Problem-oriented education and cross-cultural collaboration: experiences and comments on the Scientific Summer School in Turkey 2010

Probleme-dayalı eğitim ve kültürler-arası işbirliği: Türkiye-2010 Bilimsel Yaz Okulundaki deneyim ve yorumlar

Scientific Summer School (SSS) is a collaborative international initiative that was designed to improve the development of research skills among participants based on a practical, problem-oriented education. This year, it was organized in Turkey, where the conduction of relevant biomedical research is of significant interest. Additionally, there is an understanding that practical skills relevant to biomedical and health care research studies are key tools in the ability to meet local and international research needs and to maintain quality in health care standards.

The focus of the Scientific Summer School was to experience the skills of designing the outcome research study: creating a logical hypothesis, determining significance of study, planning how to select study population and outcomes, data types, collection and analysis.

The main principles of the Scientific Summer School were:

1. To apply the problem-oriented education in designing the outcome research study
2. To encourage the cross-discipline/cross-cultural collaboration
3. To maintain the respect to each other

Problem-oriented education

Problem-oriented education based on active learning in small groups, with problems used as the stimulus for learning (1) has been successfully adopted in research training programs such as mandatory course on scientific research for undergraduate medical students (2). Critical Appraisal Skills Program for health care professionals (3) and in Outcomes Research Practicum for clinical practitioners, postgraduate trainees and medical students (4).

Outcomes Research Practicum (ORP) developed at the Duke University Medical Center in Durham, NC is based on problem-oriented education. It was designed to promote competencies and skills in designing outcome research studies and was shown to be successful in increasing the collective research activities of participants (4) in the long term. The effort to transfer this module to the central Europe area led to the initiation of Scientific Summer Schools (SSS) (5-8). The SSS concept is based on the ORP, and aim is to enable and encourage international and inter-professional participation.

In Turkey, as in many other Central European countries, there is still a strong tradition and emphasis on didactic teaching methods, where the custom of passive listening to lectures is the primary educational tool. Most participants of the SSS were experiencing a problem-based educational approach of this kind for the first time. The custom of passive listening to lectures was previously suggested as the main reason for lower participant satisfaction compared with a problem-based learning procedure of education (9). The effect of the change in educational approach from didactic to problem oriented education and personal reflections of this change was recently studied (unpublished data). The main findings of the study were that the SSS had positive impacts on participants' competencies related to design and the conduction of research studies and their group performance. These findings were based on both the subjective perspective of SSS participants and the objective perspective of the workshop faculty.

Cross-discipline/cross-cultural collaboration and maintaining respect to each other

The cross-discipline/cross-cultural collaboration was achieved by having participants from different countries and with different backgrounds. The approach of having participants from different countries leads to the challenges in communication and problem solving. The primary challenge and goal of working in diverse groups is to maintain the respect of each other especially when differences in opinions and understanding take place. Those challenges were solved by careful listening and understanding, and making sure that the perception and understanding is the primary goal in discussions and communication. Differences in background can lead to positive outcomes just as when borders between cultures and background are removed. Only then different aspects and opinions can be applied in designing the research projects through collaboration.

Conclusions

To improve sharing of scientific programs and to promote scientific communities worldwide suggested strategies exist to bridge gaps between research output of transitional countries and leading powers in biomedical research (10). The initiative of doing Scientific Summer School in Turkey has shown that well established problem-oriented

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educational intervention can be successfully transferred from the main stream research country to central Europe area and increase research enthusiasm and the overall impression of doing research.

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