'IN TOUCH–' NEWSLETTER

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FROM THE EDITOR'S DESK

Dr Fahad Al Wadani

Dear friends,

We are happy to bring out the second issue of 'in-touch', the news letter of the medical education department. We thank you for the positive response and feedback that we received for the first issue and have tried to incorporate your suggestions in this issue. Please do continue to give us your valuable suggestions. Happy reading and please keep 'in touch'!!!!

In the current issue:

HISTORY OF MEDICAL EDUCATION
Part I
From Ancient to Middle ages

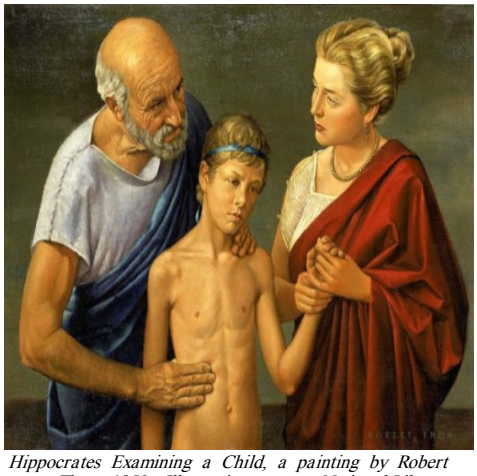
Dr. Ossama Zakaria, Professor of Paediatric Surgery and member medical education department

Education in general can be simply defined as "the process of facilitating learning, and acquisition of knowledge, skills, and attitudes including values, beliefs, and habits". Medical education is related to the practice of being a medical practitioner; either the initial training to become a physician or additional training thereafter.

Although it is difficult to identify the origins of medical education, the first known trial of medical education began back around 9000 years ago (7000 B.C) when the ancient Egyptians knew many of the therapeutical effects of the medicinal plants. This knowledge was taught at home from father to son. So, these houses formed the first primitive pharmacy and medicine schools. Century after century, the ancient Egyptians became more and more interested in medical sciences. Temples began to establish medical and pharmaceutical schools. Priests of good and honest character with scientific background were chosen to become teachers and professors in these schools.

Another group of medical and pharmaceutical schools teaching all the scientific courses were the Per Ankh or *Houses of Life*. Special schools were erected inside the Royal palaces for the education of the Royal family children, the nobles and the court officials comprising all sorts of sciences and arts, specially taught in its own Per Ankh, as in Heliopolis and Memphis palaces.

However, authorities usually consider that medical education formally began with the ancient Greeks' method of rational inquiry, which introduced the practice of observation and reasoning regarding disease. Rational interpretation and discussion, it is theorized, led to teaching and thus to the formation of schools such as that the one at Cos, where the Greek physician Hippocrates is said to have taught in the 5th century B.C and originated the oath that became a credo for practitioners through the ages.



Hippocrates Examining a Child, a painting by Robert Thom, 1950s. Illustration courtesy National Library of Medicine (no changes per creative commons)

In early Sanskrit medical literature there emerges through the mists of Hindu legend an eminent physician named Charaka, who, like Hippocrates, was a great teacher and an indefatigable writer. But no doubt there were many other great teacher-physicians in China, Egypt, and among the Jews whose views about the training of students have not survived. The medical literature of Greece and Rome, however, gives detailed insight into both the principles and the practice of student education; here the source materials become vast for the Greeks were much concerned with education and wrote of it at length.

Starting from the fifteenth century, there was increased pride in the achievements of the Islamic civilization in all fields, including that of medicine. As Islam spread, Muslims were keen to collect all the ancient manuscripts and books that were available. The Arabs directed their energies to translate all that they acquired of Greek, Persian and Indian medical manuscripts. Christians and Jews, amongst others, played a large part in this work.

During these early middle ages, doctors-to-be were not students, they were apprentices, taught something about herbs and surgical skills by older peers. Then came a transition. At the end of the 10th century, a sort of pre academic teaching developed in Salerno on a late Alexandrian model. Mentors were respected, authoritative, and strong personalities.

