

Original Article**An Audit on Mentor-Mentee Program: Mentees Perceptions on Mentors***Jamaluddin Zainol¹, Abdus Salam²***Abstract**

Introduction: Mentor-mentee program is essential for mentees' development. The objective of this paper was to investigate mentees' perceptions on their mentors. **Methods:** A questionnaire-survey among all-50 clinical-medical students who mentored by 16 faculty members at Widad University College(WUC)Malaysia, was conducted in 2019. A standardized-questionnaire that examined the mentorship-roles, communication-frequencies, mentor-mentee-relationships and mentoring-effectiveness was used. Relationship was measured by a 4-point scale against each of satisfaction, importance, support, and impact while effectiveness was measured using 0-5 scale on 11-behavioral-skills. **Results:** Response rate was 92%; only 17% mentees perceived, their mentors played all five mentorship-roles while 30% played only one role. Though 41% mentees had ≥ 6 communications per-semester with mentors, one year-5 mentee had no-communication at all. Over 16 mentor-mentee relationship and 55 mentoring-effectiveness scores, the mean relationship and effectiveness score was 12.03(75%) and 37.45(72%) respectively. Mentees expected more communication-sessions and their contributions to be acknowledged. **Conclusion:** Mentor-mentee program at WUC revealed 75% and 72% respectively in mentor-mentee-relationship and mentoring-effectiveness, which is good. However, faculty needs to play more mentorship-roles and acknowledged mentees' contributions. Addition of portfolio and reflective-writing in the curriculum will benefits in monitoring mentees' development. Educational managers should pay attention to this and adequate training of mentors to fulfil the mentees' needs.

Keywords: audit; mentor-mentee program; relationship; effectiveness; mentees' perceptions

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Introduction

Mentor-mentee program is an essential component in medical schools. Mentoring is a process involving an experienced person (mentor) who guides a usually younger individual (mentee) with the aim of teaching, guiding, supporting and facilitating professional growth and development.^{1,2} Mentoring is defined as a steady, long-lasting relationship involving direct interaction between mentor and mentee designed to promote the mentee's overall development.³ Mentoring program was developed in private sector in USA since 1970, mainly to support the junior staff. Later since the 1990s, it was introduced in various groups of the medical profession, most frequently

in the field of nursing. Formal mentoring programs for medical students and doctors was developed only at late 1990.^{4,5} An effective mentoring relationship between mentor and mentee is the key element that facilitates the formulation and realization of a student's vision through their personal growth and development.⁶ Although module content varies from one institution to another or one academic program to another,⁷ the basic components of the mentoring program are the development of a mutual relationship between a mentor and a mentee with the setting of objectives aiming the results or benefits to the mentees.⁶ There are four main objectives identified in mentoring programs which are career counselling,

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developing professionalism and personal growth, increasing interest in research and academic careers, and fostering interest in certain specialties.⁴ Through mentoring practice, teachers also benefit by not only gain knowledge, skill and attitude competencies, but also acquire professional development in the career path.⁸ Mentoring helps the mentees to learn about their new environment encompassing its priorities, its customs and usages and the identities of the leading figures, institutions and structures.¹ Thus, mentoring helps a better understanding of the organization, its values and ethical perspective, attitudes and behaviour appropriate to the circumstances; learning to appreciate different or conflicting ideas, learning to overcome setbacks and obstacles and thus quickly establish oneself in the new learning and social environment.⁹ Mentoring program is an important predictor of mentees' academic performance.¹⁰

There are variations in the method and structure set up of the mentoring activity at different medical schools.¹¹ Study also showed that there are very limited data about mentoring relationships involving medical students and mentoring effectiveness. Moreover, there are lack of awareness about the role of mentor and mentee.¹²

Widad University College (WUC), Faculty of Medicine in Malaysia has been offering mentoring program to the undergraduate medical students as a part of a support system since inception of the University from year 2011. The program is defined as a formal meeting between a student and a faculty staff where the student acts as a mentee and the faculty staff as a mentor. During mentor-mentee meetings, mentor's roles are to discuss and guide the mentees about their studies, provides constructive feedback, assess mentees' personal and professional conduct and provides extra support if required. Thus, a consistent support, guidance, and concrete help are the attributes of a positive role model. The goal of this mentoring is: to support the development of personal growth and professional conduct of students and thereby promote to mentees' progress. Although mentoring program was implemented since the inception, there was no formal training held for the mentors and no guidelines were provided. Currently, formal training on mentoring program was held and structured guidelines were prepared and given to the all mentors. Before holding this training workshop, this study was performed as an audit on the ongoing mentoring program at the current set up intended to get the basic data and thereby provide the scope

of improvement. The objective of this study was to evaluate the students' perceptions of their mentors in the WUC mentoring program in terms of mentors' role, mentor-mentee communication frequency, their relationship and mentoring effectiveness.

