engaging shift of emphasis in responsibility, from the teacher to the students. Driven by the need of change in the traditional didactic atmosphere of medical education, the concept of 'student centred learning (SCL)' was introduced and recommended. In the era of 21st century, SCL is an essence in contemporary pedagogy that allows student to have greater autonomy and control over choice of subject matter, learning methods and pace of study. Various terminologies have been associated with SCL, including flexible learning, experiential learning and self-directed learning, which focused on students' needs, abilities, interests and learning styles with the teacher as a facilitator.¹² The principle of SCL lies on the promotion of merits of learner centred and problem-oriented approaches to learning. This aims to better equipped doctors with adult learning skills necessary for them to adapt and meet the changing needs of the community they served. A diverse strategy can be adopted in SCL comprising small group discussion, role play, case-based discussion, problem-based learning, simulation, video-movie clips and games. The move to learner-centred strategies has major implications, not only to faculty development but all levels, ranging from the individual up to the institutional level.

Learning Style

In parallel to SCL transformation and promotion, students would have developed learning style (LS) preferences in order to process obtained information to be meaningful learning that would result into better understanding of the subject matter. This shows understanding students' LS preferences is prominent. Thus, it is one of the responsibilities of the faculty as well as the students and facilitators themselves. Learning styles always require a tension between two opposite states such as: 'thinking or feeling' and 'watching or doing'. The VARK learning styles inventory measures four sensory modalities including visual, aural, read/write and kinaesthetic.¹³ Learners can be categorised into unimodal if they show predominant one learning preference, and multimodal when preference is shared between two or more learning preferences. Previous study reported LS differ among medical undergraduates with majority had multimodal LS especially in their pre-clinical years and appears to change as they moved up the ladder of medical education.¹⁴ However, the LS did not change significantly over the five years of medical undergraduates, and the most significant step-up occurred after commencing to work as doctors.

Critical Learning

Critical thinking is a controlled mental activity involving evaluating opinions and arguments or plans and coming up with judgments that can guide the development of beliefs and taking action.¹⁵ It is the ability to think clearly and rationally to develop strategic plans to solve problems which is essential in the practice of medicine when you are diagnosing a disease and deciding a management plan for patients. Not only is this skill relevant in making the correct diagnosis and instituting the most appropriate treatment, it also allows healthcare professionals to appraise journals and conduct sound medical research. However, critical thinking is not explicitly taught in most education programmes for health professionals. A recent study highlighted that one of the main findings included the suggestion that creating a single module for teaching critical thinking would be useful rather than formulating a new regulation or policy.¹⁵ Recommending a component in the Effective Learners series to include critical thinking skills will develop higher thinking ability amongst the pre-clinical medical students to prepare them for the clinical years where its applicability is put to use through diagnostic activities, journal appraisal and research practices.

Cooperative & Collaborative Learning

Traditional learning involves delivery of lectures and the provision of lecture notes with almost no active communication taking place between students.¹⁶ In contrast, collaborative learning uses social interaction as a way of learning where students work in a group to achieve a common goal, while respecting and acknowledging each individual's contribution.^{17 18} On the other hand, cooperative learning requires students to work together in small groups and help themselves and others to learn.¹⁹ Albeit the term cooperative is frequently used interchangeably with collaborative, they have different definitions. The term collaborative emphasises student-to-student interaction in the learning process, while the term cooperative required students to work in small groups, usually under the guidance of the instructor.¹⁸

There are four characteristics of collaborative learning namely 1) sharing of knowledge between lecturers and students 2) sharing of authority 3) lecturers as mediators and 4) diversity in student groupings. In other words, students work with each other to learn with the active participation of the students. Under these circumstances, students often arrive at solutions to problems without the help of their lecturers. This is the desired outcome of collaborative learning when students begin the process of learning to learn, rather than simply listening.²⁰

