

EVALUATION OF SOME PRINCIPLES OF MEDICAL EDUCATION IN THE LIGHT OF THE QURAN

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ABSTRACT

Objective: The purpose of this study is to highlight the presently used medical educational principles highlighted in the Quran, analyze them and correlate them to derive lessons facilitating their implementation.

Study Design: Mixed method study.

Place and Duration of Study: Department of Medical Education, CMH Medical College, Lahore; January to December, 2013.

Material and Methods: Verses of Quran from different Tafaseer (Explanation of Quran by renowned Muslim Scholars) related to education were identified. Help from dictionaries and encyclopedias available on internet were sought for true meanings and connotations. The ideas derived from the medical educational research were applied to find educational principles and compared to existing medical educational philosophies. Learner response system was used to gather educationalists opinions.

Results: Principles of medical education which have been learned over last few decades and are now globally accepted and practiced were already there in Quran for last 1400 years. The common principles discovered and discussed were: Simplicity, Learning in steps, Paced learning, Identification of important, Critical thinking, Inductive reasoning, Use of examples, and Repetition. Most of these are core principles of medical education.

Conclusion: Adult learning principles are already present in the Quran. In the propagation of these modern medical educational principles, references to Quran may help to understand their deeper perspectives. It may expedite the wider acceptance by educationalists in the Muslim countries.

Keywords: Education, Principles, Quran.

INTRODUCTION

For Muslims the Quran is a book of principles for the guidance of all humanity. Quran, as a divine guidance message for humans, involves all material and spiritual angles of life. Holy Quran involves all requirements to guide and educate humans in social, individual, moral, legal, worldly and hereafter life¹.

Quran, the book of guidance which shows the right path to perfection, uses different methods, somewhere by telling stories while at other places by rational reasoning¹. All these are the new methods employed in modern medical education, re-discovered and validated over the

last century, since the seminal work of Flexner in 1910².

A deeper study of Quran also highlights and emphasizes numerous principles regarding medical education, not fully addressed in medical literature. These principles if scientifically highlighted can guide educators for implementation in the medical educational process. These religious perspectives may help medical educationalists in practicing Muslim societies to understand the origins of educational strategies. This provides a unique perspective to create context and may help in touching deeper aspects of the hearts and minds of both learners and facilitators. The purpose of this study is to highlight and study the presently used medical educational principles given in the Quran, analyze them and correlate them to derive lessons and emphasize their implementation.

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MATERIAL AND METHODS

Verses of Quran from different Tafaseer (Explanation of Quran by renowned Muslim Scholars) related to education were identified. Help from dictionaries and encyclopedias were also sought for exploring the true meanings and connotations of these verses. The ideas derived from the medical educational research were applied to find principles in the Quran and compared to existing medical educational philosophies.

Four basic questions were generated to fully explore the meaning of educational learning principle highlighted in the Holy Quran. The following questions were generated to elaborate upon our findings.

1. What is there in Quran?
2. What principles can be derived?
3. What we learned in modern medical education?
4. What is the current medical practice?

They were compared with the existing theories in medical educational literature and conclusions were drawn, in the light of the literature.

To have some baseline understanding of educationalists views, a Learner Response System (LRS)(Promethean, USA)was used on the international audience of 5thInternational Conference of Medical Educationalists (ICME)³. A cohort of 30 participants was used for the feedback to questions pertaining to their backgroundknowledge and viewpoints regarding the quranic educational philosophies and the current systems in their institutions. The results of the responses were automatically analyzed by the LRS software and generated in a table form, with percentages and averages.

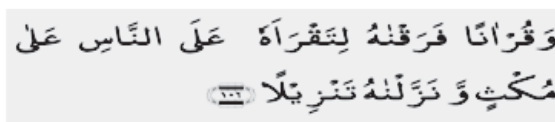
RESULTS

The various principles deducted from the questions generated above were analyzed.

Principle-1: Simplicity

QuranicVerse

Sura Qamar (54) verses numbers 17,22,32 and



40, state repeatedly that Quran is made easy to understand.