Materials and Methods

It was a cross sectional questionnaire survey on mentor-mentee program, conducted at the end of year 2019 among all 50 medical students studying in clinical years at WUC in Malaysia. Total sixteen lecturers were evaluated by the students who mentored them. A standardised survey questionnaire was used to collect the data which was adopted from the literatures on mentoring program.^{12,13} The questionnaire comprised of two sections; in section A, mentees' year of study and matric number was noted and perceptions of mentees on their mentor-mentee relationship was identified in terms of role played by mentor, frequency of mentor-mentee communication per-semester and characterisation of mentor-mentee relationship in terms of satisfaction of mentee; importance of mentoring, supportiveness of mentor and impact of mentoring on mentee.¹³ In order to get information about the role played by mentors, mentees were asked to select as many as role appropriate to them as they perceived from a five-option list of mentors as: i) teacher, ii) counsellor, iii) advisor, iv) advocate and v) resource. Frequency of mentor-mentee communication per semester were obtained by asking mentees to select the number of communications from a list ranged from 1 to >6. The communications were done through in-person or face-to-face meeting, through email and through telephonic conversation. Total number and their modes of communication were identified. To evaluate the perception of the mentees about their i) satisfaction on the program, ii) importance of this program, iii) support obtained from mentor and iv) impact of program on them, a 4-point Likert scale was used where 1 stands for lowest score and 4 stands for highest score for each of the four attributes. Thus, from a total maximum score of 16, mean scores of each attributes and overall total mean scores were identified.

In section B, mentorship-effectiveness were measured by focusing on 11 behavioural skills of the mentors. A Likert scale ranged from 0-5 was used to measure the behavioural skills where 0 stands for strongly disagree and 5 stands for strongly agree with no neutral position in between. The skills were i) accessibility to mentors, ii) professional integrity, iii)

demonstrating content expertise, iv) approachability, v) encouraging mentees, vi) providing constructive feedback, vii) motivating, viii) providing direction and guidance on study issues, ix) responding to questions effectively, x) acknowledging mentees' contributions and xi) suggesting appropriate resources. So, a total of maximum 55 scores was allocated to measure the mentorship effectiveness. At the end, free text or open comments were also welcomed from the participants who were interested.

Students were informed that participation in this study was voluntary and results of the study will be used only for research purpose for educational development and they were assured that their identification to be kept confidential and participation will not affect their academic course. The questionnaire was administered to the participants through student representative and the data was then collected, compiled and analysed using SPSS version 22. The data were presented as frequency and percentage distribution for mentors' role and mentor-mentee communications per semester and as a mean \pm SD distribution of the scores for mentor-mentee relationship and mentoring-effectiveness, which were also showed as percent distribution. A nonparametric, Kruskal-Wallis test was done to determine the statistically significant differences in the relationship score and effectiveness score among the different years.

Ethical clearance: This research study was approved by ethics committee of Widad University College, Kuantan, Pahang, Malaysia.

Results

Out of total 50 clinical year students, 46 were responded giving a response rate of 92%. Table-1 showed the distribution of mentee and mentors profile. Among the mentees, 7 (64%) were from year-3, 13 (100%) from year-4 and 26 (100%) from year-5. There were 8 (50%) mentors from clinical and 8 (50%) from preclinical disciplines. Mentor-mentee ratio varied from 1:2 to 1:5; each of 7 mentors engaged in mentoring with 2 mentees, each of 5 with 3 mentees, 3 with 4 mentees and 1 with 5 mentees. Table-2 showed the number of communications per semester. Here highest number of students in

year 3 (43%) has 3 communications while highest number in year 4 (31%) and year 5 (58%) has >6 communications per semester. In year-5, one student mentioned no communication with the mentor at all. In total, 41% mentees had communication with mentor for ≥ 6 times per semester.

