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Quality Management and Medical Education in Saudi Arabia

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1. Introduction

More than 100 years ago Abraham Flexner's report changed medical education in the United States (USA) and consequently worldwide. He simply used a gold standard against which all medical schools at that time were measured (Cook et al., 2010). The report at that time was concerned mainly with undergraduate medical education. Since then medical education has developed immensely and flourished into many branches and specialties, becoming a continuum: undergraduate medical education, postgraduate medical education (training and residency programmes) and continuing medical education. Clearly both the quantity and quality of medical education have undergone major improvements over the intervening 100 years, but still there are quality issues at all levels of medical education recognized in both developed and developing countries that need to be addressed (Tekian & Al-Mazroa, 2011; Cook et al., 2010; Hasan, 2010; Ehlers, 2099; Took, 2008; Sood & Adkoli, 2000; Maddison, 1987; Lowry, 1993; Al-Shehri et al., 2008, 1993, 1994; Al-Shehri & Al-Gamdi 1999; Al-Shehri, 1996, 1993, 1992).

For undergraduate medical education, it has been reported that "medical colleges are producing graduates who are not well equipped to tackle the health care needs of the society" (Sood & Alkoli, 2000). The gap between theory and practice, and the failure of medical education to foster critical thinking and self-directed learning among medical students are recognized in both developed and developing countries (Lowry, 1993; Al-Shehri, 1999). For postgraduate medical education, a number of issues have been identified: unclear policy for postgraduate medical training; lack of consensus on the role of doctors at different stages of their career; fragmented and weak governance, and generally medical training is "unlikely to encourage or reward striving for excellence" (Tooke, 2008). For continuing medical education there is no evidence that current provision is subjected to quality management that takes into consideration structure, process and outcome (Al-Shehri et al., 2008). So the issues of medical education through its continuum are no longer quantity, but rather quality, which is more prevalent in developing countries.

Quality management transformed Japan's manufacturing industry to become a gold standard for developed countries. Judging from the success of quality management in the manufacturing industry, one may argue that similar quality management in medical education is very much needed for a number of reasons. These include ensuring that products meet customer needs; assisting in raising people's level of health; affirming quality

of teaching and learning on the basis of sound evidence; enhancing public confidence in the educational system; prestigious and ranked recognition of academic organizations; financial and academic attractions and global market competitiveness (Cueto et al., 2006; Woodhouse, 2003; Gale & Grant, 2010). Despite these legitimate reasons, one wonders if quality management as defined and used by the industry is acceptable to all stakeholders of medical education. It has been reported that quality management is perceived by academic staff in medical schools as "overly onerous and detrimental to their real work" (Hasan, 2010).

Quality management depends largely on customers' satisfaction (Berwick, 1992). In the manufacturing industry, customers are not usually part of the process of production while in medical education and health care they are an integral part of it (Gale & Grant, 2010; Berwick, 1992). Many intrinsic and extrinsic factors interplay to influence structure, process and outcomes of medical education, and make it more complex than the manufacturing industry. For example, it has been reported that "the administrative structure of the traditional medical school is designed to achieve maximum inflexibility and the greatest possible difficulty in adapting the school's policy and programs to a rapidly changing world" (Maddison, 1978). Moreover, in medical education different stakeholders (customers) may have different, if not contradictory, needs and expectations (Al-Shehri, 2003). Although it is unconceivable to adopt quality management that does not consider the complexity of medical education, the most commonly used approach to quality management in medical education in both developed and developing countries, is accreditation.

1.1 Accreditation of medical education

Accreditation has been defined by the European Consortium of Accreditation (ECA) as "a formal and independent decision, indicating that an institution of higher education and/or programs offered meet certain standards" (ECA, 2005).

Woodhouse (2003) counts more than 140 bodies of quality accreditation and certification in relation to higher education. Each accrediting body has its own way of definition. The danger here is that unless stakeholders of medical education believe in quality as a culture, seeking accreditation will become a superficial exercise that depends on filling in boxes which may or may not reflect the actual beliefs, attitudes and behaviours of medical education organizations. Moreover, the multiple factors influencing the learning-teaching process cannot be addressed completely by assessment and accreditation. "While the quality of teaching and learning interaction between students and educators in higher education is influenced by a variety of factors, including attitudes and skills of teachers, abilities and motivation of learners, organizational backgrounds, contexts and values and the existing structures, such as rules, regulations, legislation and so on, the majority of approaches to assess, assure, manage or develop quality is only partially taking these factors into account" (Ehlers, 2009).

Differences in culture between developed and developing countries may also influence the perception and purposes of accreditation. Political, social and cultural factors in developing countries may equate accreditation with quality achieved; a destination rather than a journey and an outcome rather than a process. Failing accreditation, on the other hand, may have drastic consequences on the development of medical education particularly in developing countries where there is always a need to expand medical education to cope with the growing needs of the society and the development of the country. Although accreditation may not be the best choice for developing countries, it is spreading.

In their analysis of nine developing countries, Cueto et al. concluded that "the trend towards instituting quality assurance mechanisms in medical education is spreading to some developing countries" (Cueto et al., 2006). Four main steps must be followed for accreditation:

- Self-study report and submission to the accrediting body;
- Formal survey visit by representatives of the accrediting body;
- Recommendation of the surveying visitors;
- Accreditation decision by the highest governance of the accrediting body.

Accreditation decisions can be full accreditation, provisional accreditation, no accreditation or withdrawal. Duration of accreditation lasts usually from five to eight years before the organization is due for reaccreditation (Cueto et al., 2006).

Unlike developed countries, accrediting bodies of medical education in most, if not all, developing countries are governmental agencies under ministries of education and health. This may raise certain issues related to bias, control, validity and reliability of the outcome of the accreditation process. Passing or failing accreditation has certain connotations politically, professionally, organizationally and financially. To put the accrediting bodies under the control of a ministry of education and health may lead to either collusion or conflict of interests that cloud the interpretation of results. Regardless of this dilemma of collusion and conflict there is no strong evidence to equate accreditation with high quality outcomes of medical education, particularly so in developing countries.