Soon thereafter, Constantin came to Monte Cassino, translated Greek and Arabic medical writings, and introduced to the West, the then far superior Arabian medicine. Bologna and Montpellier became the centers of scholastic medicine with their studies, ambitions and methods: institutions were founded, students enrolled, a pedagogy was developed, and standard methods were adopted. Being a doctor was based upon a static non-improvable book learning: its transmission was therefore quite easy.

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Interesting fact!!

Scientific evidence suggests that some of the earliest doctors in ancient Egypt were women. Ancient inscriptions from Egyptian excavation sites suggests that females were known to hold important roles in the medical field. It is interesting that centuries later the trend of females outnumbering males in the field of medicine is in vogue again. Recent statistics from universities across the world indicate that females outnumber males in terms of enrolment in medical schools!

PEARLS IN RESEARCH - PART 1

Dr. Sayed Ibrahim Ali
Assistant Professor of Biostatistics, FAMCO department

Statistical errors in medical research

Statistical errors in medical research are surprisingly common. For example

Olsen (2003) found that 54% of a sample of 141 papers published in infection and immunity had errors in reporting, analysis or both.

Yim et al. (2010) found that 79% of a sample of 139 papers published in the Korean Journal of Pain had errors.

Nieuewenhuis et al (2011) found that 15% of articles reviewed in the top ranking journals Science, Nature, Nature Neuroscience, Neuron and The Journal of Neuroscience had used the wrong method.

So, I will explain the most common statistical errors in medical research:

Firstly: Errors related to p-values

A. p-values given in closed form,

B. p-values lacking after statistical tests,

C. Incorrect p-values,

D. Incorrect demonstration of p-values

Pearls:

Don't write P-value = 0, instead , write P-value =0.0001

It is better to Write P-value = 0.012 < 0.05 than P-value<0.05 directly

References

Olsen CH. Guest commentary: Review of the Use of Statistics in Infection and Immunity. Infection And Immunity 2003;71(12):6689-6692

Yim KH et al. Analysis of Statistical Methods and Errors in the Articles Published in the Korean Journal of Pain. Korean Journal of Pain 2010;23:35-41

Nieuewenhuis S et al. Erroneous analysis of interactions in Neuroscience: a problem of significance. Nature Neuroscience 2011;14:1105-1107

A brief interview with Dr Seba Ghreiz regarding her experiences with the Joint Master of Health Professions Education program (JMHPE)

What is the format of the MHPE program?

The JMHPE program is an annual 52 weeks (1 calendar year) credit hour based study. It is conducted totally through distance learning. -The curriculum has nine blocks (six-week /block), during which students concentrate on specific subjects. In each unit, various contributing disciplines are organized around a central theme.-The rationale behind this distance learning joint program is to combine the academic Maastricht experience as a pioneering problem-based school in Europe with the practical Suez Canal experience as a pioneering community-oriented/based, problem-based school in the Eastern Mediterranean Region. Distance-education is supported by an electronic block books. Interaction between students and staff is web-based. For this reason, students are strongly advised to find access to reliable electronic communication networks (Internet) in their countries.

What are the rules for admission?.

Graduates from all Health Profession Education Institutions are accepted for registration (e.g., health sciences, medicine, nursing, physiotherapy, dentistry, pharmacy, speech therapy). There is no fixed time for registration. The graduate can register at any time all around the year, start the program from any point, join the current block, and graduate after successfully completion of the nine blocks.

The minimum duration of the Master Course is one year, and the maximum is three years.

How was the experience in general?

I will always feel honored to have completed The Joint Master of Health Professions Education (JMHPE) program in collaboration between Maastricht University (Netherland) and Suez Canal University (Egypt) Incredible mentors provided me with the essential skills related to career development and research in health professions education. Amazing teaching environment. The faculty are dedicated to teaching, I really learned a lot and enjoyed my online classes, web discussion and doing the assignments.