Millis (1996) listed five characteristics of cooperative learning which include 1) students work together in small groups 2) students work together on a common task 3) students use social behaviours to accomplish their tasks 4) students work interdependently and 5) students are individually responsible for their work.¹⁹ The desired outcome of cooperative learning is the provision of high-quality learning environment where students feel included a group. This feeling of inclusion is often absent in students learning in a traditional setting.¹⁵ To summarise, both collaborative and cooperative learning strategies demonstrate the benefits of group work and prepare the students into the real-world as a team player.²¹

Technology Assisted Learning

Medical education has witnessed rapid changes due to evolving educational ecosystem, health care setting, altered societal expectations, continuous medical advancement and variation in teaching techniques. Over the years, the use of technology has been rapidly increasing in medical education. Digital technology contributes significantly in the teaching of medicine as it provides easy access, reduces on-site teaching and enriched learning experience.²² However, in order to fully benefit from available technology and use it to aid students in learning, there are several issues that need to be addressed. Firstly, the role of the lecturer needs to be redefined when technology is incorporated into their teaching strategies. Secondly, lecturers are required to demonstrate adequate skills to effectively utilise technology in teaching. Lastly, proper planning and implementation of technology in teaching are required to ensure that a coordinated educational experience is offered.²³

There are several technological tools that are used in medical education such as computer-assisted learning, mobile devices, digital games, simulations, wearable technologies, to name a few. Using these new technologies will effectively transform learning into a more collaborative, personalised, and empowering experience. In this module students will be exposed to several digital tools, and how to effectively use online search engines to gain real-time information.

Mental Fitness

A medical student studies not only for a university degree but also for a professional qualification. Upon successful completion of training, the medical student will not only be granted with an MBBS degree, but also will be able to practise as a doctor. In order to study effectively, it is essential for a medical student to have physical and mental fitness to cope with the study demands.²⁴ At the same time, the medical school should also be equipped with good support services for early intervention when a student seeks or identifies with deterioration in the study progress.²⁵ The proposed module will provide exposure on physical and mental fitness and suggested practices, early signs of deteriorations in mental fitness and the available support services for early intervention offered by the school for student welfare and well-being.²⁶ Upon completion of this module, the medical students should have a good understanding on physical and mental fitness, practice good learning coping skills and demonstrate good insight on early intervention for any form of interruption of the study.

Personal Grooming and Etiquette

Medical professionals are constantly in contact with people who will assess them based on their appearance, behaviour and how they communicate. Upon entering a medical profession, it is essential to adopt necessary appearance and behaviour to be perceived as professional, intelligent, and competent, in order to gain the trust and confidence of their patients and co-workers.^{27 28} Personal grooming refers to care of appearance through personal hygiene and appropriate attire, while etiquette is the proper conduct and formal manners in a professional setting.^{29 30} The proposed module will provide exposure to enable medical students to begin adopting appropriate practices so these practises will become their second nature when they start their career. This proposed module will provide information and suggested practices on: 1) proper personal hygiene habits 2) appropriate attire to ensure a pleasing and attractive appearance 3) professional manners, behaviour and code of conduct and 4) effective communication skills in a workplace. Upon completion of this module, the medical students should be able to: 1) practice good personal hygiene and proper attire that will promote their physical and emotional wellbeing and enhance their professionalism 2) demonstrate empathy altruistic characteristic and 3) behave and communicate in professional situations with confidence.

Character Building

Soft skills are a combination of people skills, communication skills, character or personality traits, attitudes, career attributes, social and emotional intelligence quotients, among others. These enable people to navigate their environment, work well with others and achieve their goals with complementing hard skills. These soft skills are an integral part of a healthcare professional as they deal with people, particularly people with various severity of diseases, which require doctors to engage the patients in a manner fitting to the patient's needs. Unfortunately, not all medical education include soft skills learning in their curriculum as it was perceived that these skills would be acquired through students observations during rounds and clinic sessions when they are attached with the consultants or senior doctors.¹⁵ Not all healthcare professionals have sound soft skills, with some lacking in one or several aspects, making them a poor example for students to learn from.³¹ Having a session dedicated to character building will help students understand the key components of the soft skills needed to interact appropriately with patients and team members during their clinical years.