Saudi Arabia, the largest country in the Gulf region, has witnessed unprecedented expansion in higher education. This includes more than 100,000 students sent abroad mostly in health related specialties; medical schools increased by 200% over the last five years with huge intakes; more than 60 postgraduate medical training programmes and fellowships run annually; provision of e-learning programmes and thousands of continuing medical education activities and programmes provided annually (Al-Shehri, 2010; Al-Shehri et al., 2008, 2001; Al-Shehri & Stanley, 1992). This rapid expansion and massive increase in the quantity of medical education in Saudi Arabia has brought great challenges in relation to quality management and deserves to be shared with international scientific community, particularly in this era of globalization.

Two different opinions can be found in the literature about this expansion. One argues that Saudi Arabia needs reform similar to Abraham Flexner's recommendation (Atikan & Al-Mazroa, 2011), while the other affirms there is no need for such reform (Bin Abdulrahamn, 2011). Which argument should we accept? What are the underlying reasons for accepting one or the other? Are we talking about the same subject because the word "quality" may be perceived differently by different people in different cultures? Additionally, and more importantly, do we have a clear understanding of meanings and purposes of quality management in medical education?

2. Quality management in medical education: Meanings and purposes

Terms such as quality control, quality assurance, quality management and total quality management are commonly used in industry for the purpose of perfecting products (Gale & Grant, 2010; Hassan, 2010; Berwick, 1992; NHS, 2010). Quality control is a set of activities or

techniques whose purpose is to ensure that all quality requirements are being met. In order to achieve this purpose, processes are monitored and performance problems are solved" (NHS, 2010). In medical schools, quality control means a curriculum implemented as planned, teaching formats and materials delivered according to standards, and learners monitored in terms of selection and compliance with the learning process. Quality control is about checking that the process meets predefined specifications. Quality assurance is the process of ensuring that the product or service is "fit for its purpose and not just made to the specifications" (Gale & Grant, 2010). In medical education, this means in addition to quality control there is a constant effort to improve and adjust for a better fit as the learning process goes on. Quality management includes quality control, quality assurance and all the activities that are carried out by all stakeholders at all levels and functions of medical education for the purpose of improvement (Ehlers, 2009; Gale & Grant, 2010; NHS, 2010). Quality management is a continuous and progressive cycle of improvement and further improvement.

However, most of the quality management processes in medical education are limited to quality control and accreditation which means achieving certain predefined objectives and criteria. This undoubtedly addresses one part of what quality management is about, but not entirely. Moreover, in developing countries, a culture of quality management is not well developed, hence, different stakeholders of medical education may perceive the purpose of quality management differently. Use of quality management in a mechanical way, from the 'green hill' of the manufacturing industry into the 'swamp' of medical education and health care, risks losing its main purposes of learning and professional development.

Ehlers calls for moving away from seeing quality management in education as a mechanical process that complies with pre-set standards, to a more holistic view that "focuses on change more than on control, development rather than assurance, and innovation more than compliance" (Ehlers, 2009). This latter approach stems from the concept that for quality management in medical education to be effective and useful, it has to emerge from within the educational organizations rather than be imposed from an outside source. This is in line with principles of adult learning and approaches of effective management and leaderships reported in literature (Brookfield, 1986; Kaufman, 2003; Al-Shehri & Khoja, 2009). Creating a culture of quality in medical education is an important requirement for stakeholders to realize the benefits and purpose of quality control, quality assurance and quality management. Stakeholders of medical education have to form a coalition of interest and build trust among themselves to enable them to address deficiencies and work as a team in a more transparent and productive way.

Unfortunately "medical education has failed to adequately prepare learners to function together effectively as members of an integrated health care team, with well-developed appreciation of the roles and responsibilities of every member of the team" (Cooke et al., 2010). This is compounded by lack of leadership styles and management structure that enable stakeholders in medical education and health care to realize their potential or face difficulties that affect their quality of work (Al-Shehri & Khoja, 2009). Accreditation is not usually designed to address different factors influencing quality improvement of medical education and accreditation cannot fully address different interactions among different stakeholders of medical education. Motivational, organizational and cultural factors play a significant role in the quality of medical education, but cannot be detected by predefined

standards and guidelines (Ehlers, 2009). What can be checked on paper is not necessarily what is going on in reality. Stakeholders of medical education have to search continuously for excellence and further improvement.

Thus, the main purpose of quality management in medical education must be to promote a culture of excellence in which all stakeholders contribute safely, innovatively and competently to making the required change. This is particularly true in developing countries where conflicts among stakeholders are not uncommon in the absence of transformational leaderships (Al-Shehri, 2003; Al-Shehri & Khoja, 2009). The following four principles of quality management in health care mentioned by Berwick (1992) should be considered, bearing in mind the complexity and culture of medical education:

a. Meeting the needs of customers determines the success or failure of any organization or programmes. Responding to customers' needs is the quality against which organizations and programmes are judged. Needs change overtime and vary from culture to culture. Customers of medical education are not only students, residents and established doctors, but also patients, teachers, educators, managers and indeed the public. So which one of these customers determines the success or failure of medical education? Quality management in medical education is commonly defined by quality control and quality assurance through a process of accreditation according to the term of reference of the accrediting body. This process is not in line with principles of adult learning and may not necessarily lead to customer satisfaction.

