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Change as a Necessity in Medical Education: Let's Review its Main Limitations and Know "Adaptive Reflection" Approach as a Change Facilitator

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ABSTRACT: Background: Change in medical education should be considered as a necessity. Material and methods: change management and its difficulties are described in medical education.Results:"Adaptive Reflection" approach as an outcome-based model is introduced in the present study. Main attentions of the model are emerging adaptation and learning, concept of change, motivation, anxiety, uniqueness of context, empathy and change of managing method. Conclusion: Conventional defreezing-change-refreezing model should alternate to new approach including different understanding of change management.

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INTRODUCTION

Application of management in educational change is not widely discussed in literature (Head, 2011). Alfred North concerned about adaptation of education to social requests, which is possible just by continuous reforms (Whitehead, 1929). In review of western medicine history, medicine is considered as art alternated by medicine which is in fact science. Recently there is a return to idea of art in medicine (Flexner, 1910 and Ludmerer, 2004). It was in 1908-10, when Carnegie foundation asked Abraham Flexner to describe medical education in the United States. Flexner recommended adopting science as the foundation for medical education (Beck, 2004 and Rae, 2001). In the past four decades, art and humanity spirit have been considered in curricula once again (patel, 1999). There is a wide gap between knowing and doing (Guilbert, 2001).

In a rapid review of expected competencies of medical school graduates in Iran we find a holistic, logical and task- based perspective of program designers. For instance humanistic view, ethical practice, comprehensive knowledge, communication skills coping with patient and their family members are documented as expected competencies, in formal written existing data of health and education ministry of Iran. There is a clear duty of "explanation of course, implementation and student assessment" for departments responsible to implementation of the program. However, graduates are not systematically assessed in medical schools to make sure of the pre-determined outcomes to be achieved (Iranian ministry of health and education, 1988 and 2000).Such discrepancy is mentioned in medical education literature, as well.

Outcome – based education is tightly associated with assessment. Main aspects of outcome – based education are defined outcome and assessment based on these outcomes (Friedman, 1999).

In summary, there is no limitation in designs, researches and new ideas. Implementation seems to be inappropriate. In the present study change management and its difficulties are described in medical education field, followed by introducing "Adaptive Reflection" approach as an outcome- based model of curriculum planning and curriculum changing. This is product of a PhD thesis of medical education in Karolinska University, Sweden.

Patterns of change over time

There is a periodic change of curriculum nearly about every 10 to 15 years. It is a result of a pressure caused by new needs of society, patients and health care. These needs show the requirement of new doctors. Whenever the gap becomes profound, these periodic changes occur clearly (Christakis, 1995).

In a qualitative study of medical faculty, their ideas were mostly linear, probably like Lewin (Mocked, 2009 and Lindbergh, 1998). Lewin looked at change in the shape of unfreezing, moving and then re- freezing. In medical education it is equal to decision to change (Unfreeze), implementation of change and freezing again (Bland, 2000 and Martenson 1989). "Levin" also used similar model in medical education (Mennin, 1989). In medical education, similar models are introduced (Myloma, 2009); "Kotter" presented an eight-step model

(Kotter, 1996). "Gale" and "Grant" introduced a ten – step model for medical education change (Gale, 1997). In all of these approaches, a similar pattern is observed.

Innovation in medical education

Medical education is full of new ideas, so the main limitation to change is not shortage of innovation, but misunderstanding of the new methods and process of the change (Lazarus, 1985). Human being looks at change such as a linear happening (Dormer, 1996). "Everdt Rogers" studied and categorized people coping with change. Five types are known as follows: innovators, early adopters, early majority, late majority and laggards. These findings suggest early adopter group to be engaged in change from the beginning. These are the group called as "change champions" (Rogers, 2003).

Resistance to change

Change failure is explained as "resistance to change" (Martenson, 1989 and Bloom, 1989). A probable tendency is to think of failure as other people resistance (Collins, 2001). "Hamel" predicted a tendency towards humanity in future organizations (Hamel, 2007). "Gardner" suggested that changing minds does not happen but only through discussion (Gardner, 2004). "Christensen" showed that change in larger and older organizations is more difficult. It is definite even in military organizations that collaborative models are more successful in change management (Entin, 1999).

"Chip" and "Dane Heath" likened the elephant and rider to different point of views. "Resistance to change" seems to be a subjective idea, not a real thing to happen (Heath, 2010 and Carse, 1986).

Role of managers

Positive role of managers might include pickup opportunities, developing ethical manner, alignment of organization with the society resulting in growth. Managers are expected to cover many activities including change management and leadership. To be successful, managers should change their beliefs and understandings towards new models.