Table 1: Mentee and mentors profile, n=46 (mentees) and 16 (mentors)

Year	Profile of Mentee		Discipline	Profile of Mentor		Mentor-Mentee Ratio	
	Number	Responded		Number	Ratio	Mentor	Mentee
Year-3	11	7 (64%)	Clinical	8 (50%)	1:2	7	14
Year-4	13	13 (100%)			1:3	5	15
Year-5	26	26 (100%)	Preclinical	8 (50%)	1:4	3	12
					1:5	1	5
Total	50	46 (92%)		16 (100%)		16	46

Table 2: Mentor-mentee communication frequencies per semester, n=46

Communication Per Semester	Year-3, n=7 n (%)	Year-4, n=13 n (%)	Year-5, n=26 n (%)	Total, n=46 n (%)
-	-	-	1 (04)	1 (02)
1	-	1 (08)	-	1 (02)
2	1 (14)	3 (23)	3 (11)	7 (15)
3	3 (43)	1 (08)	4 (15)	8 (18)
4	2 (29)	2 (15)	2 (08)	6 (13)
5	1 (14)	2 (15)	1 (04)	4 (09)
≥ 6	-	4 (31)	15 (58)	19 (41)
Total	7 (100)	13 (100)	26 (100)	46 (100)

Figure-1 revealed the number of roles played by the mentors. It showed, highest number of final year mentees (27%) agreed that all 5-roles were played by the mentors while 43% of year-3 and 46% of year-4 mentees perceived as only one role played by their mentors. One student of year-5 mentioned 0 role as he had no communication at all. Figure-2 revealed the distribution of methods of communication used during their conversations. Overall, a total of 45% respondents perceived that they communicated directly through in-person followed by 41% used telephone and 14% used email.

Table-3 showed the mean of mentor-mentee relationship in terms of satisfaction, importance, support and impact measured by using a 4-point scale. Out of total highest 16 scores of mentor-mentee relationship, year-3 mentees scored as 13.43 \pm 1.83 (84%) followed by year-5 as 12.42 \pm 2.86 (78%)

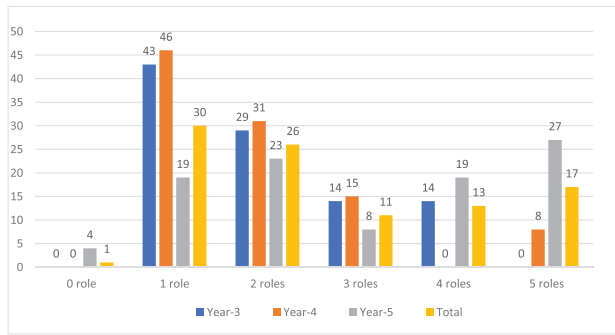


Figure 1: Mentees perceptions about number of roles played by the mentors

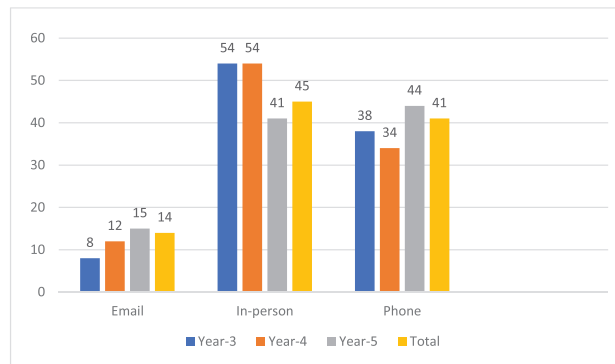


Figure 2: Methods of communication

and year-4 as 10.23 ± 3.35 (64%) with an overall total mean score of 12.03 ± 2.68 (75%). There was a statistically significant difference in the mentor-mentee relationship ($p = 0.025$) between year-3 and year-4, while no evidence of a difference between year-3 and year-5 or year-4 and year-5.

Table 3: Mean scores of mentor-mentee relationships.