b. Quality itself, regardless of its definition, is influenced by complex processes of production. In medical education these processes are related to physical, organizational and intellectual structures. The outcomes of these processes may be interpreted differently by different stakeholders (learners, teachers and faculty staff, and managers). Finding a method that addresses the needs of each stakeholder while ensuring quality is a challenge (Al-Shehri et al., 2008, 1994). But whatever method is used for quality management of medical education, it has to be meaningful and have a positive impact on people's health and a nation's costs. Accreditation cannot measure such impact. Involving all stakeholders in a more innovative and comprehensive way of developing a culture of quality management in medical education that enables them to examine issues of concerns critically and professionally with the purpose of improvement seems more appropriate than the mechanical approach of accreditation (Ehlers, 2009)

c. Professionals involved in the complex processes of quality management in industry, as in education, are intrinsically motivated to do well in perfecting the products. However, as indicated above in medical education the products (e.g. students in undergraduate medical education, trainees in postgraduate medical education, established doctors in continuing medical education) are also instrumental in perfecting the production process. Active participation of students, trainees and established doctors in the learning process not only affects outcomes, but is also an essential element of adult learning (Brookfield, 1986; Al-Shehri, 1992). Motivation of those professionals can be enhanced or reduced by beliefs, values, assumptions and behaviours that form the components of their culture (Schein, 2004; Miller et al., 1998). The culture of a group has been defined by Schein (2004) "as a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 2004). If culture

encourages trust among stakeholders of medical education to be inquisitive and transparent in their search for further improvement, quality will prevail. If on the other hand the culture fosters suspicion, blame and maintaining the status quo, then quality will diminish. Relying on the intrinsic motivation of professionals is not enough without creating the appropriate culture for such motivation to harvest its intention. In developing countries, unfortunately, culture is not usually conducive for talented professionals to sustain their intrinsic motivation to do well. This has to be changed by promoting a culture of quality management in medical education that is safe, innovative, inquisitive and systematic for professionals to sustain their intrinsic motivation in the search for perfection of their jobs.

d.   A strong built-in system of data gathering and analysis to monitor the process of production and link it to the outcomes is a continuous cycle known as the audit cycle. Such a system is essential to ensure improvement and meet the needs of all programmes. An audit cycle is usually used as a quality control measure by organizational management for process monitoring, but it can be used with other strategies to make quality management in medical education more purposeful for all stakeholders.

3. Strategy for creating a culture of quality management in medical education

Research in educational psychology has confirmed the effect of culture on education and mental activities: "how one conceives of education, we have finally come to recognize, is a function of how one conceives of the culture and its aims, professed or otherwise…culture shapes mind, that it provides us with the toolkit by which we construct not only our worlds but our very conceptions of ourselves and our powers…for you cannot understand mental activity unless you take into account the cultural setting and its resources, the very things that give mind its shape and scope" (Bruner, 1996). The importance of developing a culture of quality management that addresses the challenges facing medical education in different cultural settings cannot be underestimated by any means. However, a strategy of using effective means of learning and professional development may prove useful for stakeholders of medical education to promote a culture of quality management that is professionally led and scientifically sound. It can be called an ARR (Audit, Reflection and Research) strategy.

3.1 Audit

In addition to generating data for comparison with internal and external standards, an audit must be used as a strategy for self-directed learning and professional development. Defined as a learning and developmental strategy, the audit cycle shown in figure 1 can be applied to any particular experience of interest in medical education (Figure 1):

Selection

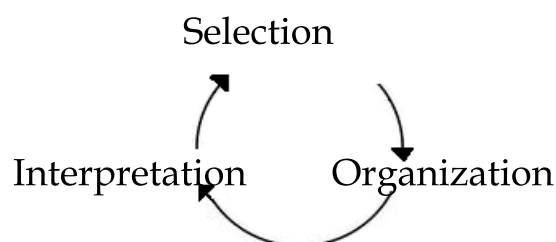Interpretation   Organization

Fig. 1. 'Audit' as a learning strategy and quality management tool

Within the audit cycle, 'selection' is a key decision for the auditor. The whole curriculum or part of it can be selected for review; one or all of the teaching formats can be selected; part of the assessment or evaluation or the whole assessment methods and/or any other educational experience can be selected for auditing. The same can be applied to postgraduate medical education: selecting a particular experience relevant to the residency programme: rotation, tasks carried out by residents, governance and leadership of the programme, etc. In continuing medical education, selection may be related to one particular programme, all continuing medical education provision and/or impact on service/community, etc. Selection reflects the priority of the auditor.

However, before embarking on an audit project the following must be done: involving stakeholders from the beginning, checking resources available for the audit project and defining the potential benefits. Stakeholders are defined according to the relevance of the audited experience. This may include the dean of the college, chairman of the department under which experience is audited and/or a faculty follow who may not share your vision of the importance of the audit. Shared vision and involvement of stakeholders will optimize the benefits of the project (Al-Shehri et al., 1993). Checking resources is a straight forward reason to ensure that you have the manpower and materials necessary to conduct the audit project properly. The benefits of the audit need to be well communicated. This may be in the form of perceived shortcomings in existing performance and fears that these may have important consequences for the learning and teaching process or outcomes. An audit is a collaborative work that has to address an important experience relevant to different stakeholders and results in gains for all of them.

"Organization" may mean at one level the systematic collection of data on performance and on related standards, and at another level it may involve surveys and other measuring instruments, and a broader process of standard setting (Al-Shehri et al., 1993). This may include sorting out data from satisfaction surveys of learners (students, residents and established doctors), comparing findings with national and international standards and generating norm or criteria referencing for further audit projects. This process of gathering and sorting out data on the selected subject is in itself food for self-directed learning and professional development for all involved in the team, both individually and collectively.

"Interpretation" of results generated by the audit cycle deserves careful consideration. External standards such as those of the World Federation for Medical Education, the International Organization for Standardization (ISO) and other standards and guidelines (national or international) may be used as signposts for development rather than criteria that must be achieved. Deviation from such standards is not necessarily a reason for despair or joy, but rather a confidence indicator in the decision making process towards creating a culture of quality management in medical education. This may come in the form of collecting more data, introducing change and/or sharing the findings with others. The cycle of audit should be developmental where the findings of the audit lead to further development (Al-Shehri et al., 1993). An audit, then, should be a continuous journey rather than a project undertaken with the expectation of arriving at a predetermined station, which may not be the appropriate station for travellers. Stakeholders in different stages of medical education may undertake many journeys, some repeatedly to reach the required level and improve it further. Without a personal stake in the results of the audit, stakeholders will view it as an external quality control rather than a safe culture for more learning and further improvement. Perceiving quality management as a culture of learning and development

should prevent resentment by some academics (Hassan, 2010) and motivate them to participate actively in producing a real culture of quality management.

