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## SWOT Analysis of the Universiti Sains Malaysia Medical Educationists' Preparations to Make a Regional Medical Education Hub: A Qualitative Study

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### ABSTRACT

The aim of this study was to analyse the strengths, weaknesses, opportunities and threats that describe the current circumstances of medical educationists in the School of Medical Sciences in Universiti Sains Malaysia (USM), particularly towards preparing themselves for becoming a regional hub in medical education. A total of 21 documents, including nine strategic management records, three department meeting documents and nine researchers' observation journals were engaged in this study. The gained data were clustered by themes for each of the four categories which were strengths, weaknesses, opportunities and threats regarding medical educationists in the USM. High motivation and interest of the lecturers, interest in writing, presence of medical background, experienced in clinicals, experienced in management, presence of good health status, presence of postgraduate medical education and the presence of international students were designated as strengths of medical educationists. Presence of personal challenges, a majority of young lecturers and a majority with no PhD were stated as weaknesses of medical educationists. Positive support from family, strong support from the top administration to the medical education department, positive attention to individual instructors, two instructors having a PhD, supportive cadre, positive international perception to the department of medical education and large opportunities for research and school-provided grants were indicated as opportunities for medical educationists. Financial issues and facilities were expressed as threats to medical educationists. Consistent with the positive mode to move forward, there is a good chance for the USM medical faculty to become a medical education hub.

**Keywords:** *Medical educationist, Medical school, Qualitative study, Regional medical hub, SWOT analysis*

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### INTRODUCTION

A recent call to becoming a well-known institution is welcomed by all the higher education institutions worldwide. A significant characteristic of the education

hub strategy is to attract international students investing time and finance into exploring quality knowledge and skills in the country, particularly due to the high-class education system offered by such institutions (1). Generally, an education

hub is considered as an interchanging of idea networking, cultures, knowledge and values between two or more countries around the world (2). The recent trend of education hubs is focused on two categories; (a) student education and training, and (b) knowledge and innovation. The first hub emphasises the recruitment of international students. Secondly, it encourages foreign universities to set up branch campuses. Finally, it encourages foreign universities to collaborate with local institutions for the production and distribution of knowledge and innovation (3). Many countries have addressed their aim of being a higher education destination. South Korea, Singapore, Taiwan, Hong Kong and Malaysia are seen among the countries becoming excellent international education hubs in Asia.

Similar to other countries, Malaysia has produced an excellent international higher education hub that foresees the attraction of 250,000 international students by 2025. This internationalisation of higher education aims has been stated as one of the seven key goals of the Higher Education Strategic Plan 2013–2025; in Malaysia, it has grown rapidly in the last decade (4). It is hoped that through this plan, Malaysia will be an education exporter country rather than an education importer. Many foreign universities have been invited to operate their campuses in the country, such as Monash University and the University of Nottingham. Areas of social sciences, engineering, computer sciences and health sciences are fields targeted in the Malaysia's path to becoming a regional education hub (2).

In the context of health sciences, medical school is a significant entity in Malaysia's future regional hub. This is consistent with the current course offered by Malaysian universities. Currently, there are eight public schools of medical sciences operated in Malaysia such as Universiti Kebangsaan Malaysia, Universiti Malaya, Universiti Sultan Zainal Abidin, Universiti Sains Islam Malaysia, Universiti Teknologi MARA,

Universiti Malaysia Sabah, Univesiti Malaysia Sarawak and Universiti Sains Malaysia (USM) as well.

It has many experiences in conducting teaching and research in medical education programmes. Besides, it also has experience in managing seminars, workshops and other programmes that relate to medical education at the national and international levels. It consists of nine full-time medical doctors and one counsellor who possesses vast experience in education. The team is led by an ambitious associate professor who is recognised at the national and international level. To boost academic networking, a few international memorandums have recently been signed with institutes such as the Services Institute of Medical Sciences, a public medical school in Lahore, Pakistan. Considering these advantages, the USM medical education department's vision of becoming a hub of international medical education in 2025 is feasible. The vision is focused on two areas, including recruitment of international students in medical education and engagement in research networking among scholars in the region of Asia. Consistent with this regard, its mission is to design a compatible medical educationist in teaching, research, assessment and administration. Thus, it is important for the school to conduct a specific study that focus on the status of its medical educationists and explores their preparation to achieve a regional medical education hub through SWOT analysis.