Translation

In truth we have made Quran easy to understand: but is there any to learn

Derived Principle

The above verses point towards principle of simplicity and educationalists often propagate use of simple and understandable language for students to enhance their learning.

Medical Education

After centuries of spending energies in memorizing both Greek and Latin terminologies, someone almost cried in agony and said "Keep it simple, stupid^{4,6}". Hence the medical educationalisthave mostly realized the importance of avoiding jargons and started preaching about simplicity^{7,8}.

Present Situation

Interestingly the medical books are still rife with inexplicable jargons. An example can be given from a course in Ethics. We come across obscure terminologies, like: Virtue ethics, Deontological ethics, Teleological ethics and Situation ethics⁹.

Most of these terms can be given in easier simpler ways. Medical educationalists often wonder why we are not using intentions, actions, consequencesand context/situation instead. Why are we making simple things difficult deliberately? Don't we need efforts to simplify and avoid jargons? Perhaps the medical texts need to be re-written, in line with this Quranic Principle of simplicity.

Principle-2: Learning is in Steps

Quranic Verse

SuraIsra (17) verse number 106 states that Quran is revealed in steps and in stages.

Translation

A discourse which We have gradually unfolded, so that thou might read it out to mankind by stages, seeing that We have bestowed it from on high step by step, as revelation.

وَلَقَدْ يَسَّرْنَا الْقُرْآنَ لِلذِّكْرِ فَهَلْ مِنْ مُدَكِّرٍ

Derived Principle

The above verse points towards the principle that the learning process is in steps.

Medical Education

We learnt in medical education that the initial step, activation of prior knowledge, is required for construction of knowledge^{10,11}. The complex concepts are then built on this with active learning. Hence, institutes are trying to develop an integrated curriculum. A horizontal integration at the lower level of the spiral and vertical integration, helping to address the higher spiral rings^{12,13}.

Present Situation

The authors posed the question "Does an integrated, spiral curriculum exist in your institute?" to the audience of the 5th International Conference on Medical Education (ICME) held at a local medical college³. The response taken by LRS showed only %12.5 in agreement, rest did not have an integrated system of learning, with %14.6 being not sure.

Principle-3

Learning should be a paced, structured process

Quranic Verse

SuraToha(20) verse number 114 states to refrain from haste while learning and building concepts, reflecting all the time for deeper understanding.

وَلَا تَعْجَلْ بِالْقُرْآنِ مِنْ قَبْلِ أَنْ يُقْضَىٰ إِلَيْكَ وَحْيُهُ

Translation

And hasten not (O Muhammad) with the Quran ere its revelation hath been perfected unto thee

Derived Principle

The above verse points that learning cannot occur in haste, it is a structured process which has to be paced, at par with the understanding of the learner. The principle should be to work on deeper understanding, not rote learning of a huge number of facts and figures.

Medical Education

Medical educationalists realize this and have used strategies like spiral curriculum to make learning gradual and step-wise, starting from simple to more complex curricular material¹⁴⁻¹⁶.

Present Situation

The average number of pages in most prescribed text books for the full duration of typical basic medical degree in a traditional medical school is approximately 25000, and these are to be learned in 5-6 years¹⁷.

The authors posed the question "How many hours on average did you study daily after college hours at home or hostel?" to the audience of the 5th ICME Conference. The response taken via LRS is shown generated in table.

Majority in audience confessed that they used to study less than 2 hours daily. If we assume that a medical student studies 2 hours a day, every day, he gets only about 7-8 minutes to read, understand, memorize and keep the learned information of one page to use later in practical life. So the question: "Is it possible?" or more appropriately, "Is it required?" The recommended syllabi and books need to be reconsidered^{18,19}.