3.2 Reflection

Reflection is another strategy which can be used to direct the purpose of quality management towards creating the right culture for stakeholders of medical education to be lifelong learners and critical thinkers in order to respond on time and appropriately to constant change in medical education and health care (Shon 1983, 1988; Al-Shehri, 1996). Reflection is defined in medical education as "a cycle of paying deliberate, systematic and analytical attention to one's own actions, feelings and thinking in relation to particular experiences for the purpose of enhancing perceptions of and responses to current and future experience" (Al-Shehri, 1996). Experience creates learning opportunities, but without a high level of awareness and readiness these opportunities may be lost (Kolb, 1984). Reflection is central to learning from experience and has been shown to enhance the competence of professionals. Developing new meanings from educational experiences through a cycle of selection, organization and interpretation (Figure 1) should enhance the quality of such experiences and take professionals to a higher level of cognitive and affective learning that enhance their competence (Al-Shehri, 1996).

Figure 2 shows levels of reflection where the reflective practitioner can develop from a lower level of learning and reflection (receiving and describing experience) into higher levels of synthesis and evaluation of experience. In this way professionals develop new meanings and perception that add to a better understanding and improvement.

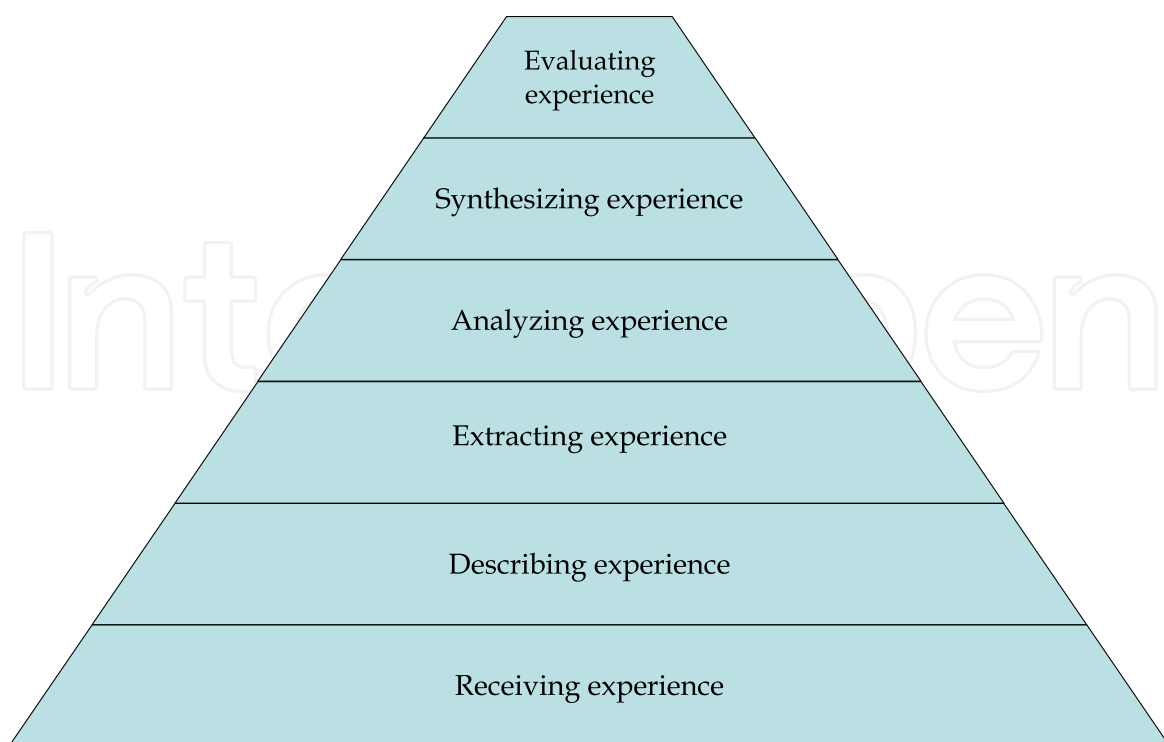## Higher cognitive & affective learning skills

Fig. 2. Levels of reflection towards higher cognitive and affective learning

Systematic and structured reflection should enable reflective professionals to go from describing their experience to a higher level of synthesis and evaluation to add to the quality of current and future experiences. The following quotation from a reflective general practitioner shows how reflection can bring new meanings not only to the quality of service provided, but also the learning/training process behind that service: "I am often stuck by the effect on me of helplessness when I know that I cannot offer cure or treatment to a patient. We often state that patients want a simple answer to their problems - perhaps I may improve if I accept that there is more than just medical treatment involved in helping patients. Medical training does not equip one to accept this 'impotence'" (Al-Shehri, 1996).

Reflection and reflective practice has become a common term in medical education, but has not been utilized well for creating and developing a culture of quality management. There are many formats of reflection used in medical education that can help professionals to reflect systematically and structurally: random case analysis, group discussion, consultation analysis, using personal professional journals, portfolios, recording, talking and listening, and electronic reproduction. Each format has its pros and cons depending on the situation and resources. However, keeping a personal professional journal may prove simple and effective in enhancing professional development and competence (Al-Shehri, 1996). The presence of a mentor or a researcher may enhance further the development of reflection as a strategy for creating a culture of quality management in medical education. Unfortunately, little research has been done on the use of reflection in the quality management of medical education, particularly in developing countries, despite evidence of its role in self-directed learning and professional development. This takes us to research as the third strategy for developing a culture of quality in medical education.