There are numerous benefits of being an educational hub, including social, political, economic and educational advantages. It is a good platform to bridge the diversities of culture, knowledge and experiences in an integrated academic community. Apart from that, it may also enhance the quality of research and teaching as well (5). A department of medical education and a competent medical educationist are both considered pillars to determine faculty success. In this regard, a major function of the medical education department is to help prepare the teaching staff with the necessary

skills to effectively undertake their roles as medical teachers. It includes functions of curriculum development, service provision, assessment and ensuring the accreditation of the medical college. In addition, the direction of medical education is expected to change its shift in pedagogy approaches, as well as integration of technology and assessment. To align with the predicted changes, medical educationists should prepare themselves in order to manage these features well (6).

In spite of the importance of medical educationists in enhancing medical teachers' professionalism, very little information exists on methods of improvement in the aspects of both talent and performance. This has led to a lack of methods to properly train medical educationists. This situation has caused a lack of practise models in empowering medical educationists worldwide. For this reason, the present study aims to explore the strengths and weaknesses medical educationist in the School of Medical Sciences, USM and this research is well-timed. In addition, no studies have been conducted to date with SWOT analysis, particularly for examining the current situation of medical educationists in USM. The research question is as follows: What are the strengths, weaknesses, opportunities and threats facing medical educationists in USM?

## METHODS AND MATERIALS

A qualitative case study was applied as a research design. The study was carried out in the Department of Medical Education at the School of Medical Sciences, USM from 1st December 2018 to 28th February 2019. The case study method was applied as it is connected with the naturalistic inquiry exploring the complex experience of humans, and it is not over-simplified and subsumed into a number or a statistic (7).

Documents in qualitative research are carefully selected for inclusion in the study

based on the possibility that each document contributes to variability of the sample. In qualitative inquiry, the intent is not to generalise to a population, but rather to develop in-depth exploration of a central phenomenon. The research term used for qualitative sampling is purposive sampling. In purposive sampling, researchers intentionally selected accessible documents and sites to learn or understand the central phenomenon.

In this research, maximal variation sampling is used. Maximal variation sampling is a purposive sampling strategy in which the researcher samples documents that differ in content (8). Documents in this study must meet the following criteria such as explaining the strategic management of medical educationists, and explaining researcher's observations pertaining to the behaviour and attitude of medical educationists in the department. Documents which are not related to the research interests were excluded from the study. To meet the outlined criteria, a total of 21 (9–10) documents were involved in this study. They consisted of strategic management records, department meeting documents and the researchers' observation journal. The observation journal was based on the department meetings, personal conversations with colleagues within or outside departments and online department conversations through social media applications such as WhatsApp.

The SWOT analysis approach was utilised in the study. This serves as a foundation for evaluating the internal potential and limitations as well as the probable opportunities and threats from the external environment. Justifications of the choices are as follows: (a) this method was broadly applied in health sciences (11–12), and (b) it is relevant for use in various settings, including academic management. Undoubtedly, there are various strategic management models offered in the literature rear-view so far (e.g., the balanced scorecard, the Baldrige framework, the blue ocean strategy, the alignment strategy and

Porter's five forces management models). These instruments remain the most popular and widely used strategies. Despite their popularity, they have limitations. Generally, these instruments are used in business and marketing services rather than in the education sector. Apart from that, they have specific weaknesses. For instance, there remains an absence of focus on external factors and competitors, a lack of risk analysis and the issue of time dimension are among the weaknesses of the balanced scorecard strategic management model. The Baldrige framework model has its limitations in achieving a complicated defined target. Considering these limitations, it was reasonable to select the SWOT analysis model in this present study. Additionally, the SWOT analysis model is believed to be consistent with three keys to success in the education sector, such as getting everyone on the same page, engaging community in the process and encouraging collaboration among educational leaders.

In the present study, we intended to examine the strengths, weaknesses, opportunities and threats faced by the USM medical educationists in the journey of becoming a medical education hub in the year 2025. SWOT analysis helps the user take a reasonable method to improve strategy implementation. To ensure the credibility of data obtained, a document checklist was developed. The main functions of the tool are to avoid missing data and standardise the data collection process. The document checklist consists of the date, types and the document relation with the research objectives. Aside from this, one space for notes is provided to the researcher to share his/her ideas pertaining to the documents examined. The data collection process took place over the duration of two months from 1st December 2018 to 28th February 2019. The obtained data was analysed using ATLAS-i software. The data collection process was performed using the content analysis procedure. The content analysis performed was based on the following aspects, such as definition

of SWOT analysis, SWOT analysis importance, advantages of SWOT analysis and how SWOT analysis is used. At the end of the process, information was clustered into four quadrants, including strengths, weaknesses, opportunities and threats regarding medical educationists.

