

A Model for Providing New Educational Opportunities for Talented Medical Students; MD-MPH Program Experience

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Introduction

Exceptional Talents Development Center (ETDC) in Tehran University of Medical Sciences (TUMS), has started to work since 2005 and was established to coordinate all activities for designing and implementing strategy and programs for identification and training of gifted and talented students in TUMS. ETDC has designed a three axes differentiated program to ensure that these students are provided with opportunities to develop their abilities and to meet their potential for outstanding achievement. Differentiation is considered to be occurred in content (what is presented), process (how it is presented), and product (how it is assessed). The axes include:

Acceleration

Enrichment

Extension

1-Acceleration: The term 'acceleration', also referred to as 'accelerated progression', relates to an advanced pace of learning. It enables students who are gifted to learn at a level corresponding to their ability and matched to the speed at which they learn (1). Different forms of acceleration include:

- Curriculum compaction
- Subject acceleration
- Year advancement

TUMS G&T students can benefited form acceleration by: not attendance in general course classes, selecting maximum course unit of 27 for each semester, summer course, some course exemption for national science gold Olympiad medalists and etc.

2-Enrichment: an enrichment activity is learning activities, which provide more challenge

than regular curriculum activities. Students may be encouraged to search for new information, pursue personal interests, work on creative activities and be provided with leadership opportunities (2). These activities may take place in either the formal or informal classroom or workshops, with other students or within a wider community.

School-wide enrichment program in TUMS include:

Workshops such as life skills (time management, behavior management, team work, questioning skills, etc), creativity, research and methodology, IT, medical education, evidence base medicine, etc.

Joining Student's Scientific Research Center (SSRC) with ETDC to establish a student based system in which they can practice together their leadership, management, teaching skills, creativity and life skills knowledge in a real world-like atmosphere.

"Real Research Experience" project in which a group of 20-40 students joins to a research center and each subgroup (consist of 2-5 students) work on a research idea under supervision of an academic staff of the research center. They search literature, develop the idea to a proposal, take the approval, gather the data, analyze it, write the article and submit it in a journal. Simultaneously they participate in research methodology and statistic course and workshops. After two to three years, some of them can teach in workshop or take the responsibility of mentorship for next subgroups joint to that research center.

3-Extension: it can be defined as to omit portions of assigned curriculum, and substitute it with extension assignments that match their in-

terests, abilities, or academic needs. Another approach is provision of opportunity to study in two formal academic fields for example medicine and bachelor of chemistry. However, approach that is more acceptable is Dual degree (joint degree) programs. Today's higher education leaders have intensified their emphasis on interdisciplinary curricula and their call for Dual degree programs. The number of Dual degree programs is increasing and future demands on higher education most likely will compel institutional leaders to encourage this kind of collaboration (3). It is main TUMS strategy for G&T students as MD-MPH (also DDS-MPH and Pharm-MPH) program has been established Two years ago, MD-PhD is approved recently and other Dual degree programs is being designed.

MD-MPH dual degree program

The absence of a good working relationship between medicine and public health is not only a cardinal feature of the health care system in developing countries but also the United States and other developed countries (4). MD-MPH program in TUMS is designed to introduce G&T students to the population sciences and to create physicians who can think in both individual and population terms. It is based on the belief that Physicians should also understand the structure, financing, and administration of the health care delivery system, so that they will be able to practice medicine effectively and participate in planning and managing the delivery of care and designed to train medical students to be effective physician scholars and public health leaders. G&T students apply to the MPH program in their third year of medical school. Based on some criteria, (such as mean overall score, score of National Basic Science Comprehensive Exam) and interview, some of them are selected and begin the core MPH courses (Epidemiology, Biostatistics, Environmental Health, etc) and non-core course (medical sociology, evidence-base public health, qualitative researches, etc) in School of Public Health.

This two-year program has been launched from 2007 and until now involved more than 120 G&T students have. Now it is a bit soon to judge about the program but it would be valuable if some study could be designed to get insight into how the MD-MPH has been used in professional practice and how the program may be refined to enhance benefits to future practicing physicians and to learn how cost and convenience factors such as program duration and curriculum accommodations reflect on the students' genuine interest in the field of public health.

References

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