Appropriate, sometimes means a quick change and sometimes a slowly one. Reasonable decisions are made based on proper data gathering and wide collaboration of the organization.

Considering the society, not just the organization is another main aspect of management. In the UK and USA, mostly immediate benefits are looked for and end results of society and even their own organization are overlooked.

In conclusion, the main task of the manager is to review gathered information, available options with regard to benefits of all stakeholders both immediate and end results in long- term (Burnes, 2004).

Summary of "Adaptive Reflection", as a method of change in medical education

Adaptive Reflection is introduced as a new model to curriculum change. Beginning step is asking faculty staff working in the field to determine competencies required for the graduated persons (Collins, 2001).

Competencies should be described in S. M. A. R. T. Shaped Sentences. That is, specific, measurable, Addressed, Realistic, Relevant and time- bound. Adaptive Reflection is a six- step approach (Figure 1). Its name comes from the reflection of existing situation in favor of health, society and patients.

In the first step, expert opinion is asked regarding the ideal characteristics of graduates. Second step is summarizing first step results to brief mission. In Following step (3) some changes are determined as outcomes into S. M. A. R. T. verbs based on cognitive (Anderson, 2001) and affective (krathwohl, 1964) taxonomy as needed. In fourth step activities resulting in pre- determined outcomes are obtained. In step 5, the necessary final changes are made. Last step (6) is choosing proper assessment to test desired outcomes (Savage, 2011).

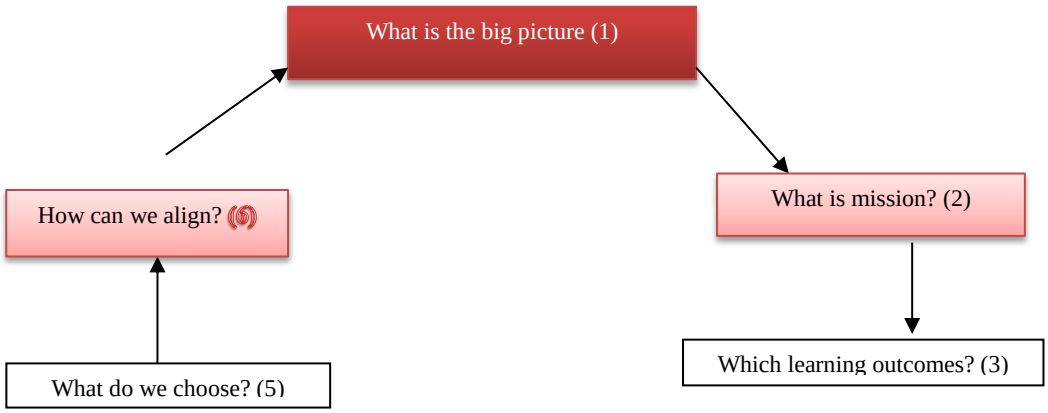

Figure 1. The Adaptive Reflection Model

DISCUSSION

Although many innovations and researches are done in the field of medical education, but still implementation is few. There are seven characteristics in "Adaptive Reflection" method mostly describing these steps. Change management is the main subject in coping with new approaches. Adaptive Reflection as an outcome- based model of medical education introduces a 6 steps approach. The first is emerging Adaptation and learning for the purpose of careful decision making, gathering information, wide and continuous learning in all parts of the organization is needed (Burnes, 2004).The second is informing about change to everyone inorder to reduce anxiety and increase support (Savage, 2011).The third is motivation to change which is already induced in their active role in step 4-5 (Collins,2001 and Miller, 2002).The forth is anxiety and reduction in change by evaluation of the reasons of it.These might be credibility, unfit expectations and human linear view (Dormer, 1996).The fifth is uniqueness of context Adaptive Reflection believe unique context and help involved people to find it out.

Change through empathic dialogue is the sixth pith. "Scharmer" described this dialogue as a dynamic process (Scharmer, 2007). Adaptive Reflection makes a continuous learning and change process (Norton, 2011). In this regard manager is facilitator of the learning capacity (Jaworski, 1996 and Boyatzis, 2005)

The last is change management. Idea of managers is changed from direct supervision and top- down to a new down- generated one (weick, 1995).

There is no doubt regarding necessity of change in medical education.

Conventional method of change includes defreezing the situation, change it and refreezing again. The new approach should change thinking and behaviors of change management. Among outcome- based models, adaptive reflection introducing 6 steps of medical education change management seems to be successful in gathering positive points.

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