Dr Seba Ghreiz is a member of the FAMCO department and the medical education department. She completed the JMPHE in 2013

Problem solving using Script Concordance Tests – A brief introduction

Dr Feroze Kaliyadan, Faculty, Department of Dermatology and member medical education department

Background

For the clinical years in our curriculum we are using open ended problem solving (PS) questions as an alternative to MCQs mainly for assessing clinical reasoning skills .A review of available literature suggests just there is no real evidence to suggest that PS is better than MCQs in student assessment. Many institutions, which had previously tried the PS model, have actually discontinued use of the same. Moreover the other advantage for MCQs is that valid statistical data can be obtained more easily for the same and item analysis/item elimination can be applied as and when necessary. Finally, objectivity of PS questions will always be lower than that of MCQs. It should be kept in mind though that MCQs will be able to achieve the objective of assessing higher order skills only if they are constructed effectively and this is probably why PS type questions still have some relevance in clinical assessment.

Problem solving type of MEQs seem suited for assessing problem solving but it is possible to use a combination of MEQs and MCQs in a sequential problem solving process for the best effects. [5] This is where we need to encourage the use of more accepted variants of problem solving questions like the **SCRIPT CONCORDANCE TESTS** which are considered to be superior to MCQs in assessing higher order clinical reasoning skills. [1, 2, 3, 4, 5] **So what is a script concordance test (SCT)?**

The essential concept of SCTs is that they help to assess clinical reasoning uncertain, real life like situations. It assesses clinical judgment and compares it to the scoring given by expert judges. The scoring is based on the degree of concordance

'Script theory' suggests that clnicians use networks or organized knowledge (scripts) to approach and solve clinical problems.For example on seeing a patient presenting with scaly, erythematous plaques, a dermatologists activate knowledge networks related to the possible differential diagnosis (and differentiating between them) to reach a final diagnosis and plan further management. It would be very easy if the are typical of a particular disease but in real life often the patterns may be ambiguous, needing clinical reasoning skills to make a final decision. [4]

Construction of SCTs

Short scenarios with an element of ambiguity are used. A possible hypothesis is suggested and each scenario is followed by sub-questions, each of which gives some additional information based on which the student has to decide on whether the hypothesis is strengthened or weakened (on a 5 point Likert scale ranging from -2 – to 2 , where 2 indicates that the hypothesis is strongly strengthened.[4]

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An simple example is given below:

A 25 year old female patient presents to the dermatology clinic with complaints of hypopigmented patched over the face of 2 months duration. A clinical diagnosis of vitiligo is considered

Choose : -2 -1 0 1 2 (-2 hypothesis strongly weakened to 2 – hypothesis strongly strengthened) based on the extra information provided

The lesions show significant scaling
-2 -1 0 1 2

There is itching over the lesions
-2 -1 0 1 2

Wood's light examination show accentuation of the hypopigmentation
-2 -1 0 1 2

White hair are seen over the affected areas
-2 -1 0 1 2

For scoring, the questions are scored by expert judges (the one disadvantage of the classic SCT is that it requires a large number of judges, like in standard setting methods like the Angoff's method)

The score for each question is equal to the number of judges that that chose that answer, divided by the mode for the same question.

Example If, for the above question A , 8 panel members chose "-2," and 2 chose "-1" , mode will be 8. Credit for a student who chose -2 will be 8/8 = 1 and for one who chose -1 , credit will 2/8 = 0.25. [4]

Modifcation of the SCT –

A modified form to avoid the need for a large panel of judges is to reduce the Likert scale to a three option one. Here the answers are usually clearer and experts tend to chose only one answer, thereby making the scoring easy, although this reduces validity as compared to the five point scale

To conclude, SCTs are a more objective and evidence based application of problem solving questions to assess clinical reasoning. Like MCQs faculty need training to understand concepts related to blueprinting and construction of SCTs for making it a really reliable and valid assessment tool

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2.Hift RJ..Should essays and other "open-ended"-type questions retain a place in written summative assessment in clinical medicine? BMC Med Educ. 2014;14:249

3.Palmer EJ, Devitt PG. Assessment of higher order cognitive skills in undergraduate education: modified essay or multiple choice questions? Research paper.BMC Med Educ. 2007 ;7:49.

