Identification of Gifted and Talented Children in India: A Preliminary Study

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Abstract

The purpose of this study is to develop an initial measure for identifying gifted youth in India. The study will also assess differences in the performance of two groups of children (one group who performed well in school assessments and the other group who did not do well in the school assessments, but the teachers thought they had true intellectual potential) in the preliminary identification. Twenty-four children in third, fourth, or fifth grades attending a school in India participated in the study. Researchers used the Academic Competency Checklist (ACC) (Jambunathan & Jayaraman, 2011) as the preliminary measure. The checklist was for children in grades three through seven comprising of 197 questions in five sections. The items were scored as "Yes" or "No". The results suggest that there were significant differences in the performance of the two groups of children only in the social emotional development section of the ACC ($t = 8.43$, $p \leq .001$).

***Keywords*:** Identification; academic competency; gifted education; performance level.

Introduction

Gifted education is loosely defined as the education of children who demonstrate superior skills in more than one area in the academic and creative arenas. Gifted children as defined by National Association for Gifted Children as stated in their position statement (2002), are "*Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities".*

Above-average ability is the first criterion for identifying gifted persons. General intellectual ability is measured by tests of general aptitude or intelligence with scores ranging in the 95-98 percentile or two standard deviations above the norm. In terms of an intelligence quotient (IQ), the gifted are those individuals having an IQ of 130 or higher. Unites States of America Office of Education (USAOE) has defined gifted children as having superior skills in one or more of the six areas: Creative thinkers, General intellectual ability, Specific academic ability, Leadership skills, Psychomotor, and Visual and Performing Arts. No child will be gifted in six areas, but some may be in more than one area. Within specific academic ability, students again usually have one or two subjects that they are best in and are passionate about (Renzulli, 2011).

However researchers like Renzulli (1978), Gardner (1983), Gagne (2005), Sternberg (2003) and Monks (1992) argued against this cookie cutter definition of gifted children. Renzulli (1978) argued for the inclusion of other concrete dimensions to the definition and globalization of giftedness. He called attention to two other critical indicators of giftedness, i.e., Motivation and Creativity. He argues that the six areas narrow the global perception of giftedness and focus more on performance and process-oriented skills.

In his Three-Ring Conception of Giftedness, Renzulli (1978) identified three main domains of giftedness - above average ability, creativity, and motivation or task commitment. Above-average ability refers to one's ability to do well in areas of general and specific performance achievements as

measured by traditional methods. This dimension tends to be the most constant of all the three dimensions. Creativity refers to more unconventional thinking and production of ingenuous solutions. Task commitment is the nonintellectual ability to remain focused on developing a particular skill and remaining committed to continuous learning and improvement despite obstacles and failures. Each of the areas is intertwined and one is not more important than the other.

Sternberg (2003) in his triarchic model proposes that superior intelligence is comprised of three essential components: Analytic skills or componential intelligence which is the ability to think and process abstract information; Synthetic skills or experiential intelligence is the ability to view information in a creative manner; and Contextual intelligence or the ability to use intelligence to deal with everyday issues. Sternberg contends that these three components are indispensable to giftedness. He also acknowledges the importance of the environment and experiences the child might have in the development of successful intelligence.

Gardner's (1983) Theory of Multiple Intelligences highlights the importance of viewing intelligence as being multidimensional. He proposed that every person has eight independent intelligences (verbal, musical, logical-mathematical, interpersonal, intrapersonal, spatial, bodily-kinesthetic, and naturalist). These intelligences work together and one might be strong in more than one area. This type of classification of intelligence is beneficial to educational programs in differentiating instruction and diversifying the curriculum.

The Differentiated Model of Giftedness and Talent (DMGT) proposed by Gagne (1999, 2000) highlights the difference between gifted and talented. He explains that giftedness stems from naturalistic abilities and can be manifested in one or many areas. He explains that talent is the mastery of systematically developed abilities or skills. Gagne (2000) recognizes the following aptitude domains in the natural abilities area: Intellectual, creative, socio-affective and sensorimotor. He explains that talent can be developed in a variety of areas ranging from leisure to organized sports. Gagne (2000) in his model of DMGT proposes that children who are in the top 10% of their natural abilities and trained talents can be identified for further support and development. He also recognizes that natural gifts and trained talents can be influenced by a plethora of factors. He has classified them into intrapersonal and environmental factors and chance.

Research on gifted identification has shown that one should not rely on one mode of identification or advanced level of functioning in one area. Instead, one should use multiple assessments and the children should demonstrate superior skills in more than one area. Very often many educational programs and institutions rely on children's performance on traditional measures of academic achievement for entrance into programs for gifted and talented children, with creativity being ignored. As a result, children who show superior skills in the creative areas, but perform at an average level on the traditional measures do not get admittance into the support programs for gifted children (Pierson, Kilmer, Rothlisberg and Mac Intosh, 2011). Renzulli (1978) emphasizes that one should pay greater attention to the interaction between the three areas in identifying children (above average ability, creativity, and motivation).