Principle- 4

Identify important

Quranic Verse

SuraKahaf (18) verse number 22 stresses to

سَيَقُولُونَ ثَلَاثَةً رَابِعُهُمْ كُذِّبُوا وَيَقُولُونَ خَمْسَةً سَادِسُهُمْ كُذِّبُوا رَجْمًا بِالْغَيْبِ
وَيَقُولُونَ سَبْعَةً وَتَأْتِيهِمْ كُذِّبُوا قُلْ إِنِّي أَعْلَمُ بِعَدَابِهِمْ مَا يَعْلَمُهُمْ إِلَّا قَلِيلٌ فَلَا تُمَارِ
فِيهِمْ الْأَمْرَاءَ ظَاهِرًا وَلَا تَسْتَفْتِ فِيهِمْ مِنْهُمْ أَحَدًا

avoid indulging in unimportant discussions

and advises to remain focused on important concepts.

Translation

(18:22) Some people will say, "They were three and the fourth was their dog", and some others will say, "They were five and the sixth was their dog." These are mere irrelevant guesses. There are still others who say, "They were seven and the eighth was their dog." Say, "My Lord alone knows best how many they were." "There are a few people only who know their correct number: so you should not enter into discussions with them about their number except in a cursory way nor ask anyone about them".

Derived Principle

The above verse implies that only important concepts need to be identified. The names, numbers, dates and places are not important.

Medical Education

We learnt in medical education about importance of questions like 'What, How and Why' instead of 'Who, Where and When'. We also learnt about Pareto's Principle which may be extrapolated to state that only %20 of any course content is important and %80 can be ignored. All efforts of teachers should be directed towards identifying, clarifying and stressing on the %20 of the important material²⁰.

Present Situation

However, medical teachers still indulge in stressing unimportant material like numbers (dosages, reference ranges- easily consulted through the internet), Who, Where and When at the cost of core concepts and principles²¹.

More Principles

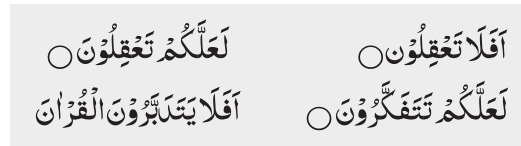
Principle-5: Critical thinking

QuranicVerse

In numerous verses (few cited below) Quran invites the readers to think critically, understand and talk about wisdom instead of memorization²².

Translations

2.44. Have ye then no sense?



2.242. So that ye may understand

2.266. That ye may give thought

47.24. Will they then not meditate on the Quran

Principle-6: Inductive reasoning

QuranicVerse

In many verses (one cited below) Quran invites the readers to observe the surroundings



and draw conclusions.

Translation

SuraRaad (13-3) Lo ! herein verily are portents for people who take thought.

This verse points towards inductive reasoning process which has become one of the basic principles of discoveries methodology. It's interesting that inductive reasoning was introduced by Francis Bacon in 16th Century and earlier scientists followed Aristotelians deductive reasoning process²³.

Principle-7: Use of examples and stories

QuranicVerse

In SuraRaad (13) verse 17 Quran emphasizes use of examples.



Translation: Thus Allah coineth the similitudes

Moreover, Quran gives examples from daily life, understandable to all. In contrast, text books sometimes quote examples pertaining to the environment and culture of its country of origin these may not be comprehensible by , people in other societies and countries. They quote examples like Opera Glass (for joints deformity in psoriatic arthritis) and Salmon Pink Color (Salmon patch) and Anchovy sauce (for amoebic liver abscess). All these similes are

perhaps difficult to correlate by medical students living in other parts of the world²⁴.

Principle-8: Repetition and revision

QuranicVerse

In numerous verses as cited below Quran repeatedly instruct about Namaz (prayer) and

وَأَقِيمُوا الصَّلَاةَ وَآتُوا الزَّكَاةَ

Zakat (charity).

