MEDICAL TEACHER

Globalization and the modernization of medical education

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Abstract

Background: Worldwide, there are essential differences underpinning what educators and students perceive to be effective medical education. Yet, the world looks on for a recipe or easy formula for the globalization of medical education.

Aims: This article examines the assumptions, main beliefs, and impact of globalization on medical education as a carrier of modernity.

Methods: The article explores the cultural and social structures for the successful utilization of learning approaches within medical education. Empirical examples are problem-based learning (PBL) at two medical schools in Jamaica and the Netherlands, respectively.

Results: Our analysis shows that people do not just naturally work well together. Deliberate efforts to build group culture for effective and efficient collaborative practice are required. Successful PBL is predicated on effective communication skills, which are culturally defined in that they require common points of understanding of reality. Commonality in cultural practices and expectations do not exist beforehand but must be clearly and deliberately created.

Conclusions: The globalization of medical education is more than the import of instructional designs. It includes Western models of social organization requiring deep reflection and adaptation to ensure its success in different environments and among different groups.

Introduction

Within a period of less than four decades, medical education has become a distinct and highly professionalized institution. Worldwide, national and international societies have been founded, all over the world, medical education conferences are organized and attended by thousands of people, and new textbooks and journal publications on how to teach and to assess in medical education appear in high frequency. At present, there are at least 15 different peer-reviewed international scientific journals on medical education, not to mention the many opportunities for manuscript submission in medical journals. Evidently, the coming into existence of medical education as a unique discipline and international professional field of expertise has taken place at a high pace.

Harden (2006) says that almost every country has three ambitions for higher education. These are greater access; improved standards to compete in international markets; and equitable access without socio-cultural and ethnic discriminations. Harden sees globalization as the answer to these quests. To him, globalization which will lead, in the words of Friedman (2005), to a flattening of the world, is a powerful tool available to learning organizations. Globalization, therefore, calls into question the premise of the first modernity, which was based on the belief that there could be the strategic methodological achievement of nationalism because the contours of society largely coincide with those of the national state (Beck 2003).

Practice points

- People do not just naturally work well together but require deliberate steps to build group culture for effective and efficient collaborative practice.
- Globalization of medical education requires cultural reflection that will ensure its success in different environments and among different groups.
- Commonality in cultural practices and expectations do not exist beforehand but must be clearly and deliberately created.
- Successful PBL is predicated on effective communication skills, which are culturally defined in that they require common points of understanding of reality.

Globalization according to Beck (2003) is one of the most widely used and misused, rarely defined, misunderstood, and nebulous keywords in disputes in the past and undoubtedly will continue to be in the present. To him, globalization means that borders in the various dimensions of economics, ecology, technology, cross-cultural conflicts, civil societies, and information are less relevant to everyday norms and customs. But although globalization is not fully understood, it has a familiarity that is changing everyday lives and compelling everyone to adapt and respond in various ways. Globalization is the vehicle that removes barriers wittingly and unwittingly to create transnational lifestyles where people across separate

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worlds act and live together (Beck 2003). As he puts it (p. 22): 'It means that people are thrown into transnational lifestyles that they often neither want nor understand.' The impacts of globalization on medical education are no different. It, therefore, is important to look at the modernization of medical education in light of globalization.

This article draws upon modernization theory to examine the impact of globalization on medical education as a carrier of modernity. To this end, we use the example of one of the most successful achievements in medical education, which is the introduction of problem-based learning (PBL) in medical schools since the late 1960s. We will examine the cultural influence of, and the social structural requirements for PBL as a tool of modernization and globalization. We will look specifically at two cases of the application of PBL in medical schools in the Netherlands and Jamaica, respectively. We will illustrate that, even when state-of-the-art medical education is valued, questions arise concerning the cultural and social structural conditions for application.

Modernization and medical education

Modernization is closely related to economic growth and connected to the transformation of the world by technology. Following the sociologist Max Weber, the institutions of technological production and bureaucracy are considered as the primary carriers of modernity (Berger et al. 1973). Related to these, a second set of carriers is to be distinguished. These secondary carriers include urbanization, mass education, and the institutions of knowledge and science. They comprise social and cultural processes, grounded in the primary carriers, and are now capable of autonomous efficacy (Berger et al. 1973). The development of medical education as a disciplinary field fits into the structure of modernity in a typical way (Gallagher 2001). Many countries in Africa, Asia, and South America struggle to modernize in the era of globalization. One feature of modernization is the drive to the development and application of scientific knowledge for human betterment, improved health, and poverty reduction. To this end, medical students are a strategic group in meeting the expectations and visions in health care for many countries (Gallagher 2001).

