

Is Article 13 of “Educational Directive for Gifted and Talented Students in Universities” a valid rule?

Oveisgharan Sh., MD¹; Ghasemi M., MD¹

¹Medical Education Development Center, Isfahan University of Medical Sciences and Health Services

ABSTRACT

Background: Iranian talented university students who take semester averages below 17 for at most two times can't use facilities provided for Gifted and Talented students in Universities through Ministry of Health (MOH) directive regarding gifted and talented student.

Purpose: To examine the validity of article 13 of this directive.

Methods: Renzulli's three ring concept of giftedness was chosen as giftedness definition. Obtaining Grade Point Averages equal or more than 15 was regarded as "above average ability". A questionnaire, based on "Scales for Rating the Behavioural Characteristics of Superior Students" was designed for "creativity" and "task commitment" evaluation. Score 3.00 or more in "creativity" and "task commitment" evaluation was regarded to be sufficient to keep the student in the program. Students who were admitted in Isfahan University of Medical Sciences during 1997-1999 and recognized as gifted initially by MOH were included in our study.

Results: 147 students were included in this study, of which 50% were female. From the study group, 20 student reports, done by 39 students were evaluated. Of these 39 students, 31 would have been left out based on article. Out of 31 students, 18 met all three criteria of Renzulli's definition.

Conclusion: There may be gifted student who are denied the opportunity of using the facilities provided for gifted student based on enforcement of article 13 of IGCT directive. Further study to devise better measure for identification of gifted student seems to be warranted.

Keywords: GIFTED, IDENTIFICATION, ISFAHAN UNIVERSITY OF MEDICAL SCIENCES

Journal of Medical Education Summer 2003 3(2): 91-95

Introduction

Developing countries as well as developed countries have provided opportunities for better development of gifted students or at least tried to do so (1). Identification of gifted students and in more general terms, gifted individuals has been sought to be an essential requirement for sustainable development by many social scientists (2).

However, identification of gifted students has been proved to be one major challenge worldwide (1). Many concerns raised by scholars in 1980s have not been properly answered, and identification procedures are still facing a host of problems (3). Even some studies have shown that these procedures have been declined, at least in some aspects (4). To establish an acceptable

identification procedure, a reasonable first step is adaptation of a well defined concept of giftedness (3). There are many theories of giftedness and in almost all of them, giftedness is defined well beyond the narrow concept of IQ which is measured by intelligence tests. Renzulli's three ring concept of giftedness (5), United States Office of Education's definition of giftedness (USOE definition) (6) and Gardner's Multiple Intelligence Theory of giftedness are three examples (7).

Iranian Gifted and Talented Committee for university students (IGTC) has started to work since 1996. Each year National Organization for Educational Assessment introduces Gifted and Talented Students (GTs) to Iranian Universities according to IGTC directive (8). According to this directive a student who has one of the following qualifications is entitled to use special facilities provided for gifted and talented students:

1 – He/she scored more than 2.5 standard deviations above the mean score in national university admission exam.

Correspondence: Shahram Oveisgharam, Medical Education Development Center, Isfahan University of Medical Sciences, Isfahan, Iran
Fax: 00983116688323
Email: oveisgharan@edc.mui.ac.ir

2- He/she won Golden Medal in national scientific Olympiads.

3- He/she was a winner of National Kharazmi Festival.

As is quite clear exceptional educational or research achievements are considered to be the measure of giftedness in this directive.

After university admission, those talented students who get semester averages below 17 twice or more, won't be able to use the facilities provided by this directive according to article 13 (8).

This article has given rise to many complaints by the students. Some argue that spending time on research projects may affect their semester averages. Others say that selection of 17 as a cut point isn't based on any hard evidence if at all so it is not valid. It is also noted that examinations are not equivalent in terms of difficulty among the universities across the country and even within a university. We investigate the validity of this article.

Material and Methods

Step 1. Adapting a definition for giftedness

In USA, three most used definitions are: USOE (48%), Intelligence Quotient (IQ) (11%) and Renzulli (8%). Percentages of other definitions' used are below 1% (3). USOE definition consists of these components: general intellectual ability, specific academic ability, creative or innovative thinking, leadership ability, visual and performing arts and psychomotor ability (6). Because constructs and instruments, which are used to measure USOE definition's components are not well established (3) so this definition wasn't selected. IQ definition is not comprehensive as a measure of giftedness (3). So Renzulli's GT definition (5) was adapted. It consists of three rings: Above average ability, creativity, and task commitment. Students who met all three rings requirements were regarded as gifted.

Step 2. Constructs and instruments

To rank a student above average he/she had to have semester averages above 15.00 according to data provided by Oveisgharan and his colleagues (9). At the beginning of the year 2001 all students were informed of Renzulli's definition and were asked to attend Talented Students Office of Isfahan University of Medical Sciences and Health Services presenting documents on their

works that represent their creativity and task commitment. Students were instructed to be careful with their semester averages during next 2 semesters (till March 2002). To continue their membership, those students who had got semester averages below 15 till program announcement time were informed that if they got semester averages more than 15 during upcoming semesters their previous semester averages wouldn't be considered.

