

Academic Medicine Education Institute (AM·EI): Transforming the Educational Culture of Health Professionals

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Abstract

Introduction: The Academic Medicine Education Institute (AM·EI), jointly established by Duke-NUS Graduate Medical School (Duke-NUS) and Singapore Healthcare Services (SingHealth), is a newly formed health professions education academy designed to cultivate best education practices and create a community of health professions educators. To achieve the aims of AM·EI, the needs of SingHealth educators have to be understood. Therefore, this study was carried out to assess educators' perceptions towards the current education climate and their academic needs. **Materials and Methods:** A 28-item questionnaire consisting of free-response, Likert-type and ranking questions was developed. The questionnaire was electronically distributed to 200 medical and nursing educators, and made available to attendees of the 2012 SingHealth Duke-NUS Scientific Congress through hardcopies. **Results:** A total of 150 completed questionnaires were received (94 from electronic survey and 56 from Congress). Five themes emerged from the analysis of responses to free-response questions: 1) faculty development, 2) development of a community of educators, 3) recognition for educational efforts, 4) institutional support, and 5) better communication about SingHealth educational activities. Respondents were in highest agreement with the statements (rating of 3.7 out of 5): "The SingHealth education programmes are high quality", "New learning or teaching methods are welcomed in this institution/hospital", and "An academic appointment is important to me". The competencies that respondents felt to be the most important were facilitating discussions, presentation skills, and providing feedback (respective means = 5.1, 5, 5 of 7). **Conclusion:** This needs assessment provided us with important insights regarding SingHealth medical educators' perceptions of their education environment and established key priorities for the AM·EI's programming efforts.

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Introduction

In 2010, Duke-NUS Graduate Medical School (Duke-NUS) and Singapore Healthcare Services (SingHealth) launched an initiative to improve the lives of patients by combining their individual strengths to become an integrated academic healthcare cluster. This new academic healthcare cluster has a mission to provide outstanding clinical service, discover and promote better ways to care for patients through research and education. At the same time, increasing numbers of medical students had been rotating through SingHealth clinics, making high-quality

education practices a priority. To meet educational goals, Duke-NUS together with SingHealth formed the Academic Medicine Education Institute (AM·EI) to function as a health professions education academy for the healthcare cluster.¹ Our task in AM·EI was to incorporate educational best practices to support and develop all aspects of education across a wide spectrum of healthcare educators, including physicians, nurses, allied healthcare professionals, and administrators.

Similar medical education academies have been very successful in other countries – they have been increasing

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grants and research output of their educators, improving interdepartmental collaboration, and facilitating faculty interest in continued professional education.²⁻⁴ In Singapore, an education unit known as the Centre for Medical Education was established by the Yong Loo Lin School of Medicine and National University Health System (NUHS) to provide faculty development programmes. For the SingHealth Duke-NUS academic healthcare cluster, there has been a perceived lack of quality education programmes within the cluster to engage SingHealth faculty effectively and for them to participate optimally. AM·EI places a special emphasis on building a scholarly community among healthcare educators and aims to combine the best of centralised educational activities and teaching academies in order to sustain teaching, learning, curriculum development, and scholarly educational research. As such, it aims to foster a community of healthcare educators, requiring wide-ranging and inclusive development programmes. In this respect, the AM·EI shares several similar concepts with the recommendations put forth by World Health Organization (WHO) in the WHO Education Guidelines 2013.⁵

As the AM·EI is the first all inclusive, interprofessional institute of its kind within this newly formed academic medical center, the educators' perceptions, needs and expectations in educational development and scholarship were not known. Thus, to better understand the SingHealth healthcare educators' views of their current climate and academic needs, we developed a survey to explore the current perceptions of the academic medical education environment, the health profession's competencies viewed as most important by the educators', and their programmatic needs. The purpose of this needs assessment was to guide the AM·EI as it develops relevant training programmes and initiatives to support educational activities. IRB exemption for this study was obtained from the SingHealth Centralised Institutional Review Board (CIRB).

Materials and Methods

Sites and Subjects

We surveyed a convenient sample of educators within the SingHealth and Duke-NUS systems. Educators in all health professions (i.e. medicine, nursing, allied health professions, etc.) were eligible to participate in the survey.