4.Fournier JP, Demeester A, Charlin B. Script concordance tests: guidelines for construction. BMC Med Inform Decis Mak. 2008;8:18.

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MEDICAL EDUCATION DEPARTMENT- CME UPDATES

Dr Mohammed Yasser Daoud, Faculty, Department of Surgery and member Medical education department

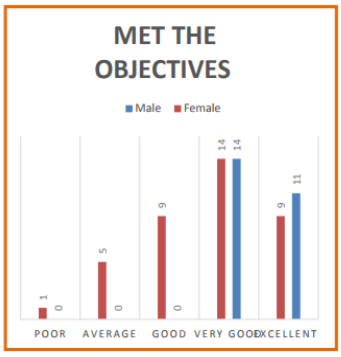
The fourth surgical skill course and hands-on workshop was conducted on 14th October 2017, in the new CTC building. The workshop had a very good feedback.

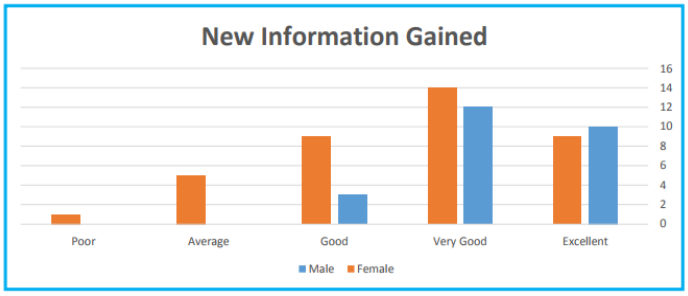
Total Number of Feedback Collected:

Male	Female
25	38

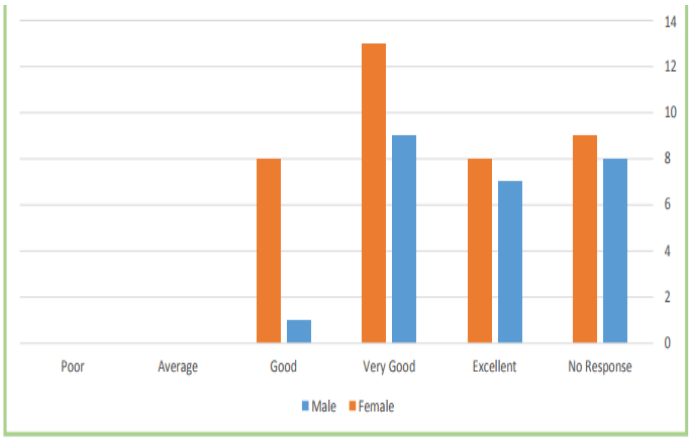
Statistical Result:

1. Evaluation of the content of Lectures and Workshop





OVERALL EVALUATION OF THE WORKSHOP



Workshop faculty

Suture station

Bowel anastomosis station

QUIZ!!!!

Identify this psychologist who is considered to be one of the pioneers of the concept of problem based learning

Notes from the editors..

HAVE YOU PRESENTED OR PUBLISHED A PAPER RECENTLY?

HAVE YOU RECEIVED AN AWARD

RECENTLY?

DID YOU DO A FELLOWSHIP RECENTLY?

IF YOUR ANSWER TO ANY OF THE ABOVE IS 'YES', THEN YOU NEED TO BE FEATURED IN OUR NEWSLETTER!!!!!