Creativity and task commitment were assessed by a questionnaire derived from "Scales for Rating the Behavioural Characteristics of Superior Students" (SRBCSS) (10). Task commitment questionnaire had 11 items and the one assessing creativity had 6 items. Evaluators rate each item as one of the following: very high, high, moderate, low, very low. Also a choice was provided for each item as "can't be assessed". Selection of this response by an evaluator was regarded as a missing datum for that item. All students were instructed to deliver their works till the end of March 2002.

Step 3. Sample selection

Students who were admitted in Isfahan University of Medical Sciences during 1997-1999 and recognized as gifted by IGTC directive were included in our study. Because Talented Students Office (TSO) at Isfahan University of Medical Sciences started to work since summer 2000, semester averages of student achieved before this time were not subjected to the article 13.

Step 4. Data collection and analysis

Students' semester averages were extracted from students' educational records electronic database with permission from vice presidency for education. Student reports were evaluated by 2 evaluators based on a structured checklist. Each item's score was determined as follows: If both evaluators checked an item, mean of their scores would have been used as item score. If only one of them checked an item and the other one didn't, the given score considered as item score. If none scored an item, that item was regarded as a missing datum for that report. All data were analyzed by Statistical Package for Social Sciences (SPSS) version 10.01. Missing data was calculated for each item in addition to its corrected item-scale correlation. Pearson correlation coefficient was used in correlation calculations. Reliability was examined by

Cronbach's Alpha. Validity was checked by Multi Trait Multi Method (MTMM) analysis for questionnaire subscales.

Results

In this study 149 gifted students were included. Two students went to other universities and were excluded from the study. Of all students, 75 were female (51.02%). Mean age of the students was 22.20 ± 0.943 year (ranging from 20 to 25 year). Table 1 shows frequency distribution of students by their date of admission and course of study.

At the end of the first semester of academic year 2001-2002, 20 student reports were delivered to TSO. These projects were done by 39 students. Thirty one of these students would be left out if article 13 of IGTC directive were to be enforced. Based on the criteria used in our study, 4 students did not meet the condition to remain in gifted enhancement program so their reports were excluded.

One project produced a computer program in dentistry while others were related to educational, medical or experimental topics. The computer software was evaluated by two computer

programmers. Each other project was evaluated by both TSO manager and TSO scientific consultants, apart from 2 reports.

Table 2 shows a detailed description of the questionnaire results.

Table 3 shows the results of reports evaluations. Possible maximum score was 5 and the possible minimum was 1. Mean of task commitment scores was 3.57±0.598 and that of creativity scores was 3.16±0.846. Based on a pass score of 3, 11 reports were acceptable. Of those 31 students who would be left out of program based on article 13 of IGTC directive, 18 students were the authors of acceptable reports.

Discussion

Our results showed that 18 students who would be disqualified based on article 13 might be regarded as gifted based on Renzulli's three ring concept of giftedness. They had above average ability as well as creativity and task commitment. In other words about 60% of students who would have been left out based on article 13 as a determinant for remaining in the gifted and talented program, continued their TSO membership.

TABLE 1- Frequency distribution of talented students by date of admission and course of study

Date of Admission	1997-1998		1998-1999		1999-2000		Total
	Sem 1*	Sem2	Sem1	Sem2	Sem1	Sem2	
Medicine	14	5	19	15	22	28	103
Dentistry	15	0	0	11	0	17	43
Pharmacy	0	0	0	1	0	0	1
Total	29	5	19	27	22	45	147

*Admission semester: fall or winter

TABLE 2. Descriptive statistics of questionnaire items with their corrected item-scale correlations

Item	Mean	SD*	Corrected item-scale correlation	Missing Data		Item	Mean	SD*	Corrected item-scale correlation	Missing Data	
				%	n/N					%	n/N
Task commitment						Task commitment					
1	3.63	0.764	0.22	0	0/16	7	3.63	0.806	0.63	0	0/16
2	3.30	0.891	0.42	0	0/16	8	3.69	0.655	0.91	0	0/16
3	3.82	0.696	0.16	12.5	2/16	9	3.95	0.854	0.37	18.75	3/16
4	3.74	0.841	0.49	0	0/16	10	3.61	0.767	0.63	0	0/16
5	3.58	0.803	0.82	0	0/16	11	2.72	0.836	0.75	0	0/16
6	3.61	0.984	0.38	12.5	2/16						
Creativity						Creativity					
1	3.05	0.873	0.83	12.5	2/16	4	3.46	0.789	0.35	31.25	5/16
2	3.37	1.093	0.80	6.25	1/16	5	3.21	1.030	0.65	0	0/16
3	3.05	0.880	0.69	12.5	2/16	6	3.38	1.190	0.74	0	0/16