Leadership

The focus of medical curriculum, other than academic competency of a student, is also to harness leadership qualities which are aligned with the development of high-quality healthcare personnel. The expected qualities of a medical leader are integrity, commitment, accountability, decision-making capabilities, creativity as well as empowerment through delegation. Leadership education is not well developed at undergraduate level and there is limited literature on how to incorporate them into the undergraduate curriculum. A recent paper highlighted that 85% of medical students felt that leadership, communication, teamwork and quality improvement skills should be integrated in the medical curriculum.³²⁻³⁵

In a rapidly changing healthcare system with challenges such as financial limitations, stricter regulations and patient's demands, high levels of leadership and management skills are necessary to guarantee the delivery of high-quality patient care. The proposed module in leadership under this programme aims to fill these gaps by equipping students with managerial and leadership skills. At the end of the module, medical students will be able to begin demonstrating qualities of a good leader.

Professionalism

There are many definitions given for medical professionalism.³⁶⁻³⁸ The similarity between these various definitions is they encompass a series of attributes beyond just the ability to heal. One of it was given by the Royal College of Physicians which defined professionalism as a commitment to integrity, compassion, altruism, continuous improvement, excellence and working in partnership with members of the wider healthcare team.³⁹ Teaching medical students the concept of professionalism is crucial,^{40 41} yet challenging. Some television shows portray many unprofessional behaviours that potentially serve as negative role models for the students.⁴² Even in real life, the students will be exposed to various scenarios that demonstrate unprofessional behaviour. This might undermine the values of professionalism that medical school is trying to inculcate.

Hence, this module aims to provide basic foundation of medical professionalism. An introductory lecture followed by interactive sessions which allows students to voice out their perspectives and understanding of professionalism. Examples of various clinical scenarios, both from real-life scenarios or snippets from movies/TV show will be used to discuss the aspect of professionalism. The sessions will include all the major attributes of medical professionalism. The learning objectives would be to attain the expectation on professionalism which include values and standards of behaviour that they should abide. Secondly is to translate the values and attributes to a practical set of behaviour⁴² in order to enhance understanding and promote positive behavioural change. An evaluation method⁴¹ to assess this module's impact to the students' professionalism will be added to complement this module. A continuous assessment throughout pre-clinical and clinical years and regular feedback towards their professional behaviours as a medical student should be given, and this may help them to gradually improve themselves. This will allow them to reflect and discuss various potential professionalism issues that they may encounter.

Time Management Skill

Time management skills appear to show significant relationship with students' academic performance and their ability to adjust to university education system.^{43 44} A large study in Spain involving 7000 university students revealed that academic preparedness was the key factor that contributes to university drop-out, where the drop-out rate was high during the first year of enrolment and declined towards the second and third year.⁴⁵ The focus of time management does not only cover the disciplinary aspect in abiding to various activities, but also the innovative aspect of executing the various workloads needed to fulfil the work-life balance.⁴⁶

The main goal of time management module is to develop the skill of effective time management among medical students at the beginning of pre-clinical phase and clinical phase. The intention can be preceded with assessment via a questionnaire that serves as a mind-setting tool, and can then be carried out serially.⁴⁷ The first objective of the module is to create awareness in possessing time management skill. A formal seminar highlighting time management issues is essential where the content shall cover psycho-emotional wellbeing, quality of life, the evidence from various studies and the rationale of time management. Secondly, the module shall provide training on the skill development itself. It is known that different personality and behavioural type will adopt different time management preference and the diversity must be recognised.⁴⁸ Hence, stimulating the students through group discussions and simulations on how to organize time in different situations suits the sharing mode of this module. As learning outcomes of this module, the medical students are expected to explain the importance of time management and understand the adverse effects of poor time management. They should also

be able to manage their various workloads and life activities creatively without inducing stress. In conclusion, it is crucial that the skill of effective time management being established in the medical curriculum in order to prepare them to face real-life challenges when working as a doctor.⁴⁹

Presentation Skill

The ability to present is an essential skill for a medical student to possess. They will be required to present in front of their peers, lecturers, and also larger kind of audience. An effective presentation should be engaging as the speaker delivers the information to the target audience. These skills can be learned and successfully implemented among the medical students with guidance and practice.