Translation

Establish worship and pay the poor due or And be steadfast in prayer; practice regular charity

Al-Baqara [2:277], Al-Baqara [2:177], Al-Baqara [2:110], Al-Baqara [2:83], Al-Baqara [2:43], An-Nisa [4:77], An-Nisa [4:103], Al-An'am [6:72], Al-A'raf [7:170], At-Tauba [9:5], At-Tauba [9:11], At-Tauba [9:18], Yunus [10:87], Hud [11:114], Ar-Ra'd [13:22], Ibrahim [14:31], Ibrahim [14:37], Ibrahim [14:40], Al-Isra [17:78], Taha [20:14], Al-Anbiya [21:73], Al-Hajj [22:78], Al-Hajj [22:35], Al-Hajj [22:41], Al-Nour [24:37], Al-Nour [24:56], Al-Nour [24:56], Al-Ankabut [29:45], Ar-Rum [30:31], Luqman [31:17], Fatir [35:18], Fatir [35:29], Ash-Shura, [42:38], Al-Mujadilah [58:13], Al-Muzzammil [73:20], Al-Baiyinah [98:5]

Derived Principle

Important aspects need to be repeated and revised. Almighty Allah knows human nature of forgetfulness and Allah keeps on reminding about the important.

Medical Education

We learnt in medical education about importance of repetitions and revision²⁵.

Present Situation

The course imposed on medical students as mentioned above is so vast that sometimes there is no time left for routine revisions.

DISCUSSION

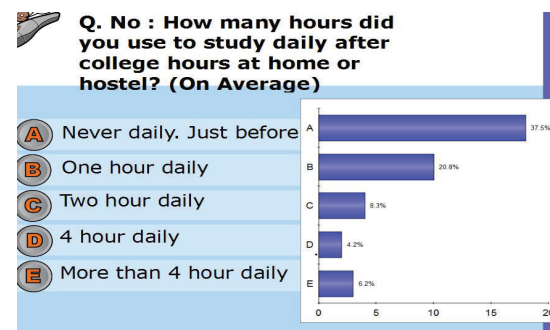
Islam continues to deeply influence the beliefs, values, and customs of an estimated one fifth of the human race²⁶. Applying new sciences to interpret the scientific verses of Quran, observing approved standards, is not

prohibited. They consider natural rules as a light to reveal the secrets of verses, which further makes the miracle of Quran clearer than ever¹.

Rajabnejad¹ in his article has asked some important questions: What is the relationship between Quran and new sciences? How is Quran giving reasons about scientific statements? Considering that the final aim of Quran is human guidance, to what extent does Quran pre-date the principle of modern health professions education?

From the extensive examples quoted in results, we gather that most of educational philosophies have been used and emphasized in Quran, centuries before their use in today's educational methodologies. This not only reiterates the miracle of Quran, but helps us to identify and adapt these principles for our daily teaching to medical students and residents. Once understood they can perhaps lend another context to educational underpinnings of modern curricula.

Table: LRS response about average number of hours spent studying.



Medical educationalists who are involved in developing new methodologies and helping develop the faculties of their medical educational institutes can relate to this aspect of Quran. This may even help the acceptability of newer techniques in societies where true Islam is practiced and people view western concepts with suspicion. We may be able to quote verses like those discussed above, and hence be able to establish context. The relationship between heart and brain, supported by Quranic verses has been put forward²⁷. The concepts of medical

education, based on internalization of Quranic principles may facilitate its indoctrination into the world of medical teaching.

Modern medical practice is becoming increasingly pluralistic and diverse. In our medical education, like in West, cultural competency and awareness should be given more focus in physician training seminars and within medical school curricula. A renewed interest in describing the varied ethical constructs of specific populations has taken place within medical literature²⁸. Islam has generally encouraged the use of science in medicine, a fact even recognized in the West²⁹. In Malaysia the emphasis on Quran and Sunnah helps the practitioners to run their counseling sessions more effectively³⁰.

CONCLUSION

All adult learning principles are already present in the Quran. In the propagation of these modern medical educational principles, references to Quran may help to understand their historical perspectives. It may expedite the wider acceptance by educationalists in the Muslim countries.

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CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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Authors Contribution

RU conceived the idea, researched and analyzed, performed literature search and drafted the earlier versions of manuscript. FHK provided intellectual input and helped revise the manuscript. CAS revised, reviewed, and finalized the manuscript, improved the discussion and revised the references, with intellectual contribution.