Work by leading gifted education research scholars like Renzulli (1994), Torrance (1984), Sternberg (2005), Gardner (1994), and Bloom (1985) have called for a more comprehensive and holistic definition of giftedness and for a more robust method of identification of gifted children instead of relying only on academic achievements. Many educational programs and school districts use a wide variety of assessments to identify gifted children. Unfortunately, the majority of these programs and school districts still rely on the traditional IQ tests to identify the gifted children and we run the risk of not identifying all the gifted children. Many districts do use multiple assessments to distinguish the gifted children. The most commonly used multiple measures are: Academic achievement tests, cognitive assessments, parent, teacher and peer nominations, and teacher checklists.

Renzulli, (1994) acknowledges the limitations that various school districts and

educational institutions face (e.g., funding stipulations and assessment limitations). His suggestions for making the identification process more robust and appropriate involves some changes to the assessment strategies, analysis of data, and funding formula. He suggests that academic competence assessments have to be aligned with state or national standards. There are a wide variety of instruments that measure giftedness and they are more robust and comprehensive compared to what was available few years ago. However, it is very expensive to administer a whole battery of tests to identify gifted children. Pierson, Kilmer, Rothlisberg and McIntosh (2012) in their detailed report about the use of brief measures of intelligence in schools to identify gifted children, clearly discuss the pros and cons of using a brief measure of intelligence as an initial assessment. They highlight the importance of using brief measures that are reliable and valid for the purposes for which they are used.

Identifying and supporting the education of gifted and talented children continues to be an issue in many countries. India has a history of identifying the exceptional children. However, the definition of exceptional children has changed over the years. Raina (1984) explains that initially exceptional children were those who demonstrated excellence in appropriate service-oriented and social justice directed behaviours. Such behaviours were considered as being an integral part of the education process. With the influence of the western countries, the definition of excellence changed and more emphasis was given to cognitive excellence. The identification process was also similar to an assembly line process that was successful in identifying mediocrity versus identifying and supporting excellence (Raina, 1984). Nambissan and Batra (1989) are vehement in their argument for coming up with multiple measures of intelligence such as multiple intelligence measures and having a more global definition of excellence.

The Indian government introduced several programs to identify excellence and foster it (e.g., National Talent Search (NTS), Navodhya Vidyalaya, Cultural Talent Search program, Bharatiya Vidya Bhavan's Rajaji Vidyashram, Inter-University Center for Astronomy and Astrophysics). However these programs were not very successful because of flawed identification process, efficacy of the program, and societal discord about the program (Raina, 1984).

Gifted and talented scholars call for programs offered on a regular basis to meet the needs of the gifted and talented youth. Raina (1984, 1988) and Srinivas (1988) point out in a country like India, much emphasis has been placed on providing educational opportunities for all children, while not much has been done for educating the gifted and talented, which may have resulted in the "brain drain" phenomenon and increase in the apathy of the talented youth who were discouraged and did not quite succeed.

The purpose of the present study is to develop an appropriate initial identification measure for identifying gifted and talented youth in India. As alluded to in the literature, there is a lack of relevant and culturally appropriate tools to assess the children from impoverished backgrounds. One of the main concerns has been using assessment strategies that are not culturally relevant. The current study will develop an initial assessment system based on the local curriculum standards. This assessment is to serve only as a preliminary identification system. The study will also assess differences in the performance of two groups of children (one group who performed well in school assessments and the other group who did not do as well in the school assessments, but the teachers thought they had true intellectual potential) in the preliminary identification assessment. This will enable the researchers to provide some answers to the question, "Is giftedness related to academic success?"

Methodology

Subjects

Twenty-four children attending a school run by a non-profit organization in the outskirts of Chennai, India participated in the study. The researchers asked the teachers to nominate two groups of children. The first group (n=12) was those whom they thought were extremely intelligent and performed well in school assessments. The second group (n=12) was the children whom they thought were intelligent but the children did not do well in school assessments. The children were recruited from third, fourth, and fifth grades. Three trained researchers administered the assessments.

Instruments

Researchers used the Academic Competency Checklist (ACC) (Jambunathan & Jayaraman, 2011) as the preliminary measure. This checklist was based on the Central Board of Secondary Education standards. The social emotional section was based on the characteristics of gifted and talented children as proposed by Renzulli (1978). The checklist started for children in the third grade and went up to grade seven. The checklist comprised of five sections: Mathematics, Reading and Language Arts, Science, Social Studies, and Social Emotional Development. The Mathematics section comprised of questions in number and operations, measurement, geometry, data analysis, and algebra. There were a total of 85 questions in the Mathematics section. The Language Arts section comprised of reading, writing and elements of language. There were a total of 39 questions in the Language Arts section. The Science section was comprised of Life sciences, Physical sciences and Earth sciences. There were a total of 18 questions in the Science section. The Social Studies section consisted of 14 questions. The Social Emotional Development section consisted of 41 questions. The items were scored as "Yes" or "No" based on whether the children answered the questions correctly or not.