Questionnaire Development

A 28-item questionnaire was developed by the AM·EI executive committee, a panel of experts in medical education from both Duke-NUS and SingHealth. In order to understand the current needs and educators' expectations of the system, the panel developed the following 4 sections:

- Three free text questions:

- "What do you think the AM·EI could do to improve the quality of education at SingHealth?"
- "What would you personally like the AM·EI to do for you as an educator?"
- "How can we best engage all the educators to improve the quality of education at SingHealth?"
- Demographics: Seven items that asked participants about their specialties, their current involvement and years of experience in education, and the educational methods they had used in the past.
- Attitudes towards current educational environment: Twelve statements that participants rate on a 5-point Likert-type scale (1 = "strongly disagree," 5 = "strongly agree")
- Key education competencies: Seven competencies selected by a panel of 4 medical education experts from Duke-NUS. Participants rank these competencies in order of importance (1 = "least important," 7 = "most important").

Distribution

Approximately 200 SingHealth educators in 4 newly formed Academic Clinical Programs (ACPs), consisting of medicine, obstetrics and gynaecology, paediatrics, and surgery, as well as the department of nursing were given a link to the online questionnaire between 8 May 2012 and 18 May 2012. In addition, a hardcopy version of the questionnaire was made available at an AM·EI booth for attendees of the 2012 SingHealth Duke-NUS Scientific Congress (3 August 2012 to 4 August 2012).

Analysis

Data obtained from the survey were analysed using descriptive statistics and a nonparametric test of significance for ordinal data. The open-ended question responses were transcribed verbatim, and separated into individual comments which were then analysed for content and themes. Two research assistants independently examined the comments to identify recurring codes, subthemes, and themes. The research assistants then convened to decide upon a final list of themes and subthemes, and re-sorted individual comments into subthemes.

Results

We received a total of 150 responses. Ninety-four responses (63%) were received from the ACPs and nursing, and 56 responses (about 37%) were collected during the congress. The majority of respondents were medical clinical educators (40%) or nursing educators (38%). Further demographic details are included in Table 1.

Table 1. Demographics, Teaching Experiences and Educational Methods Used by Study Respondents

Demographics	% of Total Respondents
Demographics – Primary role (n = 150)	
Medical clinical educator (n = 60)	40
Nursing educator (n = 58)	38
Allied health educator (n = 13)	9
Others (n = 19)	13
Involvement in teaching (n = 150)	
Yes (n = 125)	83
No (n = 25)	17
Experience in education (n = 150)	
More than 20 years (n = 16)	11
10 to 19 years (n = 37)	25
5 to 9 years (n = 29)	19
Less than 5 years (n = 38)	25
Missing responses (n = 30)	20
Educational methods used (tick all that apply; n = 125)*	
Lecture-based (n = 95)	76
Case-based (n = 92)	74
Problem-based learning (n = 29)	23
Team-based learning (n = 26)	21
Stimulation (n = 25)	20
Role-play (n = 23)	18
E-learning (n = 20)	16
Others (n = 10)	8

*Percentages may not add up to 100% because each respondent can select more than 1 answer.

Educators' Perceived Scholarly Needs

A total of 328 individual comments collected from 104 respondents were received and analysed. Five main themes were identified from a qualitative content analysis of the responses to the open-ended questions: 1) faculty development, 2) development of a community of educators, 3) recognition for educational efforts, 4) institutional support, and 5) better communication about SingHealth educational activities. Several subthemes were also identified within each theme. The subthemes are identified in Table 2, along with a number of comments included and an illustrative comment for each. The authors' interpretation of each theme is highlighted below.

Faculty Development

Educators indicated that faculty development programmes should be tailored to the Duke-NUS/SingHealth community and made more easily accessible. Moreover, in order to accommodate the range of teaching competencies, educators

believed that professional development opportunities should be varied. On an individual basis, educators wanted feedback and standardisation for their teaching performance, and individual development of their teaching skills.

Development of a Community of Educators

Most educators believed that they would be assisted by the development of a community of educators. Their responses indicated that this community should support forums for within-profession and interprofessional collaboration, reflection, and communication. Furthermore, this community should not be limited to health professions educators in the Duke-NUS/SingHealth system. Educators also wanted to interact with international experts in medical education and supported increased student-teacher interactions. They suggested that AM·EI help embed the role of clinician-educator into clinical setting by increasing awareness about education being a discreet discipline, formalising the education role with appropriate rewards and recognition.

Recognition

Simply put, SingHealth and faculty educators felt that the current promotion criteria did not adequately consider efforts related to teaching and educational activities.

Institutional Administrative Support

The majority of educators requested institutional support in the form of protected time for teaching and training, administrative and information technology support, monetary resources, increased teaching facilities, and access to academic journals.