One of the discernible expressions of the modernization in medicine and the globalization of medical education is that, in order to fit for practice, the training of physicians is no longer left to the discretion of the individual clinician/medical teacher. For not so long, the art of teaching and clinical medicine was transmitted in a guilt-like fashion, driven by the concept of role modeling (Krause 1996). Nowadays, this practice is carried out more systematically, according to a plan, grounded in scientific evidence and described, framed, and assessed in line with a catalogue of formalized competencies (Frank 2005; Frank & Danoff 2007). This includes the specialized application of scientific knowledge in medical education as 'method' and design. For those involved, medical education and the study and advancement of these methods has become an essential part of their livelihood and academic career (Harden 2006).

A premise of the worldwide strong focus in medical education on standardization of instructional techniques, instructional designs, and competency-focused assessment methods is believed that medical education is culturally indifferent, and that a set of shared values constitutes the backdrop from which the successful implementation and export of innovations in medical education worldwide take place (Schwarz 2001). At first glance, this seems plausible, as what could be more culturally neutral than applying better ways of training future generations of physicians? Surely, there is a fair amount of consensus on the basics of educational design, methods, and medical competence. But at the same time, critical differences lie beneath what educators believe, and students and practitioners perceive, to be effective. Best evidence medical education, universal standards, and the pre-clinical teaching and clinical training of health professionals for the future are not isolated from the cultural and social structural context in which these take place (Hawthorne et al. 2004). The institution of medicine, and medical education in its slipstream, is no exception to the rule that in many societies, a tension is felt between the pull toward the future and the protection of valuable cultural customs, traditions, and social structure (Gallagher 2001). The often neglected but crucial question, therefore, is whether the path to the globalization of medical education lies simply in the import and export of instructional techniques and designs, in other words a technology transfer, or whether it also includes the adoption and acceptance of western models of social organization as applied to medical education (Gallagher & Subedi 1995). Bakr Abdullah Bakr, rector of the King Fahd University of Petroleum and Minerals (Reynolds 1980) pointed to this in a clear way: 'Some countries have sacrificed the soul of their culture in order to acquire the tools of Western Technology. We want the tools but not at the price of annihilating our religion (Islam) and cultural values.'

Similarly, Hodges et al. (2009) question if global accreditation can be considered without reverting to colonialism and all of the problems related to homogenization and cultural dominance. The obvious complementary question is – to what extents medical schools in non-western countries still have the opportunity to develop and cultivate their home-grown equivalents?

Medical education and globalization

Bleakley and Bligh (2006) position the globalization of medical education into post-colonial theory. They note that Anglo-American (western) medicine, which is typically gendered as a masculine art and science, is also imperialistic. Its dominant values and practices are exported to colonize and displace the local practices of other cultures. In addition, the companion Anglo-American views on medical education, medical ethics, professionalism, communication skills, and medical humanities are also vehicles used to colonize what is frequently seen as the cultures of the 'other' (Fox 2005; Bleakley & Bligh 2006).

The question is whether neo-colonization as an explanatory framework for the concerns of the globalization of medical education fully satisfies. An actual illustration of the issue at hand can be found in recent endeavors of the medical school of the University of Maastricht to engage in the teaching

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of medical students from Saudi Arabia. Since 2007, the University of Maastricht has an agreement with the Saudi Arabian government to provide 40 scholarships for Arab students every year to study medicine. The faculty would benefit, as the entrance and assimilation of these international students with local ones would be conducive to the international profile of the faculty and university. Not only was English language knowledge a problem for the first group that arrived from Saudi Arabia, there were also difficulties for them to understand the content and style of teaching. They were unfamiliar with PBL, which is the instructional method of the medical school.

Seen from their native country, English seemed to be an artificial imposition, and rather complex as the vehicle for learning technical subjects like medicine. The students needed to first understand in their own language then translate to English. Beneath the surface of the search for all kinds of such practical solutions, a host of difficulties relating to the transitioning from Saudi Arabia to the Netherlands came forward – the differences between Arab and Western (Dutch) culture as a major one (Gallagher 1989).

As this is not unique for universities having foreign students coming from very different cultural backgrounds, there is a stark similarity in the realities of the medical school at the University of the West Indies (UWI), Mona campus, Jamaica. In 2001, the school started to increase its intake of students in the Faculty of Medicine. This increase involved, in addition to the standard students from the other Caribbean regions, students from the Continent of Africa, Botswana in particular. Language was and remains a major challenge for these students from Botswana. For some students, English was their fourth language, and the pace of translation from their native language to English was their major handicap to success. This handicap affected their acculturation and timely progress through medical school, leading to delays in progress and other kinds of assimilation and cultural integration difficulties within the classrooms and clinical areas.