3.3 Research

"Research in medical education is no longer in its infancy" (Norman, 2002). This is perhaps true in developed countries, but in some developing countries one could argue with confidence that research in medical education has yet to be born. Even in developed countries there is an acknowledgement that postgraduate training has not received the desired research (Schuwirth & Vleuten, 2006). In developing countries there is an urgent need to conduct research at all levels and in aspects of medical education to answer many questions in relation to quality management. The huge expansion and flourishing of medical education in terms of quantity in developing countries must be supported with research that addresses fundamental issues related to quality management. For research to be systematic and structural in promoting a culture of quality in medical education it could follow the selection, organization and interpretation process. Selection may address questions related to the curriculum management, learning and teaching process, and/or assessment in the undergraduate medical education. In postgraduate medical education, selection may address relationships between academic and health care providers, proper supervision and appropriate feedback to residents/trainees, opportunities given to master certain skills and procedures and best approaches to assessment and evaluation. For continuing medical education, selection may relate to finding evidence on cost effectiveness of continuing medical education provision, impact of continuing medical education on patients' care and service development.

The selection of a research project that responds to local needs and development would make stakeholders more interested in the organization and interpretation of data. Generating evidence-based data relevant to local needs, rather than to international or academic priorities, would guide the decision making process for quality management in medical education. Thus, interpretation of research findings should inspire stakeholders to create and maintain a culture of quality management in medical education rather than simply giving a certificate of success or a document of failure.

This shift towards creating a culture of quality management in higher education is new. "We are entering a new era in quality management for higher education. While it is difficult to mark its exact beginning, it is clear that it is moving away from a mechanistic to a holistic and cultural view of quality in education. It is characterized by an emerging understanding that quality development, in essence, demands for the development of an organizational culture based on shared values, necessary competencies and new professionalism" (Ehlers, 2009).

This is a welcome movement particularly for developing countries where culture determines to a great degree the meaning and perceptions of quality management. Three main strategies are described briefly above to make this movement more purposeful: audit the main engine for any quality assurance, reflection an innate but effective way of learning from experience and research to produce more meaningful data that illuminates both audit and reflection. The interaction of these three strategies can be exemplified by three circles continuously engaged with each other to identify common themes and priorities, but also keep each other moving for further improvement (Figure 3).
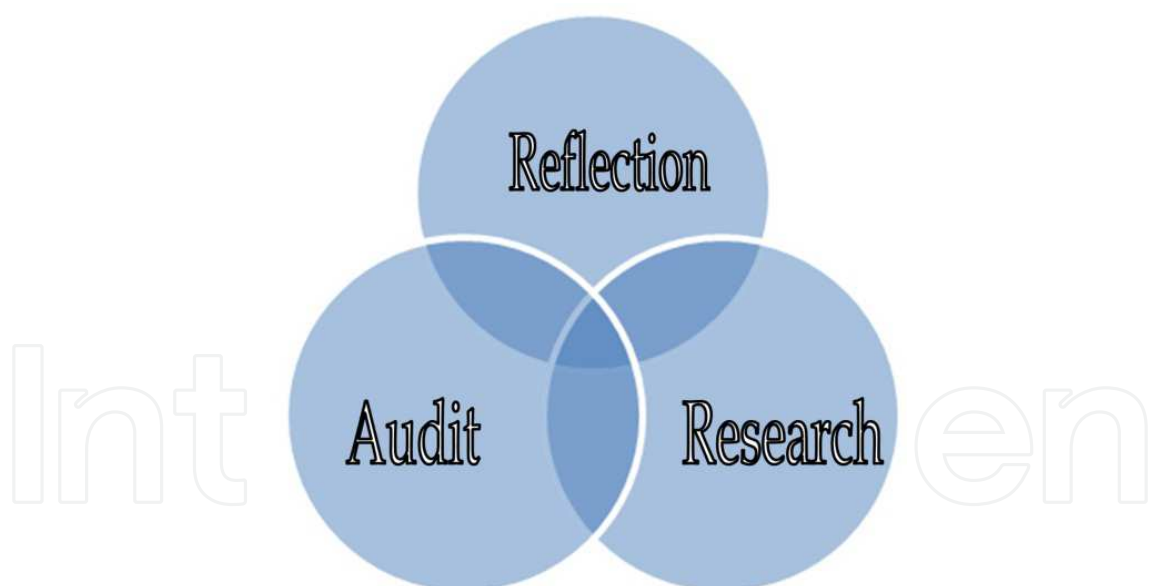

Fig. 3. Interaction of an ARR strategy

The process of selection, organization and interpretation should help in making these strategies more systematic and structural for the purpose of developing a culture of quality management in medical education that takes into consideration internal and external factors. External standards (national or international) are certainly useful, but need to be used as signposts for educational and professional development, not as edicts to be shoved down the throats of stakeholders. Once the culture of quality management has become an integral part

of the continuum of medical education and familiar and acceptable to all stakeholders, then external accreditation ceases to be a burden, but rather an enjoyable exercise.

4. Quality management and medical education in Saudi Arabia

In 2004 the National Commission for Assessment and Academic Accreditation (NCAAA), the national body responsible for quality management in higher education, was established as a result of a Higher Education Council resolution under the supervision of the Ministry of Higher Education. In 2006 the Central Board of Accreditation of Healthcare Institutions (CBAHI) was formed under the Ministry of Health with the aim of setting standards and accrediting hospitals and health care centres (www.cbahi.org.sa). In general therefore the concept of quality management in higher education and health care is relatively new to Saudi Arabia (SA) in terms of structure and organization. This does not mean medical education and health care specialties in SA were not aware of the concept of quality management before the establishment of the NCAAA and the CBAHI as the Saudi Council for Health Specialties (SCHS) was established earlier (1992) and responsible for the accreditation of postgraduate medical education and continuing medical education (Al-Shehri et al., 2001; Al-Shehri et al, 2008).