Better Communication about SingHealth Educational Activities

Educators believed AM·EI should improve communication between faculty and education administration by clearly articulating AM·EI's vision, defining faculty roles within that vision, and updating educators on the progress and outcome of teaching efforts, training efforts and programmes. This included receiving timely updates on management changes.

Perception of Academic Medical Education Environment

Table 3 presents the mean scores (range, 1 to 5) and standard deviation for each individual item asking about each participant's perceptions of the current academic education environment. The 3 items that respondents were in highest agreement with were: "The SingHealth education programmes are of high quality", "New learning or teaching

Table 2. Themes, Subthemes, and Illustrative Comments from Open-ended Question Responses

Theme	Subthemes (Total Number of Comments)	Illustrative Comments
Faculty development	Training and skill advancement (95)	“Provide the necessary training needs of an educator.”
	Standardisation and assessment (16)	“Check level of competency regularly.”
	Innovation in teaching (14)	“Be innovative and willing to adopt new technologies in the delivery of medical education.”
	Provide opportunities to teach (9)	“Give me more opportunity to teach.”
Development of a community of educators	Collaboration within and between institutions (26)	“Collaboration between medical, nursing and allied health in conducting courses and training.”
	Create a platform for sharing ideas (20)	“Seminars for educators to share their experiences.”
	Building relationships (11)	“The education institute could match clinician educator-track doctors with mentors.”
	Promoting a culture of education (9)	“Have a common vision and mindset.”
Recognition	Acknowledgement of efforts (17)	“Recognise existing talents on the ground.”
	Providing incentives (10)	“Reward teaching efforts financially.”
	Identify and recruit teaching talent (6)	“Selecting and developing the right candidates for teaching positions/assignments.”
Institutional administrative support	Provision of resources (26)	“The education institute should act as a resource center for clinician educators to consult for advice on things like curriculum planning/ education research.”
	Protected time (21)	“Allocate appropriate time which is protected for teaching.”
	Administrative and IT support (20)	“Assist with the setting up of nursing clinical development unit.”
	Provision of facilities (6)	“Provide facilities e.g. rooms, clinics.”
Better communication about SingHealth educational activities	Communication and outreach (10)	“Regular follow-up on latest management changes.”
	Accept feedback (6)	“Connect with educators for exchange of feedback and evaluation.”
	Ground-up approach (6)	“Allow the educators on the ground to initiate activities for themselves.”

methods are welcomed in this institution/hospital”, and “An academic appointment is important to me” (mean 3.7 out of 5), respectively. The 2 lowest rated items were: “Academic medicine is never compromised when more clinical work needs to be done” (3.0) and “Staff worries that efforts made in education will be rewarded less than service” (3.1).

Importance of Competencies

Table 4 presents the mean importance score (range, 1 to 7; 7 = most important) and standard deviation for each of the 7 competencies. “Facilitate discussion,” “presentation skills,” and “provide feedback” received the highest mean rankings, respectively.

Discussion

Our needs analysis helped us to identify our educators’ priorities, most valued competencies, and expectations for our institute.

The qualitative analysis highlighted a willingness to do more teaching as illustrated by respondents’ wish for protected time, more administrative support for educational activities, and greater recognition for education accomplishments from their institutions. These findings reflect recent assertions from Wong⁶ and Yap⁷ that medical educators in Singapore are committed to teaching and academia, but education activities are often sacrificed to provide greater time and resources to research and clinical practice. As a centralised medical education academy, the

Table 3. Mean and Standard Deviation for Perceptions of Academic Medical Education Learning Environment

Questions	Mean (SD)
I work at SingHealth because I have an opportunity to teach. (n = 135)	3.6 (0.9)
My colleagues are interested in teaching. (n = 136)	3.5 (0.8)
The SingHealth Education programs are high quality. (n = 135)	3.7 (0.8)
It has been easy for me to participate in SingHealth's programmes to improve teaching skills. (n = 133)	3.4 (0.9)
Management offers adequate resources necessary for academic medicine to thrive. (n = 134)	3.3 (1)
In the department, we discuss ways to improve handling of academic issues in our work. (n = 135)	3.4 (1.1)
New learning or teaching methods are welcomed in this institution/hospital. (n = 135)	3.7 (0.9)
Opportunities to participate in academic events and educational & research scholarly activities are available. (n = 134)	3.5 (1)
An academic appointment is important to me. (n = 133)	3.7 (1)
Staff worries that efforts made in education will be rewarded less than service. (n = 135)	3.1 (1.1)
Academic medicine issues have brought about some positive changes here. (n = 134)	3.6 (0.8)
Academic medicine is never compromised when more clinical work needs to be done. (n = 130)	3.0 (1)

Likert scale (1 = Strongly disagree to 5 = Strongly agree)

AM·EI should provide greater resources and recognition so that faculty's education activities can be viewed with greater value.