These two examples, later to be worked out more, point to three issues within the common thread of trans-nationalization or internationalization as described by Beck (2003) and Harden (2006). What is missing first in these cases is at the heart of effective communication. The absence of common verbal and nonverbal signs and symbols among instructors, instructional device, and students is palpable. Effective communication, which has cultural overtures, occurs when people acting together create, sustain, and manage meanings through the use of common verbal and nonverbal signs and symbols (Conrad & Poole 2002). With language as a major inter-cultural barrier, group communication is hampered. Thus, groups become ineffective. So what are the cultural and social structural requirements and the adaptive measures for the successful export of instructional designs in medical education, in the context of this article, PBL?

PBL as the modernization of medical education

PBL came into existence at a time when there was urgent need for a new type of doctor. This new doctor would not only be

an expert in the somatic aspects of disease but also able to integrate in his/her diagnosis, treatment, and follow-up procedures, the insights of different knowledge domains, including those of the social and behavioral sciences (Van Berkel et al. 2010). When PBL started to gain foothold in medical schools, it was seen as a paradigm shift and the *panacea* to problems with traditional curricula of students being passive, only memorizing, and failing to learn how to integrate and apply knowledge in a clinical context. PBL was the new strategy toward the modernization of medical education. It seemed to be an appropriate response to the pressures of modernization to make a shift from the pedagogical lecturer-centered approach to education to a more andragogic self-directed and innovative adult approach (Bloom 1988; Dent & Harden 2005; Van Berkel et al. 2010).

The globalization effect of what might have begun as an Anglo-Saxon model of teaching medicine has spread throughout medical schools in Africa, the Pacific, Asia, as well as the United States of America. However, the rate of adoption, effectiveness, and reach has not been the same everywhere. In Europe, for example, one observes differences between medical schools in Northern European countries and Southern ones. These differences in adoption rates, effectiveness, and reach have cultural as well as social structural groundings (Jippes & Majoor 2008; Stevens 2009).

In the early 2000s, also the UWI school of Medicine, Mona campus, Kingston, Jamaica introduced problem-oriented learning (POL; in this school PBLs are described as POLs) as a means of learning for the first- and second-year medical students. This was not adopted as a system of education like is the case at Maastricht University but rather as an added-on experience to the revised but old curriculum for students. The decision to adopt PBL was largely due to modernization and to globalization as described earlier in the text by Beck et al. (2003), where people regardless of desire respond to the push and pull for changes that are occurring elsewhere in the world. Thus PBL was introduced as one of the curricular changes brought about by globalization pressures. In this school, PBL was introduced and adopted on the assumption that this method of teaching and learning has had resounding success in developed countries and it is the modern way of medical education. No thought was given to the cultural underpinnings and social structural requirements for successful group work within the UWI (Mona) campus setting. The companion staff support and material resources required for the program to be successful was also not taken into consideration.

Medical students at Mona are special; they are not a homogenous group. They are first a conglomerate of majority students from Jamaica and other Caribbean territories, then a small proportion from firstly Botswana, then North America, United Kingdom, and other parts of the world. The PBL exportation and adoption was on the assumption that medical students would naturally work together in groups on common points and, therefore, group activities and group culture would naturally fall into place. But is group culture happenstance? Do people just naturally work well together or are there some deliberate steps necessary to build group culture for effective and efficient collaborative practice? The answer is clear; group effectiveness is based on socially defined roles, systems of

interactions, and norms and morals, which are actively and passively learnt cultural constructs. In the absence of common cultural existence, these socio-cultural roles and functions must first be staged by a period where group members experience anticipatory socialization. These processes of anticipatory socialization are not automatic. They require deliberate and strategic efforts of skilled and knowledgeable facilitators (tutors). They must include common, clear, and effective communication, mutual respect among group members, clear shared elevating goals, common purpose, feeling of belonging to the group, ability to exert influence on group members, problem-solving abilities, to name a few (Beebe & Masterson 2003).