There were three steps applied in the data analysis; for instance, management of data, understanding of data and analysis of data (10). For management of data, the first step entailed a given code index, such as: SMR-1/10/3/2019; DMD-2,15/3/2019 and ROJ-3, 12/3/2019. This translated as follows: SMR-1 = Strategic document records number 1; 10/3/2019 as the date of the document collected on 10th March 2019; DMD-2 = Department meeting documents number 2; 15/3/2019 as the date of the document collected on the 15th March 2019; ROJ-3 = Researcher's observation journal number 3; and 12/3/2019 as the date of the document collected on the 12th March 2019.

Once the data code indexing was complete, the next step was understanding the data. The researcher read texts line-by-line and sentence-by-sentence in order to find out the concepts, ideas and terminologies that relate to the research objectives. This process was repeated to understand the entire dataset.

Data interpretation is an on-going process to group the data gained from the second step. This process is known as a coding process. This thematic analysis was done by sorting the data into emerging themes and regrouping them for similarities and differences. From there, categories of information to search for the phenomenon being studied were developed. At this step, the researcher had read the document actively in order to identify the similarities and differences of the concepts, ideas and terminologies identified during the second step. Research objectives acted as a controller to help the researcher focus on the specific concepts, ideas and terminologies

that could potentially lead to answering the research objectives.

The triangulation and thorough description were two measures taken in order to seek the validity of the data. In this research, the researcher utilised the documents that represented the overall perspectives of medical educationists as a data collection method. By using a variety of documents, the data became valid and reliable (9, 13). Aside from this, a thorough explanation of the data retrieved was presented by the researcher. An in-depth explanation provided by the researcher enabled the readers to come to a personal conclusion concerning the outcomes of different settings with similar contexts.

The three methods of audit trailing, peer checking and Cohen's Kappa indexing were applied to seek data reliability (14). An audit trail was utilised by requesting someone outside of the research group to check the narrative in order to confirm its credibility. The reader was asked to check all the documents and reports related to the process of data collection for verification. Then, the completed groups were referred to the panel of experts for review and verification. In this context, the researcher asked a reader to check the report and all documents related to the data collection process. The groups that were complete were then referred to the expert panels for review and verification. This process is known as peer checking. For this purpose, the researcher referred data to three medical educationist experts in the school of medical sciences. All responses made by the panel of experts were taken into account.

Finally, the reliability was measured by determining the Cohen's Kappa index. The researcher then coded it to the agreement level and coding was subsequently performed by the experts in the field (13). This was achieved by corresponding the list of themes and sub-themes with the operating definition to measure reliability. The value given by the Cohen's Kappa index was 0.88, which is considered reliable

(15–16). This means that the analysis unit made by the researcher correlates with the proposed themes.

## RESULTS

A total of 21 documents were examined in the study. Majority of the documents were SMR (43%) and ROJ (43%), while the remaining 14% consisted of DMD (Table 1).

**Table 1:** Document profile

Type of document	n = 21 (%)
SMR	9 (43)
DMD	3 (14)
ROJ	9 (43)

Four themes and 21 sub-themes emerged at the end of the data analysis. Themes consisted of strengths, weaknesses, threats and opportunities regarding medical educationists in USM (Figure 1).

### Theme 1: Strengths of Medical Educationists

The first main theme involved strengths of medical educationists, with sub-themes of high motivation, interest in writing, experienced in the clinical field, having good health status and presence of international postgraduate students.

#### *Sub-theme 1: High motivation and interest in writing*

Since I [have been] here (medical education department), I [have done] many things with honesty and [enjoyment]. Presenting paper and becoming a keynote speaker are my [annual] routine. I like these kinds of works. (ROJ-1/10/3/2019)

I noticed that our lecturers [really like] conducting academic activities...including manuscript writing and conducting research. (ROJ-1/10/3/2019)

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>High motivation of lecturers</li> <li>Interested in writing</li> <li>Experienced in clinical field</li> <li>Having a good health status</li> <li>Presence of international of postgraduates' students</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>High commitment to family</li> <li>Majority are junior lecturers</li> <li>The majority are no PhD holder</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Positive support of their family</li> <li>Very strong support from top management to medical education department</li> <li>Two lecturers having PhD</li> <li>Very supportive staff</li> <li>Positive perception to the department of medical education internationally</li> <li>Many grants provided by internal and external</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Facilities need to be upgraded</li> </ul>