Characteristics	Year-3 Mean \pm SD	Year-4 Mean \pm SD	Year-5 Mean \pm SD	Overall Total Mean \pm SD
Satisfaction	3.14 \pm 0.69	2.62 \pm 0.87	3.12 \pm 0.71	2.96 \pm 0.76
Importance	3.43 \pm 0.45	2.69 \pm 0.85	3.12 \pm 0.71	3.08 \pm 0.67
Support	3.43 \pm 0.48	2.62 \pm 0.87	3.12 \pm 0.71	3.06 \pm 0.72
Impact	3.43 \pm 0.48	2.31 \pm 0.95	3.08 \pm 0.74	2.94 \pm 0.72
Total Scores	13.43 \pm 1.83	10.23 \pm 3.35	12.42 \pm 2.86	12.03 \pm 2.68
Percent of Scores	84%	64%	78%	75%

Table-4 showed the mean scores of 11 mentorship skills with maximum 55 scores, where year-3 scored 42.29 ± 7.70 (77%), year-4 scored 36.38 ± 11.73 (66%) and year-5 scored 39.69 ± 11.67 (72%) with an overall average total score of 37.45 ± 10.37 (72%). Year-3 and year-5 mentees showed highest score in the item of demonstration of professional integrity by the mentors while lowest score was obtained in the item of acknowledging mentees' contributions

appropriately by the mentors (e.g. co-curriculum, awards, other activities). Year-5, in addition showed similar highest score in the item of content expertise in the area of mentees needs. In year-4, highest score obtained in item of approachability of mentors as well as supportiveness of the mentors, while lowest score obtained in item of suggestiveness of the mentors for appropriate resources e.g., experts, electronic contacts, source materials. There were no significant differences of mentoring effectiveness shown among the mentors of three years.

Table 4: Mean scores of mentoring-effectiveness

Mentorship Effectiveness Skills Items	Year-3 (Mean \pm SD)	Year-4 (Mean \pm SD)	Year-5 (Mean \pm SD)	Total (Mean \pm SD)
Accessibility	3.71 \pm 0.76	3.38 \pm 1.39	3.69 \pm 1.29	3.59 \pm 1.15
Professional integrity	4.31 \pm 0.75	3.31 \pm 1.25	3.85 \pm 1.12	3.82 \pm 1.04
Content expertise in area of need	3.71 \pm 0.76	3.38 \pm 0.87	3.85 \pm 1.12	3.65 \pm 0.92
Approachable	4.00 \pm 0.82	3.77 \pm 1.36	3.65 \pm 1.20	3.81 \pm 1.13
Supportive and encouraging	4.09 \pm 0.92	3.77 \pm 1.24	3.81 \pm 1.17	3.89 \pm 1.11
Constructive and useful critiques	3.80 \pm 0.90	3.31 \pm 1.44	3.50 \pm 1.21	3.54 \pm 1.18
Motivative to improve study	3.80 \pm 0.69	3.15 \pm 1.41	3.69 \pm 1.09	3.55 \pm 1.06
Guidance on study issues	4.03 \pm 0.82	3.15 \pm 1.41	3.50 \pm 1.17	3.56 \pm 1.13
Answers questions satisfactorily	3.63 \pm 0.75	3.54 \pm 1.13	3.58 \pm 1.21	3.58 \pm 1.03
Acknowledges contributions	3.54 \pm 0.96	2.85 \pm 1.46	3.23 \pm 1.03	4.21 \pm 1.15
Suggests appropriate resources	3.66 \pm 0.75	2.77 \pm 1.17	3.35 \pm 1.16	3.26 \pm 1.03
Total Mentorship Scores over 55	42.29 \pm 7.70	36.38 \pm 11.73	39.69 \pm 11.67	37.45 \pm 10.37
Percent of Scores	77%	66%	72%	72%

Table-5 showed the distributions of open comments given by some of the mentees. The comments were categorized into encouraging type, suggestive type and dissatisfied types. The encouraging comments reflected good mentoring while the suggestive comments asked for more sessions and fair distribution of students. The dissatisfied comments reflected no meeting or failed the objective of the meeting.

Table 5: Open comments of the mentees

Encouraging Comments	Suggestive Comments	Dissatisfied Comments
Keep it up	Would like to have more communication session.	Even though we don't really contact each other, I don't really mind about that.
He is truly the best mentor	I like to have more session	I would like him to conduct a meeting session in-person, because previously we only communicate via phone call through WA
	The distribution of students should be fairly according to each year	Never have a meeting with my mentor, tried to reach, but 'un replied'
		Not working