The PBL model that exists at Mona bears no resemblance to what exists in Maastricht, the parent company. First, there is a change in name albeit slight, at Mona PBL is called POL. The real reason for the nomenclature is not clear, but the design of the Mona program is very different from that in Maastricht. In the first instance, Maastricht is a PBL school, Mona is not. Mona uses PBL as an added way of student involvement in their learning. This is done by allocating special time for PBL in addition to the regular lectures and high work demands, action students find onerous. The small group concept is not achieved; only smaller groups present to the large group. Students find these presentations disturbing as often the work for preparation and presentation do not reflect group efforts but is left to a few. The Mona PBL groups are also not small; they may vary between 22 and 25 students. At Mona, the human and material resources are often not easily accessed, and there are no tutors assigned to facilitate the PBL group activities. The obvious conclusion is that the PBL model was shaped to fit the school's dominant social structure and not the schools' culture adjusted to meet the demands of PBL.

An inventory of the students' perspective on PBL at Mona, done by one of the authors of this article, underscored this. By means of a questionnaire with open-ended questions, students were asked their experiences of POLs. The questionnaires were posted on line and made available to two classes of medical students. Twenty-six students responded, sufficient for the exemplary purposes of this article. Although the results revealed that all respondents found POLs beneficial:

– 92% think the group culture is not in place to make POLs as beneficial as they could be;
– 58% thinks POLs are an annoyance as they do not count for much academically and also a burden to have them so often and so close to exams; and
– the use of external resources to build knowledge was low, as only 39% frequently used external help, whereas 15% relied on their own strengths to do the POLs.

All participants, however, saw the strengths in POLs, confirming that POLs were: (a) important learning experiences; (b) means for building confidence and empowerment for public speaking (improved communication skills); (c) building critical thinking skills; and (d) helped to integrate and apply knowledge.

Weaknesses in POLs were expressed by 100% as cultural deficiencies to get groups to work effectively. Structural and administrative weaknesses related to academic support

(absence of skilled tutorial facilitators (93%) and 74% expressed organization glitches related to timing and group selection processes. Evidently, in all three areas of transformative learning, work, communication, and reflection, POL's did not come up to the expectations. But how unique or culture-bound are these observations?

In 2007 and 2008, PBL at the medical school of the University of Maastricht was highly criticized by students. Students felt that PBL was not carried out according to its essential principles and was at risk to become a ritualistic activity. Some believed that the usefulness and practicability of PBL was outdated. Therefore, students themselves conducted polling among all bachelor students to hear their opinions. These were some of the reported weaknesses of PBL (Stevens et al. 2010):

– Little group interaction is used. Group dynamics hardly exist.
– Students largely work by themselves, not in groups. In areas where the prescribed formats are used, these are only ritualistic.
– A personal learning plan hardly fits to what students are expected to know at the assessments.
– Students largely use standard (recommended) literature and the internet, preferably in their native language.
– Tutors are required to only facilitate the group process. But students still heavily rely on the tutors' expert knowledge.

Just like the Mona students, Maastricht students are aware of the benefits of the PBL system but, at the same time, experience the practical failures. Obviously, the students in Maastricht and Mona are very different but, at the same time, very similar. They require the right cultural and social structural underpinnings to get the group dynamics going. These basic ingredients are missing. So the question of cultural appropriation, structural limitations, and fit remains.

Discussion

From the comparison of PBL in Maastricht and at Mona, it is evident that in both contexts, the cultural underpinnings relating to systems and processes are/were not given due consideration for effective adaptation to the demands of PBL. The success of PBL is predicated on effective communication skills, which are culturally defined in that they require common signs and symbols and also common points of understanding of reality. Systemic problems are based on the culture of education, which includes the expectations of students as well as those of teachers and the school. This extends to the technological and structural support to make the model work as well as facilities to manage small groups.

The first assumption made in the cases of Arab students in Maastricht and African students at UWI Mona was that if common language was the vehicle for delivery and instruction in a model of education, in this case PBL, then the communication difficulties will be overcome. So English became the language of communication in both cases. But communication often is the biggest barrier. Conrad and Poole (2002) remind us that communication is more than just common words but it is the cultural underpinning of these words that result in a

common understanding of the signs and symbols that constitute and on which individuals construct reality. In the case of Maastricht and Mona, the superimposition of Arabs and students from Botswana into the system required greater group dynamics efforts for collaborative practice. So although language was sighted as the major problem, the real problem was the wider cultural issues, which include language. These cultural barriers required group strategies that would first produce a feeling of belonging, before common problems in cases could be recognized, analyzed, and synthesized. These necessary steps are requirements for PBL.