Even though not all educators' felt their perceived needs were being met at the time of assessment, educational activities such as academic appointments, protected time, and high-quality education programmes when available were greatly appreciated and valued. It was clear that under the current system educators felt clinical work took priority and academic and scholarly efforts were compromised.

As a result of this data, the AM·EI has implemented several initiatives to respond to the stated needs of Duke-NUS/SingHealth educators.

Faculty Development

At the time of submission, we have developed 20 workshops that have attracted 1954 participants from all disciplines. In addition, we have established monthly medical education grand rounds as a vehicle to bring in distinguished speakers and have our seasoned educators share their experiences. Further, in collaboration with the Graduate Medical Education Office, we have partnered with annual education conferences that offer workshops and topics of interest to our educators.

Table 4. Mean Ranking and Standard Deviation of Educators' Competencies

Educators' Competencies	Mean (SD)
Facilitate discussion (n = 139)	5.1 (1.6)
Presentation skills (n = 139)	5 (1.9)
Provide feedback (n = 138)	5 (1.8)
Coaching skills (n = 150)	4.6 (2.3)
Evaluation skills (n = 150)	4.1 (2.1)
Instructional pedagogies (n = 138)	3.9 (2.3)
Leadership skills (n = 150)	3.8 (2.3)

Likert scale (1 = Least important to 7 = Most important)

Community of Educators

We created an all-inclusive interprofessional community of educators. Membership is available to anyone from our respective institutions with a passion for healthcare education, including trainees, students, staff, and seasoned educators. One of our signature programs is an AM·EI fellowship designed to bring together those with a significant responsibility in education and facilitate their broad understanding of the Academy of Medical Education (AoME) Health Professions Competencies,⁸ and develop their skills in programme development and scholarship. We believe this fellowship will be important in the development of clinician-educators necessary to drive educational innovation.

Recognition

We established a Golden Apple Award process that recognises the scholarly educators and newsletters that highlight the work of our outstanding educators in regular communications. Regular reports from the AM·EI are being given to the ACP chairs about the contribution and professional development of their faculty in the area of education.

Resources

We provide institutional support through a monetary grant for innovative medical education scholarship, and provide greater administrative support with our partner, the SingHealth Academy. Further, we offer financial remuneration (and recognition) for faculty who teach AM·EI courses.

Communications

A concerted effort has been made to establish regular communications about the AM·EI activities, and ways to involve our educators. We hope that educators will continue

to share with us their needs and interests so as to improve the programming and recognition of our educators. Further, we have 3 active committees designed to communicate and address upcoming interests or needs of our educators. These committees are:

- Advocacy – enhance a supportive culture for and value of education in the health care system, and identifying and recognising educational efforts.
- Professional development – develop the interdisciplinary programmes and seminars that build the skills and competencies of the educators. This committee also established a standardised evaluation form for regular feedback to our faculty for their teaching efforts within the AM·EI.
- Scholarship – support innovation and scholarship in education through courses, grants and consultation.

Limitations

While this was only a convenience sample of educators which may limit the generalisability of the data, it represented those who are either actively involved in education or had an expressed interest in education, making it useful as a starting point for the AM·EI to better understand the issues and concerns of the educators within the newly formed academic medical cluster. Their opinions were therefore deemed sufficient for the purposes of this assessment, and for developing a baseline understanding of the opinions and needs of health professions educators in SingHealth's unique academic environment. As we involve more people in the AM·EI, their input and needs will be discussed and explored for implementation.

The collection of qualitative data through written responses instead of focus groups and interviews may limit the richness of our data. However, it allowed us to capture a broader set of responses and obtain a larger sample than we would have if focus groups or interviews were utilised.

We hope that continued support for medical education by the AM·EI will drive SingHealth towards a stellar culture of education innovation and scholarship which ultimately translates into better care for our patients.

Conclusion

AM·EI is designed to increase institutional support for academic medicine and educational scholarship by synergising faculty development efforts, resources, and support for medical education and medical education scholarship. Our initial needs assessment defined faculty development, community building, and administrative support and recognition as priorities for health professions

educators in the Duke-NUS and SingHealth system. This assessment allowed us to tailor faculty development programmes that aim to facilitate interdisciplinary learning, support faculty development, and recognise educational achievement. These continued efforts in medical education are leading the way in fulfilling the mission of the academic medical cluster established by our institutions.

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