Discussions

This study reflects the mentees' perception about mentor-mentee relations and effectiveness of the mentorship. We found here; the mentor-mentee ratio is 1:2 to 1:5 and most of the mentors have 2 mentees (Table-1). In literature, the ratio of mentors to mentees varied greatly from 1:1 to 1:20 depending on the program design where the mentors meet mentees either in group or in one-to-one.¹¹ Thus this study reflects adequate mentoring program design for meeting mentees with the mentors. Mentoring involves a long-term relationship between mentors and mentees which is built by the guidance and support given by the mentor to the mentees throughout the period of education and training.¹⁴ The role played by the mentor is important in building this relationship. In our study, among 5 major mentoring roles, a highest of 43% year-3 and highest 46% year-4 students perceived that their mentors played only one role while highest 27% of year-5 students perceived their mentors played all five roles (Figure-1). As our institutions mentoring program was not standardized earlier, that could have led to less role played by the mentors as well as adequacy of communication by mentor with mentees. With the initiation of new structured mentoring evaluation instrument to be used at the end of each semester, along with guideline about the meeting and things to be discussed including portfolio and reflection, it is expected that the program will be more effective and meet the demand of mentees. Actually, teachers in medical schools traditionally are not trained to teach.^{15,16} Currently, teachers' roles are changing from deliverer of material to a more creative, designer and facilitator of learning.¹⁷ Medical teachers need

appropriate training in order to foster knowledge and professional skills among them and enable them to be updated and acceptable by mentees.¹⁵⁻¹⁶ The management need to evaluate regularly the mentor-mentee program for further improvement and to assess any disappointment among the mentees.

In our institution, the formal mentor-mentee meetings or communications are taking place either in-person i.e. face to face, or by email or by telephone. In total, a highest number of mentees (41%) perceived that they had ≥ 6 times communications or meetings per semester with their mentors. However, one final year mentee was disappointed as there was no meeting held at all with the mentor (Table-2). The role of mentor is found to be important for mentee to acquire the necessary skills and further development of the career.¹² Thus the mentors also need to be responsible and understand their roles to build a good relation with the mentees. In this present study, it has been found that in year-3 and year-4, more mentor-mentee communications occurred in-person i.e. directly face to face while in year-5 it took place more by telephone. May be the familiarity with the mentor as the year passes by, transforms this meeting from face-to-face to telephone (Figure-2). It is mentioned that communication with combined conversation on the phone or meeting face to face in-person or e-mail are a very good way of interaction and can result in the feeling of more support and satisfaction that can lead to the intentions to continue the relationship.¹⁸

A good relationship between mentor and mentee is required to encourage the mentee to enable them to attain their goal during the whole course of medical education. The mentors need to extend their help by sharing their knowledge and experience as well as providing emotional support and encouragement to the mentees. Mentor-mentee relationship is the third most powerful relationship for influencing human behaviour after the family and couple relationship, if it is working.¹⁹ In our study, mentor-mentee relationships in terms of satisfaction, support, importance and impact, the mean perceived scores of year-3 mentees were highest (13.43 ± 1.83) followed by year-5 (12.42 ± 2.86) and year-4 (10.23 ± 3.35) with a total mean score of 12.03 ± 2.68 (75%). There was a statistically significant difference between year-3 and year-4 mentees' perceptions ($p = 0.025$), however, there was no evidence of difference between the other pairs. This study also revealed that the mean scores of year-4 students were < 3 in all four characteristics of the mentor-mentee relationship, which should be

taken into account (Table-3). In year-5, the mean score obtained in 'impact' and 'satisfaction' characteristics were less compared to other characteristics such as support and importance. With the implementation of the evaluation and structured mentoring program, we hope that mentees will feel more satisfaction about their relationship with the mentors to have a good impact on them. A bonding between mentor and mentee with a high degree of trust and mutual respect prevents the misunderstanding and helps the learning process.²⁰ A strong mentor-mentee relationship can motivate human behaviour and help in learning by identifying the problems in the mentee and guiding them with appropriate teaching and support. Thus, with the proper mentoring relationship, there is an increase in cognitive, affective and skill-based learning outcome.²¹ This mentoring relationship will evolve depending on the expectation of the mentees. As time passes, mentees' needs also changed based on the professional competences gained leading to change in the nature of the relationship.²² Thus for an effective mentor-mentee relationship, the mentors need to be competent enough to build the trust-worthy relationship, thereby to be able to perform the appropriate care-giving functions and mentees experience themselves as valued and supported.²³