The second assumption made was that group work and effective group dynamics can be achieved by a small group working on a common problem. In the case of Mona, the groups were not small; they were made up of 20 or more persons. In Maastricht, these are only 10 persons. But in both cases, Maastricht and Mona, a feeling of belonging, which is derived from commonness of signs and symbols in verbal and non verbal communication is/was hard to achieve. The necessary team building group dynamics have to be in place first to create this feeling of belonging. This feeling of belonging is integral to group success. It must be resident in each group member and must be first in place before collaborative efforts can be negotiated (Beebe & Masterson 2003). Although there are many similarities among Caribbean people, the people from Botswana experience greater problems with group interaction and group sharing if the group is not their own. They do not believe in sharing their opinion and do not like being required to answer questions under 'public' scrutiny. These are but some factors that hamper the participation of students from Botswana in the PBL process. The assumptions that a common language and a common purpose were sufficient for successful group work were incorrectly made. There was no consideration for the companion problems associated with the group process. The strategies for implementation were not carefully thought out, which today is directly associated with the problems experienced.

The third assumption made is that when a model seems to work in one place, it will automatically work in another. However, it is not just a simple transfer of teaching technology. It requires a careful reflection on group culture and cultural understandings of group processes. The comparison of Arabs with the 'typical' Western culture is but one case in point. Arabs are more religion driven in their expression of reality. Their gendered roles and expectations are often expressed differently from those in Western cultures. Hence, group dynamics and group effectiveness tend to play out differently in Arabic cultures than what obtains in the 'typical' Western cultures as is seen in the Netherlands. As it usually is believed that the benefit of globalization to medical education is without controversy, medical educators and their schools are often unreflective about what they are doing in exporting or adopting these Western curricula (Bleakley et al. 2008).

The issue of belonging and common signs and symbols for group cultural congruence at UWI Mona are the same as in the case of Maastricht. Hence, we see that due consideration for the globalization of medical education using PBL as a model of education is not only a transfer of technology but also requires cultural assimilation and adaptation. In both cases, it was

evident that these countries took steps to make PBL adaptive and workable in their environment; but to the end users, these steps were still not sufficient.

The fourth and final assumption made is that educational ideologies and how students view the social structure of the medical school coincide. PBL as an instructional model and the current overall dedication to competence and evidence-based medical teaching and practice obscures the fact that the social structure in the classroom and its relation to the medical school's institutional power and authority structure remain intact (Bloom 1988). So even when students are being prepared for active learning to acquire the personal experience in order to judge and to decide in medicine, in most medical schools, the passing of exams and the receiving of high marks for better career opportunities remain imperative, and therefore the students' and schools' primary and (admittedly) short-term concern. Educational values and ideologies shift much more easily than the social structure that should support it (Bloom 1988; Gallagher & Subedi 1995).

Conclusions

This article was based on the premise that medical education is a carrier of modernity and globalization, and that PBL is one of its tools. Support is provided to the fact that PBL is not culturally neutral and that there are reciprocal impacts of culture on PBL. This insight is important because PBL perceived as an Anglo-Saxon process is generally accepted as a panacea without consideration. Although PBL implicitly means you are a modern school, export, adoption, and appropriation can be problematic. Even in seemingly homogenous groups – but in practice there is no such group – people do not just naturally work well together but require some deliberate steps to build group culture for effective and efficient collaborative practice.

Globalization of medical education is more than the import of instructional techniques and designs, but includes Western models of social organization that require deep reflection and adaptation for success. The analysis of the cases of Maastricht and UWI Mona underscores that this adoption and export of models often lack reflection and, therefore, the attendant problems (Bleakley et al. 2008). It is clear that the benefits of globalization can be achieved positively with the appropriate considerations.

Evidently, medical education calls upon modernization for economic growth, marketability, equity, and the connection to the transformation of the world by technology. The globalization of PBL is only one method. This method as analyzed by the students in Europe and the Caribbean, though beneficial, requires the cultural underpinnings for group success, which were clearly not included in the adoption and exportation processes. Globalization cannot be stopped and although concepts of modernity may change, the underpinnings of modernization will remain. Hence, PBL/POL and other views of teaching and learning will not disappear because of differences in national cultures. What they will require is an environment where the tenets of globalization according to Harden (2006) are carefully fostered.

In conclusion, we concede that PBL/POL is evidently beneficial but requires cultural reflection that will ensure its success in the given environments and among the different groups. These reflections call for not just a change in group dynamics because of team building but a change in the structure of these schools. These changes must be culturally sensitive and adaptive. For example, PBL/POL call for faculty feedback and commitment, small groups and group dynamics that are predicated on the creation, sustaining and management of meanings based on common signs and symbols. Therefore, these call for a commonality in cultural practices and expectations that need not exist beforehand but must be clearly and deliberately created.

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