SEND ANY SIGNIFIICANT UPDATES ABOUT YOURSELF OR YOUR DEPARTMENTS SO THAT WE CAN SHARE IT WITH THE REST OF THE COLLEGE

ALSO, A SPECIAL THANKS TO THE PEOPLE WHO HELPED REVIEW THE WORK IN THIS NEWSLETTER–

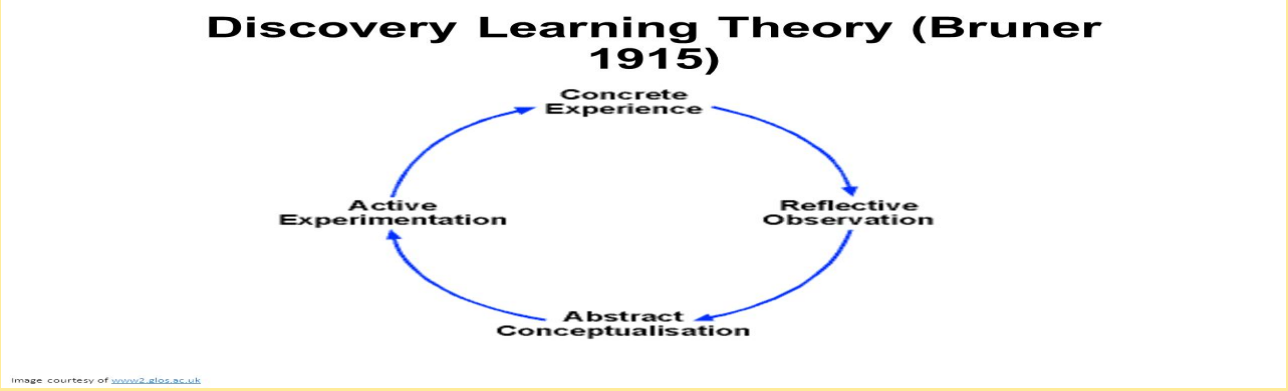
Dr Imran, Dr Shaji, Dr Kaberi, Mr. Karlo and Mr Ryan

PLEASE FEEL FREE TO SEND IN ANY OTHER RELEVANT ARTICLES AND SUGGESTIONS THAT YOU HAV E TO IMPROVE THIS HUMBLE NEWSLETTER

Emails : **shaima.oth@gmail.com;ferozkal@hotmail.com;**

ANSWER TO THE QUIZ

The concept of problem based learning is considered to have evolved over time through the refinement of work done by some workers like *Jerome Seymour Bruner.* Jerome Bruner was an American psychologist who developed the idea of "learning by discovery" (1961), which is considered to be one of the precursors of the modern concept of problem based learning. The "learning by discovery" concept deals with the notion that a problem could be a starting point for learning. Bruner proposed by "learning by discovery", using activities and open ended problems could promote active learning , intrinsic motivation and thinking skills



UPCOMING EVENTS AND ACTIVITES

KFU

'RESEARCH DAY' on January 27, to be conducted by the MEDICAL EDUCATION DEPARTMENT

Further details will be announced soon

For more information conatct : Dr Ossama Zakaraia ossamaz2004@yahoo.com

National

SIMEC 2018 is an international conference dedicated to reporting and discussing recent developments and research in medical education. The conference will cover a wide variety of topics including innovating in medical education, international dimensions, and curriculum trends in medical education and other issues of current importance and interest. Leading international authorities who will bring their national and international experience as medical educators, editors, reviewers and contributors to leading journals in the field will facilitate the conference.

The College of Medicine at Al-Imam Mohammad Ibn Saud Islamic University is proud to announce that it will be hosting the Saudi International Medical Education Conference (SIMEC 2018) in Riyadh, Saudi Arabia, from 3-5 April 2018

Website: http://simec2018.com/index.php?lang=en

International

The Association for Medical Education in Europe (AMEE) is a worldwide organisation with members in 90 countries on five continents. Members include teachers, educators, researchers, administrators, curriculum developers, deans, assessors, students and trainees in medicine and the healthcare professions.

Website: https://amee.org/conferences/amee-2018

13TH INTERNATIONAL MEDICAL EDUCATION CONFERENCE, Malaysia

The International Medical Education Conference (IMEC) is a forum for forging and renewing friendships between educators of healthcare professions from around the world; a platform to exchange ideas and experience and showcase innovations. It is usually held in March/April every year for two days (to coincide with the Annual Academic Council of the IMU), preceded by Pre-Conference workshops the day before. The theme changes with each Conference and this year's theme is "Health professions education without borders"

Website: http://imu.edu.my/imec/