**Figure 1:** Strengths, weaknesses, opportunities and threats of medical educationists in USM.

**Sub-theme 2: Experienced in clinical field**

Before joining the teaching profession (as a lecturer in medical education), I noticed many of my colleagues worked in few hospitals in the Malaysian Ministry of Health. Thus, their experiences helped them, especially in clinical domains. (ROJ-1/10/3/2019)

Majority of lecturers have [experience of] more than five years in clinical areas in the government hospital...this led me to [become] a good lecturer in medical education. (SMR-1/10/3/2019)

**Sub-theme 3: Having good health status**

Almost all the lecturers [were] between 35 to 40 years old... meaning that they are [of] middle age and in a good health to perform the task; we are able to be [good workers] in realising a medical education hub as stated by the head of department. (ROJ-1/10/3/2019)

**Sub-theme 4: Presence of international of postgraduate's students**

At the moment, we received many foreign students; among them were Jordanians, Palestinians and other countries as well...we [are] confident [that] international students' admission [will continue] in the future. (DMD-8/15/4/2019)

**Theme 2: Weaknesses of Medical Educationists**

The second theme consisted of weaknesses regarding medical educationists, with sub-themes of high commitment to family, a majority of junior lecturers, and a majority with no PhD.

**Sub-theme 5: High commitment on family**

I assumed that our academic staff have high commitment to family; for example, one of them [has] four children who are studying in primary school. Of course, they (the children) need more attention during [the] educating process. In addition, his partner is a professional who has [a] commitment, too. (ROJ-1/10/3/2019)

**Sub-theme 6: Majority have no PhD**

Seven of nine [of] our lecturers have no PhD. This is a big challenge for our department, definitely. To be an attractive destination, we first must have [a] PhD. In medical education, having a Master in such field [is] not sufficient to be a good medical educationist. (DMD-1/10/3/2019)

I knew that majority of our academic staff have no PhD qualification. It is important [in order] to attract foreign students here (Malaysia). (ROJ-1/10/3/2019)

**Theme 3: Opportunities for Medical Educationists**

The theme of opportunities regarding medical educationists consists of several subthemes which are positive support of their family, very strong support from top management, two lecturers possessing a PhD, supportive staff, positive international perception of the department of medical education and many grants provided by internal and external parties.

**Sub-theme 7: Positive support of their family**

We can see their partner and children really understand their task, thus I am sure that they [are] able to [manage] time well so far. (ROJ-8/15/4/2019)

Interestingly, in my opinion some of their [partners offer for] them to pursue their [PhD study]. (ROJ-1/15/3/2019)

**Sub-theme 8: Very strong support from top management to the department of medical education**

At the faculty level, [the] department of medical education [is] seen as a valuable entity, whereby our dean respects our lecturers and staff, our entity [is] always tasked

to conduct critical [programmes] either at [the] department or school level. For instance, we have been requested to conduct [a] workshop on curriculum review and strategic management for [the] school of medical sciences. (SMR-5/10/4/2019)

We have been receiving [positive support] from the dean and other top management as well, not only in [a] kind of morale support, but also in financial [issues]. They (top management) try to do the best to fulfil the department [needs], such as teaching and learning matters. (ROJ-4/1/4/2019)

**Sub-theme 9: Two lecturers having a PhD**

Two of nine medical educationists are PhD holders. One is pursuing her [PhD studies]...both of them are skilful [in guiding] others in teaching, research and others. The other lecturers are willing to pursue their study soon. (ROJ-3/27/3/2019)

**Sub-theme 10: Very supportive staff**

[Apart] from that, we have positive support staff, they work very hard, [and understand] their job specification [well]; importantly they work independently with... minimum monitoring from the supervisor. In other words, [they do help] to achieve the vision. (SMR-2/20/3/2019)

Yes, our non-academic staff [is] very supportive; I [have] been here for five years...they help me to manage many things [and they are experts] in their tasks and a humble staff. (ROJ-6/13/4/2019)

### **Sub-theme 11: Positive international perception to the department of medical education**

We have been receiving many applications of foreigner postgraduates students, such as [those from] Saudi Arabia and India to join Master and PhD programme. (DMD-8/15/4/2019)

Every year we have received many applications from international students to pursue their study in medical education at Master and PhD [levels, and] this is a good sign that the department of medical education has been becoming a popular destination. (DMD-2/20/3/2019)

### **Sub-theme 12: Many grants provided**

The chances to gain research grants are big including internal or external grants... we have many kinds of grants provided by the USM and other agencies, too. For instance, Ministry of Health, Ministry of Education, Ministry of Science and Technology and, interestingly, international grants are also offered to the USM lecturers. (SMR-7/13/4/2019)

## **Theme 4: Threats of Medical Educationists**

The fourth category entails threats to medical educationists, with a sub-theme of facilities that are not conducive to.