Moreover, many of the medical service organizations (e.g. hospitals and specialized medical centres) were based on models taken from developed countries that recognize quality management and many of the health care professionals working in these medical organizations were trained in well-recognized training centres abroad that embrace quality management. So as a concept, quality management has been known about in medical education and health care in Saudi Arabia for decades. Indeed, some well-known specialized hospitals in Saudi Arabia were accredited by the American Joint Commission and other international health care accrediting bodies, and some of the old medical schools had been accredited at one point of their development by an international educational accrediting body. However, as a national body and structure, quality management in higher education and health care is a recent movement in SA marked by the establishment of the NCAAA and the CBAHI, respectively.

This is a welcome movement, but it seems that the number one priority for the NCAAA is accreditation rather than quality management (Tekian and Al-Mazroa, 2010). The NCAAA "has been established...with responsibility to establish standards and accredit institutions and programs in post secondary education. The system for quality assurance and accreditation is designed to support continuing quality improvement" (NCAAA, 2009, http://www.ncaaa.org.sa. Accessed 4 Sep 2011). The assumption is that accreditation will lead to quality improvement. The CBAHI has accredited more than 21 hospitals under MoH so far and 60 more hospitals are under consideration (Al-Jazirah Newspaper, 2011) but little evidence can yet be found on the impact of such accreditation on customers' satisfaction as almost daily there are articles in newspapers reflecting customers' dissatisfaction with services in the accredited hospitals. The same can be said about the accreditation process of continuing medical education activities by the SCHS: it does not address the real issues of quality management (Al-Shehri et al., 2008). As indicated earlier, setting standards and accreditation is a quality control issue that does not necessarily lead to quality management of medical education.

It is understandable that quality control is a priority for the NCAAA, the CBAHI and the SCHS, but it is important at this stage to learn from the shift towards a holistic approach to quality management in medical education (Ehlers, 2008). Accreditation and standards setting is only one part, albeit an important part, of quality management. So far the NCAAA has done a good job by conducting workshops, courses and orientation sessions for faculty staff and stakeholders of higher education to educate and orient them about the accreditation process, criteria and standards. This should be encouraged and developed further towards establishing a culture of quality management rather than how to be accredited. Unless there is a clear distinction between quality control and quality management there is a danger of seeing quality as a destination (getting accredited) rather than a journey (culture of continuous improvement and innovations). Medical education and health care are evolving quickly and vary from one place to another. Areas of concern recognized a decade ago may not necessarily be relevant now.

4.1 Undergraduate medical education

In 1999 the following issues related to undergraduate medical education in SA were reported (Al-Shehri & Al-Ghamdi, 1999):

- Overload of curriculum with information and factual knowledge that have little relevance to actual challenges and trends in real clinical practice.
- Lack of important subject areas like communication skills, medical ethics, managed care and leadership, psycho-social factors affecting people's health and use of bio-psycho-social models in problem solving and problem-based and community-oriented learning.
- Lack of proper support for secondary school graduates to cope with their new professional learning in medical schools dealing with the most sensitive issues with people's health and well-being.
- Lack of consensus on the core curriculum and subjects of interest for students.
- Passive teaching where teachers transmit information through lecture with little, if any, active participation from students.
- Teacher-centred and rote learning approach is predominant. Students memorize teachers' talks by heart and reproduce them in examinations.
- Producing dependent rather than self-directed learners.
- Classrooms and hospital wards are the context in which most, if not all, undergraduate teaching takes place. Students and their teachers may lose touch with the reality of the outside world. It is well-known that neither patients seen in teaching hospitals are representatives of their community, nor is their presentation typical of natural display.

In recent publications there is evidence of change. Medical schools in SA are acknowledging the recent trends of problem-based and student-centred learning (Bin Abdulrahamn 2008, 2010) and courses on medical ethics and communication skills are provided (Haqwi & Al-Shehri, 2010). However, there is little research-based evidence to support the quality of this apparent change. Moreover, new challenges emerge as a result of the speed with which new medical schools have been established; these include not enough qualified faculty staff, lack of evidence on the best curriculum to adopt, shortage of teaching and training facilities, huge intakes of medical students with unclear evidence of selection and the absence of a clear management plan for faculty staff development in order to deal with issues arising

from the teaching-learning process and outcome (Tekian & Al-Mazroa, 2011). Also, Azer (2007) raised the following questions in relation to undergraduate medical education. "What evidence do we have that PBL curricula foster self-directed learning? What will make a good medical curriculum? What actions should we take to ensure better learning in the PBL structure? What is the use of good role models in teaching? What tools could we use in the assessment of non-cognitive competencies such as interpersonal skills, empathy, integrity and effective communication?"

To use industry terms, lines of production in undergraduate medical education are: "selection, mentoring, tutoring, teaching, learning, participation, assessment and examinations." Lack of quality at any station or step will result in a substandard product (Gale & Grant, 2010). The current system of selecting medical students depends mainly on secondary school grades, national aptitudes and achievement examinations (Al-Alwan, 2009). More research-based evidence is needed to support this approach. "The leap of logic that equates high marks in an examination at the terminal end of adolescence with a human and caring medical profession is nonsense" (Best, 1989). Moreover, lines of production cannot be addressed in the absence of a holistic view of the culture in which medical education is taking place.

Accreditation using internal or external standards in a summative way will be able to identify problems at each point in lines of production, but may result in drastic consequences that do not match the society needs of expansion in medical schools. For example, Flexner's reform resulted in reducing the number of medical schools in the USA at that time from 155 to 31; is this what we want in SA? Even if this drastic step is accepted, what evidence do we have to equate accreditation with quality management? There must be a way of introducing quality management that maintains recent needed quantity development of undergraduate medical education in SA while ensuring that the product of medical schools meets customers' needs.