Procedure

The researchers recruited the children from their classrooms and the assessment was done in the resource room. The questions were posed to the children in English. When the children had trouble understanding the questions the researchers translated the question in Tamil (the local language) for the children to respond. The researchers asked the children questions verbally, or gave them opportunities to respond to questions either in the written or verbal form. The researchers also observed the children during the day to complete the social emotional section of the checklist. The researchers stopped assessing the children if they failed to answer five consecutive questions. The entire administration took about 30-45 minutes for each child.

Analysis

The ACC was given to professors of education (n=4) with interests in the gifted and talented programs to check for content validity. The professors were in agreement about the content of the instrument and the purpose for which it was being used. Descriptive analysis and t-tests were done to determine if there were any differences in the performance of the two groups of children on the ACC.

Results

The mean scores for the performance of both groups of children in the ACC are presented in the table below.

Table 1: The mean scores for the performance of both groups of children.

Section	Children performing well in school (n=12)		Children not doing well in school (n=12)	
	Mean	***S.D.***	***Mean***	***S.D.***
Mathematics (85 questions).	38.28	1.42	38.31	1.14
Reading and Language Arts (39 questions).	12.88	1.87	13.73	1.72
Science (18 questions).	11.62	1.13	10.87	1.64
Social studies (14 questions).	5.08	1.02	5.91	1.84
Social Emotional Development (41 questions).	22.35	2.09	40.51	4.73

The above table shows the average scores on the ACC of children performing well on school assessments and those not performing well on the school assessments. The results suggest that there were significant differences in the performance of the two groups of children in the Social Emotional Development section of the ACC (t=8.43, $p \leq .001$). There were no significant differences between the two groups in the other sections of the ACC.

Discussion

Analysis of the results showed that the children performed well for their age on the sections that were concrete concepts (e.g., Numeration and computation in the Mathematics section, Reading, Elements of language in the Language Arts section, Earth sciences, Physical sciences, and Life sciences in the Science section). The children did not do well in the sections that involved abstract concepts (e.g., Algebra in the Mathematics section), concepts that involved independent thinking (e.g., Writing in the Language Arts section), and social interaction and strong sense of self and social justice in the Social Emotional Development section of the ACC.

One of the reasons children might not have done well in certain sections is because the teachers in the early grades do not teach a wide variety of concepts. They tend to teach to the tests and examinations. As a result, children are not exposed to a wide variety of topics. Teachers also tend to spend more time on topics that are concrete and tangible. They are not very comfortable dwelling on topics that are not comfortable for them or that would put them in a situation where they would not know the answers to the questions the children might ask. This results in a very narrow teaching regimen.

Another reason for the lack of strong performance of the children in the abstract and social portions of the scale is that the teachers are not trained to teach in a developmentally appropriate manner. Altering teaching strategies to meet the needs of each child is not a common practice in India. As a result when children's skills tend to deviate from the norm, teachers struggle to accommodate, to challenge and to scaffold them. The majority of the teachers try to get the deviant children to fit in with the norm, instead of engaging them in areas that interest them and supporting their development.

The results also showed significant differences between the two groups of children taking the ACC in the Social Emotional Development section. The group of children who did well on school assessments scored significantly lower than the group of children who did not do well on school assessments. One of the reasons there was significant differences in the Social Emotional section was that the former group of children tended to be risk averse and conformed to rules and expectations. They did not question or challenge the teachers' authority or teaching. Traditional Indian childrearing practices and classroom practices emphasizes children being respectful to teachers and not to ask questions that would be disrespectful to the teacher. Teachers tend to favour the children who are passive recipients of information. So when children get positively reinforced for their passive behaviour they tend not to indulge in experiences that might get them to challenge themselves or the authority figure. This frequently leads to low self-esteem and a feeling of isolation among the peers. Hence the lower scores in the Social Emotional section of the ACC.

However, the group of children who did not do well in school assessments seemed to thrive on engaging in stimulating discussions and working collaboratively with their peers and teachers. They also frequently sought additional resources outside of the traditional norms to aid in their learning. These behaviours were similar to the unique skills described by Renzulli (1978) for gifted and talented students (e.g., being a leader, having superior problem solving skills, being good at mediating, being creative, not being averse to risk, and having a curious mind). This type of behaviour is not positively reinforced or embraced by most of the teachers or the society. In many instances children who have asked questions that challenged the teachers were considered as trouble makers.

Results of the study can be used to educate the teachers about the importance of stepping out of their traditional teaching practices and expectations of students. Clearly, the above results demonstrated that the two groups of children were performing at the same cognitive level. However, the latter group was far superior in their social emotional development. Teachers need to think about redefining their role from that of being a provider of knowledge to facilitator of learning. They need to start thinking and discussing about empowering the children to take control of their learning. Teachers should serve as educational facilitators to lead the children through a challenging and gratifying journey of educational endeavours. This will result in the children having a positive self-esteem and a willingness to take on challenges. This is especially important when the educational system in India is changing for the better, with less emphasis on examinations and making a move towards a universalized curriculum. The society as such has moved away from perceiving engineering and medicine as the only career options. Encouraging the teachers and children to work hand in hand to discover various ways of teaching and learning will result in meaningful learning experiences which in turn will result in creating leaders and innovators of the future.

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