Our facilities in [the] department need to be upgraded. For example, [the] learning space must be redesigned to align with the current challenges (21st century education). Besides, management must provide the latest equipment of teaching [aids] and materials. (DMD-9/10/4/2019)

Physical facilities and other equipment must eventually be upgraded...this is important in [the] teaching and learning process and other activities. (ROJ-1/15/3/2019)

## **DISCUSSION**

The aims of becoming a globalised educator must be shadowed by a high quality of educators' professionalism. The presence of strengths and opportunities in the SWOT analysis are good indicators that the USM medical educationists are on the right track in their journey to becoming a regional medical education hub. High motivation and interest in teaching and journal writing are critical factors to enhance their professionalism level. These advantages are able to boost higher education activities through pairing programmes with other institutions (17). In addition, having international students will be an extra point to invite more foreign students to invest their time in the proposed medical education hub. This is consistent with the current students' perceptions that foreign qualifications can enhance their social status (18). Thus, international students will automatically be a source of highlighting USM medical education as a good destination.

Having medical background is an important feature not only to become a professional medical educationist but also to promote academic quality assurance to potential students. As an experienced figure in the medical field, s/he is able to provide a high quality education system to foreigners. This feature is consistent with the characteristic of an education hub that is able to offer high quality education matters (2). Through an experienced team, the process of interchanging education input and output between two or more countries around the world becomes increasingly easier.

Our study shows that medical educationists also have broad opportunities that can be manipulated to realise the overall vision. Solid support from top management and support staff can ensure the department's improved strength and the proper management of activities related to the vision. Provision of grants to medical education lecturers will help them to attract

postgraduate students both locally and internationally who wish to further their studies at USM. Therefore, this opportunity may, in turn, enhance the quality of research and teaching (19). Regarding threats to medical educationists, positive support from top management can potentially be utilised to reduce them. For instance, top management may be asked to recommend financial support in providing facilities, such as teaching-learning equipment. In this way, the top management factor is important to achieve the visions of the organisation.

As a result of SWOT analysis, it is recommended that the Department of Medical Education in USM highlight eight valuable strategies as a mechanism of medical educationists' preparedness. The proposed strategies are as follows:

- (a) Maintaining lecture motivation,
- (b) Specialising individual lecture competency,
- (c) Utilising international students to promote medical education programmes at the international level,
- (d) Encouraging lecturers to obtain a PhD,
- (e) Exposing junior lecturers to international events,
- (f) Maximising senior lecturers' ability to guide junior lecturers through effective mentoring programmes,
- (g) Encouraging lecturers to publish works in high impact journal, and
- (h) Exposing support staff to the department's vision.

The study findings provide evidence for policy makers and faculty management to enhance academic staff's competency. Medical educationists must improve their knowledge and competencies to make them significant at all times. This study has two limitations. First, the documents of the study are limited to the Department

of Medical Education. The findings do not represent the real status in the context of becoming a medical education hub. Second, we did not apply the previous validated questionnaire for the data collection. This is due to the fact that no previous SWOT analysis was conducted on this subject matter. Considering these limitations, it is suggested that other groups should be involved in future studies. Also, a broad SWOT analysis is recommended to gain significant study results.

## CONCLUSION

The findings of the study showed that the USM medical educationists are in the preparation process of becoming a regional medical education hub in the future. They have many advantages which directly or indirectly contribute to achieving these visions. The study's aim to analyse the strengths, weaknesses, opportunities and threats regarding USM medical educationists were successful. The strengths were characterised by personal attributes of academicians as well as top management. Despite some weaknesses and threats that emerged, the strengths and opportunities continue to outweigh them.

## ETHICAL APPROVAL

This study was approved by the USM ethic committee (USM/JEPeM/18120790) and all participants voluntarily participated in this study by signing consent forms prior to the start of the study.

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