Using "Audit", "Reflection" and "Research" (ARR strategy) systematically and structurally for the purpose of developing a culture of quality management in medical schools where all stakeholders participate actively and meaningfully seems more appropriate at this stage. Accreditation should be used to enhance such development rather than distorting or stagnating it. The purpose of quality management in undergraduate medical education should be to show evidence of development in the right direction. Stakeholders must be encouraged to participate actively in auditing, reflecting and researching their issues of concern to show that today is better than yesterday and tomorrow will be better than today, rather than getting a certificate that has an expiry date. The NCAAA may rethink the way it plans accreditation to make it more informative to the development of a culture of quality management in undergraduate medical education, rather than a summative assessment of medical schools.

4.2 Postgraduate medical training

Until 1990 most of postgraduate medical training was conducted abroad: graduates were sent to well-known training centres in developed countries. This resulted in many doctors who had graduated from different and well-known medical centres all over the world coming back to SA to become leaders in their field of expertise. This diversity is an advantage that should be used and built upon. However, it is important also to remember

that mastering one field of medical specialty does not mean mastering the training process. Trainers need to be trained further, particularly in relation to medical education. Now most postgraduate training take place inside SA with more than 21 Board training programmes and 39 Fellowships run annually at different training and academic organizations under the supervision of the Saudi Council for Health Specialties. The organizational structure, management, professional supervision and monitoring, evaluation and assessment, and communications among stakeholders of these programmes deserve to be audited, reflected upon and researched for the purpose of creating a culture of quality management in postgraduate medical education for the purpose of improvement.

At the Saudi Council for Health Sciences, each programme is represented by a Board. This Board is responsible for setting standards and accrediting relevant programmes under its specialty. For example, the Saudi Board of Family Medicine is responsible for approving any residency programme in family medicine according to the Board's standards. No programme will start without the approval of the relevant Board on the basis of accreditation procedures for the training centre and the hospital. However, once a programme gets accredited and is given the permission to start training, there is no strong accountability and responsibility structure to ensure the presence of quality management in the residency programme at different accredited training organizations. It is left to the accredited programme to run the show. This may be good in encouraging individuality and innovations, but again it indicates the shortcoming of accreditation as a ticket of entry, but no guarantee of the quality of process and outcome.

Few publications can be found on quality management of postgraduate medical education in SA, but common observation suggests that it deserves better attention. In fact the only publication found suggests that the satisfaction of residents/trainees with one of these programmes is very low (Alghamdi, 2008). This supports the argument that quality management is more than setting and complying with standards; it is a culture that must be developed on many fronts. Using the ARR strategy should tell us more about the current experience and how to go forward if used systematically and structurally to address issues of concerns. Anonymous residents' surveys, evidence on proficiency of trainers and plans taken to enhance their proficiency further, mortality and morbidity reports of training centres and hospitals, reports on governance and leadership, exposure and experience of residents at different levels with appropriate supervision and mentoring, patients satisfaction surveys and many other evidence and data should be generated and utilized to enhance the culture of quality in postgraduate training programmes.

The ARR strategy can be used to look into the above mentioned and other issues professionally and scientifically to generate sound evidence to help in quality management of postgraduate medical education. Another important issue that needs to be looked at is the gap between undergraduate medical education and postgraduate medical education. Internship is a clear example of this gap that must be bridged.

4.2.1 Internship

Graduates of medical schools have to spend one year (internship) in a training hospital before they join any postgraduate training programmes. This year is a must for graduates in order to be awarded their Bachelor degrees. This internship year is a critical period of joy and uncertainty. A joy for graduates celebrating their final step after a long journey of at

least six years spent in undergraduate medical education and uncertainty because the majority of graduates are not sure of their next step towards specialization. It is a common observation that in our system this period spent in two extremes. On one extreme it is a year of hard work in which intern suffers from routine and tough rotations, on the other extreme it is a year of relaxed 'fly on the wall' observation without involvement and supervision. This is mainly due to the gap in management and communication between academics in medical schools and health care providers in the training hospitals used for internship. Teaching hospitals under medical schools cannot cope with the expansion of medical schools and high number of graduates. Thus, service hospitals are used for internship rotations, but medical schools have little say on the management and supervision of interns in these service hospitals. Interns need proper supervision and monitoring to ensure that the internship period consolidates what they have learned in medical schools and prepares them for further training.

During internship new graduates of medicine may need support in dealing with their emotions and uncertainty in coping with new experiences and future aspirations for their careers. If left unattended by experienced academic supervisors and mentors, interns may lose interest or acquire bad learning habits. If overworked and stressed they may not realize the joy and potentials of being graduates of medical schools and future doctors. Balancing the two extreme is very crucial to make the internship period a useful base for residency programmes and inspiring intern's confidence and responsibility. One way of helping interns with the transition from being students to residents with more responsibilities is half day release activities in the presence of experienced academic facilitators where the interns come together out of clinical rotations to discuss issues that stem from their experiences, emotions and feelings, worries and uncertainties. Close supervision and management of interns would ensure a balance between the two extremes mentioned above and may detect the need for counselling sessions with certain interns going through stressful situations. The death of a patient, a medical error, conflict with team members and other stressful situations may leave long lasting effects on interns without noticing. The half day release may help in discussing these issues, but counselling services may also be needed.

Another issue of concern with internship is 'the fixed truth' about the need for interns to have rotations in the four major specialties: medicine, surgery, paediatrics and obstetrics, and gynaecology. I do not know on what basis these rotations become fixed truth. There are graduates who have already made their minds up about a residency programme outside these specialties. We need evidence to support the benefits of these traditional rotations. Besides, common sense and experience tell us that family medicine and primary care may be more appropriate for interns in order to come to understand the most common problems that exist in the community and how to deal with them (Al-Shehri, 1997; Al-Ghamdi & Al-Shehri, 1996). I would argue that a rotation in a well supported primary care centre is an essential experience for all interns.