In regards to mentorship-effectiveness scale, there were no significant differences among the three years of mentees. Overall, the results showed that the students perceived effective mentoring behaviour by their mentors; all the 11 mentoring behavioural items in year-3, 5 items in year-4 and all the items in year-5 except two were scored >3.5, out of highest score of 5 which is good. The two low scored items were "acknowledgement of mentees contributions appropriately" and "suggestions on appropriate resources" both were perceived by year-4 and year-5 students (Table-4). This finding showed that the expectation from the mentees are to be acknowledged properly by their mentors in their contributions. Acknowledgement of mentees contributions such as co-curriculum, awards, and other activities, are important as these encourage them for their ongoing progress. This is a reflection of mutual bond and relationship that enhances the trust and mutual respect for each other. In our study, the mentors either have overlooked or did not realized the necessity of such acknowledgement that have a very important impact on the mentees. Suggestions on appropriate resources e.g. experts, electronic contacts, source materials etc are important guides for mentees. Mentees expect

their appropriate guidance by getting the resources from the mentors. It is the responsibility of the mentors to provide or suggest resources, experts, and source materials.¹³ Therefore, mentors need to have pay attention on this matter.

The open comments reflected their encouraging comments, suggestion as well as disappointment on this mentoring programme (Table-5). Some students suggested to have more sessions and some suggested to distribute the students fairly according to each year. The comments reflecting the dissatisfaction such as 'Even though we don't really contact each other, I don't really mind about that', 'I would like him to conduct a meeting session, because previously we only communicated via phone call through WA', 'Never have a meeting with my mentor, tried to reach, but un-replied', 'Not working'. All these comments give the reflections that the communications with the mentor were not effective although there occurred quite a good number of communications per semester (Table-2). They need more effective meeting specifically in-person with adequate guidance. These dissatisfactions of the mentees cannot make the mentoring program a successful event. It is required to fulfil the expectation of the mentees in order to establish a trustworthy good relationship by the mentors.

Mentor-mentee program is an important component of undergraduate medical curriculum. Mentors or faculty members are the intellectual asset of medical schools, and faculty development activity is essential for an institution for its educational development.²⁴ Without faculty development there will not be any curriculum development.¹⁵ While communicating by the mentor, mentor-mentee development and their communication can be best enhanced by connecting to acronym TEA: tell, explain and assess.²⁵ Tell mentees what to do and what not to do; explain why to do and why not to do; assess mentees' understanding of what has been told and explained.²⁵ Assessment is more important to find out whether mentees have understood or not what mentors told and explained in order to rephrase the conversation based on assessment results for better understanding. Teaching without 'testing' is something like cooking without 'tasting'. Therefore, mentors have to pay attention on testing or monitoring of their mentees' capabilities and development in all aspect and act accordingly. It is the input, process and output, and the quality of nurturing the garden that dictates what type of product the gardens or medical

schools are producing.²⁶To nurture an academic culture aimed at raising and maintaining the standard of education and ensure a trustworthy mentor-mentee program, regular faculty development activities on educational issues are needed for a sustainable educational and institutional development and thereby ensure the production of competent and confident medical graduates.¹⁵The purpose of training is to bridge the gap between current practices and desired best or standard practices. Training program helps to develop the expected knowledge, skills and attitudes; motivates and inspires people; changes peoples' behaviour and their commitment and thus make accountable for improvement of work performance.²⁷Leaders in educational institutions should give due importance on professionalism²⁸ and effective training on mentor-mentee program.

Conclusions

Mentor-mentee relationship and mentoring effectiveness skills of the WUC mentors was found 75% and 72% respectively with a good number of mentor-mentee communications which reflects an effective mentoring program. However, only 17% mentors possessed all 5 mentorship roles which need to be increased. A few mentees did not at all receive any support from their mentors or it was not effective for them and some mentees demanded more meetings in-person. Some mentees reported that their contributions were not acknowledged by

the mentors appropriately. Currently teachers' roles are changing from deliverer of material to a more creative, designer and facilitator of learning. Teachers in medical schools traditionally are not trained, they need to understand their roles and emphasize on capturing more mentorship-roles. Mentors need more communication-sessions with their mentees specifically in-person which can be best enhanced by connecting to TEA; tell, explain and assess in order to make the communication and mentoring excellence. Addition of portfolio and reflective writing in the curriculum will be of helpful to monitor the growth and professional development of mentees. The educational managers need to pay attention on this issue and adequate training of mentors in order to enable them to be updated and acceptable by mentees through fulfilling their needs and thereby ensure the production of competent and confident graduates.

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Conflict of interest

The authors declare no competing interest

Author's contribution

All authors participated equally in this research and preparation of manuscript.

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