In a medical school setting, two main forms of presentations take place: oral case presentations; e.g. bedside presentation, as well as public speaking to a larger audience. The former requires a powerful clinical skill as it allows efficient information transfer between medical providers, leading to an overall improved patient care. Medical students often struggle with oral presentation. The difficulties arise due to several reasons including language mastery, time management, as well as variation in perception of oral case presentations between students and lecturers.⁵⁰ Despite its recognised importance, oral case presentation has not consistently been a formal educational component in medical school. Attempts to improve oral case presentation skills in medical students have been described,^{51 52} including implementation of e-learning module,⁵³ with overall skill improvements following active intervention. The presentation skills component of the current proposed module will focus on the basic principles of an effective oral presentation and provide a general guide for the students to build their skills on. Upon completion of this component, the students will be able to: 1) describe essential components and basic structure of an effective oral presentation 2) begin to synthesize and prioritize data into an organised oral presentation and 3) demonstrate how to deliver a fluent and confident oral presentation incorporating essential non-verbal components.

Potential barriers and limitations

Given the administrative support and optimism for this transformation, the apparent potential barriers and limitations are more likely to be on practical and technological bases.^{32 54} Following a curriculum programme refinement workshop, such new program series would require extensive manpower, deliberate module planning and time slots allocations in the ever hectic schedule of the first year MBSS programme. Expected outcomes of each module shall be measured after completion of each module. The first year of commencement shall be an evaluation cohort of this introduction. Following two to five years of implementation, all intended outcomes shall be pooled and measured for immediate and long-term impacts of the overall programme series.

CONCLUSIONS

In general, the workshop received positive feedback from majority of the medical students involved. Interestingly, the suggestions made by the students have inspired the DME to redesign this workshop according to their identified learning needs which contribute to more organised, comprehensive and sustainable workshop offered by the department. Besides that, the feedback from students was crucial in guiding the DME in designing more student-focused curriculum ensuing improved curriculum delivery and moulding competent doctors at the end of the five-year programme.

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ABBREVIATIONS

DME: Department of Medical Education

ELLPS: Effective Learning, Leadership & Professionalism Series

ELWS: Effective Learner's Workshop

SCL: Student-centred learning

TCL: Teacher-centred learning

UiTM: Universiti Teknologi MARA

AUTHORS' CONTRIBUTIONS

All authors contributed equally to the work regarding the topic presented. FMN mooted the idea of the manuscript with NI, wrote the student-centred learning and learning style sections, and devised conclusion, THAR contributed in writing the critical & analytical learning section, MAA constructed and aligned the feedback questions and wrote the presentation skill section, JH wrote the section of technology assisted learning, WSM was responsible in writing professional grooming and etiquette, BA wrote the professionalism section, HCC wrote on cooperative & collaborative learning, WNWAZ contributed in writing time management skill and NI is the main author contributed in the methodology section, performed analysis of the results, wrote in mental fitness and limitations and organising related sections for the manuscript. FMN, THAR, BA, WSM & NI contributed significantly in revision of the manuscript. All authors read and approved the final manuscript and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study was approved by the Faculty of Medicine, UiTM Ethics Committee in compliance with the Helsinki Declaration. Study participation was voluntary. All students were adequately informed about the study's objective and were granted anonymity and confidentiality regarding their data.

CONSENT FOR PUBLICATION

Not applicable.

COMPETING INTERESTS

The authors declare that they have no competing interests.

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Figures

Figure 1

Comments and suggestions for future improvement by participants according to theme category

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