* Standard Deviation

TABLE 3. Creativity and task commitment scores of projects

Project	Project subject	Task commitment	Creativity	Acceptance
1	Computer program in dentistry	3.41	3.90	Yes
2	Student review article	4.17	1.50	No
3	Medical educational project		Not evaluated	
4	Experimental research	4.00	3.42	Yes
5	Medical educational project		Not evaluated	
6	Clinical trial		Not evaluated	
7	Dentistry observational study	4.00	2.25	Yes
8	Experimental research		Not evaluated	
9	Medical educational project	3.41	3.75	Yes
10	Medical observational study	3.41	3.33	Yes
11	Experimental research	4.32	4.25	Yes
12	Experimental research	3.91	3.33	Yes
13	Medical observational study	4.09	4.17	Yes
14	Medical observational study	3.64	3.00	Yes
15	Clinical trial	2.82	1.80	No
16	Medical educational study	3.50	2.67	No
17	Clinical trial	3.55	3.75	Yes
18	Dentistry educational study	3.09	2.17	No
19	Experimental research	3.67	3.40	Yes
20	Dentistry educational project	4.15	3.80	Yes

More GT students might have been able to continue using educational facilities of IGTC directive if they had been informed more efficiently about the program.

Using the measures used in our identification procedure had some advantages:

1) Those students who get good task commitment and creativity scores but low semester averages could be identified and evaluated for possible reasons of their poor educational achievement. This will help to identify the problem causing poor educational achievement in medical student

2) As creativity is taken into account, creative students can enjoy facilities provided in program to improve their competency and product. Genius people in many studies are indeed identified because of their creative accomplishments (5). Although there is a positive correlation between academic achievement and creativity (11) no cut off point has ever been specified for this correlation. So there is no evidence to support the choice of two semester averages below 17 as disqualification criteria. Considering academic achievement as the only measure for determining

students' leave or stay in a gifted and talented program is not warranted. Renzulli insists that it is institution responsibility to provide many opportunities for talented students because each student can be creative in only some fields not any field (5).

It is true, as Renzulli has pointed out, that "there is no such thing as a perfect identification system" (12) but mission of any gifted and talented program should guide the decision on who will be included in it.

The authors are well aware that the measures they used for identification and the decisions on qualification of student to remain in the program had some flaw such as lack of hard evidence for validity and reliability of the questionnaire or setting acceptable semester averages equal or above 15. However, our results highlight the need to consider different sets of measures to identify gifted students based on the mission of such program to find out which measures are better in predicting future success of the students.

Acknowledgement

Mr S. Saeidbakhsh's contribution in providing semester averages of students is greatly appreciated.

References

- 1- Mitchell BM, Williams WG. Education of the Gifted and Talented in the World Community. *Phi Delta Kappan* 1987; 68(7):531-534.
- 2- Feng AX, Campbell JR, Vema MA. The talent development of American physics Olympians. *Gifted and talented International* 2001; XVI (2):108-114.
- 3- Callahan CM, Hunsaker SL, Adams CM, Moore SD, Bland LC. Instruments used in the identification of gifted and talented students. [online]. 1995 [cited 2001Aug]; Available from:URL : <http://www.virginia.edu/>
- 4- Tallent-Runnels MK, Sigier EA. The status of the selection of gifted students with learning disabilities for gifted programs. *Roeper Review* 1995; 17(4):246-248.
- 5- Renzulli JS. The three-ring conception of giftedness: A developmental model for creative productivity. In Sternberg RJ, Davidson J. (Eds.), *Conceptions of giftedness*. New York: Cambridge University Press; 1986. p. 53-92.
- 6- Mariand S. Education of gifted and talented: Report to the Congress of the United States by the U.S. Commissioner of education. Washington DC: Department of Health, Education, and Welfare Publication; 1972. (Vol.1).
- 7-Gardner H. The Theory of Multiple Intelligences. *Ann Dyslexia* 1987; 37:19-35.
- 8- Educational Directive for Gifted and Talented Students in Iranian Universities. 1996.
- 9-Oveisgharan S, Ghasemi M, Changiz T. Academic achievement of talented students at Isfahan University of Medical Sciences. *IJME* 2001; 1(2):13-6.
- 10- Renzulli JS, Smith LH, White AJ, Callaban CM, Hartman RK. Scales for rating the behavioral characteristics of superior students. Mansfield Center, CT: Creative Learning Press, 1976.
- 11- Orioux J, Yewchuk C. Correlates of creative performance in high school students. *Can J Spec Educ* 1990; 6(1):50-60.
- 12- Renzulli JS. *Gifted identification*. Mansfield Center,CT: Creative learning press; 2002.