Again we do not have data on which we can make the right decisions. The ARR strategy should look critically into the internship period in terms of structure, organization and management, and outcomes to generate strong evidence on quality management of this essential period. Lack of enough teaching hospitals dedicated to colleges of medicine and the gap in organization and management between undergraduate medical education and postgraduate medical education may compromise the quality and outcome of the internship. Primary care centres and family medicine clinics have not been well utilized for

interns. The process of communication and supervision between colleges and hospitals are not well established and depend on informal collegial relationship more than anything else. The expansion of colleges and the increase in the number of graduates is far greater than current teaching hospitals can accommodate.

The challenge is more for private colleges as they cannot access any of the public teaching hospitals and have not established their own hospitals. Private colleges may make use of the flexibility of being in the private sector and make innovative moves toward community-based teaching and training. They may own or manage family medicine and primary care centres, and use them as teaching sites in addition to teaching hospitals. The private sector should be less bureaucratic than the public sector in making and managing change. Pursuing community-based teaching and training of medical students and interns by the private sector may open up new territory for the public sector to follow.

4.3 Continuing medical education

In Riyadh, the capital city of SA, it has been estimated that more than 8,000 continuing medical education programmes are provided annually which are accredited centrally by the Saudi Council for Health Specialties . The quality management of this huge continuing medical education provision is described as "at best unclear with little impact on stakeholders, healthcare services and patient care, and at worst encouraging "cheap junk" continuing medical education" (Al-Shehri et al., 2008). After reviewing educational models of evaluation that can be used or modified in the quality management of continuing medical education provision, the authors emphasized "that one cannot decide on a type of evaluation model without understanding the stakeholders of continuing medical education as adult professionals and without understanding the complexity of the assessment process in terms of validity, reliability, feasibility and acceptability. The difficulty of finding valid, reliable and feasible models of evaluation that takes into consideration the interests of all stakeholders as adult learners and at the same time addresses the knowing, feeling and doing of stakeholders cannot be underestimated" (Al-Shehri et al., 2008).

The ARR strategy can help in looking into different issues of concern regarding quality management of continuing medical education, including innovative evaluation models of continuing medical education that enhance learning and professional development of doctors, while benefiting patients care and health care systems. Research centres must fund large and innovative projects on quality management of continuing medical education. A combination of research findings with auditing projects and reflective practice must lead to a culture of quality management in continuing medical education that ensures its merits and outcomes.

5. Conclusion: Closing the loop

More than 100 years ago Flexner's report changed medical education in the USA and consequently worldwide. Against a predetermined gold standard all medical schools were judged and this judgment resulted in closing more than 50% of the medical schools. "Flexner had determined that the template for judging all medical schools would be Johns Hopkins with its academic rigor, its teaching hospitals and the quality of its full-time faculty" (Cook et al., 2010). However, recently, the same institution behind Flexner's report

(The Carnegie Foundation for the Advancement of Teaching, USA) called for reforming medical education in the USA, but in a different way: "those who teach medical students and residents must chose whether to continue in the direction established more than a hundred years ago or take a fundamentally different course, guided by contemporary innovation and new understanding about how people learn…new discoveries in the learning sciences and changes in the preparation of physicians all argue for the need to reexamine medical education" (Cook et al., 2010).

The lessons for developing countries, particularly SA, is that predetermined standards and accreditation will definitely contribute to quality management of continuing medical education, but leave much to be desired. In fact accreditation in a culture where quality management is not well understood may do more harm than good (Ehlers, 2009; Schein, 2004; Hasan 2010; Stanley & Al-Shehri, 1993). A culture of quality management in medical education has to be developed first in which all stakeholders contribute and innovate safely. In this way accreditation and meeting external standards ceases to be a threat, but rather becomes an opportunity for further learning and development.

The ARR strategy is proposed as a powerful toolkit to develop a culture of quality management in medical education in SA. This strategy has shown to enhance self-directed learning and professional development among professionals, and has the potential of addressing issues of quality in the continuum of medical education over time. Stakeholders of medical education in SA should work together in a team at all levels and functions to generate data, review them and implement required change in a developmental process. Prioritization of issues and needs relevant to different stakeholders can be addressed by following a systematic and structured way through the process of selection, organization and interpretation. In this way the development of medical education in SA can be guided safely in searching for the highest quality without jeopardizing what has been achieved in quantity. National standards and criteria (e.g. those used by the NCAAA, the CBAHI and the SCHS) as well as international standards and accreditation (e.g. WFME, ISO and others) should be used as signposts leading to the right direction rather than secured gates through which permission to travel is granted.

Using audit, reflection and research as shown above (Figures 1, 2 and 3) should engage the hearts and minds of all stakeholders of medical education in SA to develop a culture of quality management that transforms current experiences into products that have a positive impact on the nation's health and economy.

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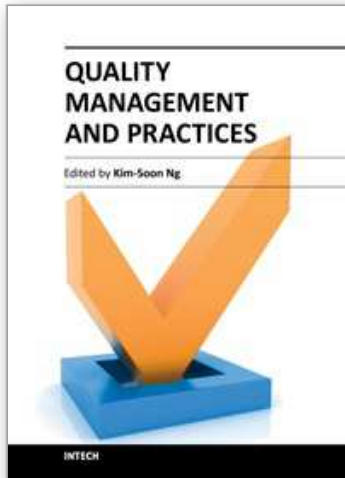
Quality Management and Practices

Edited by Dr. Kim-Soon Ng

This book is comprised of a collection of reviews and research works from international professionals from various parts of the world. A practical approach to quality management provides the reader with the understanding of basic to total quality practices in organizations, reflecting a systematic coverage of topics. Its main focus is on quality management practices in organization and dealing with specific total quality practices to quality management systems. It is intended for use as a reference at the universities, colleges, corporate organizations, and for individuals who want to know more about total quality practices. The works in this book will be a helpful and useful guide to practitioners seeking to understand and use the appropriate approaches to implement total quality.

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