

TALENTS OF CHILDREN WITH SPECIAL NEEDS ACCORDING TO MULTIPLE INTELLIGENCES THEORY

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Abstract: This study aims to identify talents of children with special needs in Central Java Indonesia. The results can be used to define policies in fostering talented students with special needs in special schools in Central Java Indonesia. This research used mixed method approach. The technique used in this study is a survey. The population is students with special needs in special schools in Central Java Indonesia. Sampling technique used is purposive sampling, with a sample of 129 children with special needs without consideration of the disability type and education level. The instrument used in this research was a rating scale questionnaire based on the multiple intelligences theory of Howard Gardner. Content validity was used to test the validity of the instrument. Quantitative data were analyzed with descriptive quantitative techniques to analyze the frequency and the percentage of each component, while qualitative data were used to enrich the quantitative data. The results showed that children with special needs in special schools in Central Java Indonesia has a naturalistic talent (18.8%), visual/spatial talent (18.04%), interpersonal talent (17.29%), kinesthetic talent (13.54%), music talent (10.53%), intrapersonal talent (9.77%), verbal/linguistic talent (9.02%), and logic/mathematic talent (3.01%). This study suggests the Central Java government to define policies in fostering talented children with special needs in special schools in Central Java Indonesia according to the results of this study.

Keywords: Children with Special Need, Multiple Inteligences, Talent

INTRODUCTION

The concept of multiple intelligences become a topic of much researches in many countries (Chen, H.; Chiang, C.; & Lin, 2013; Ghamrawi, N., 2014; Chan, D. W., 2008; Chan, D. W., 2006; Jung, T. & Kim, M., 2005; Chan, D. W., 2005). Besides, many researches also discuss about talent and talented children (Olszewski-Kubilius, P. & Thomson, D., 2015; Wairire, G. G., Mungai, N. W., & Mungai, K., 2013; Assouline, S. G. & Lupkowski-Shoplik, A., 2012; Mueller-Oppliger, V., 2010; Olszewski-Kubilius, P. & Lee, S., 2004). Those show that the topic of multiple intelligences and talent become important topics in education research.

Talented children are those who identified as someone who has the characteristics of prominent ability, skill, and performance. Talented children are not only can be seen from cognitive, logic, and intelligence perspective, but also can be seen from talent, skill, aptitude-interest development, and multiple intelligence perspective.

Renzulli (Garguilo, 2012) stated that giftedness includes three dimensions, namely high ability, high task commitment, and high creativity. On the other hand, Gardner (2003) argued that there are eight types of intelligences or abilities, namely bodily/ kinesthetic, verbal/linguistic, logic/mathematics, music, intrapersonal, interpersonal, visual/spatial, and naturalistic intelligence. According to Gardner (2003), ability can be seen as multi domains. Cattell, Horn, & Carroll (Garguilo, 2012) also stated that intelligence as

a constellation of human ability is hierarchical and multi fact. Therefore, talent can also be seen as multi-domains abilities.

According to multiple intelligences theory (Gardner, 2003), it can be concluded that talents include not only academic ability, but also non-academic ability. Different from academic ability, non-academic ability (art, music, sport, etc.) has not received much attention, whereas many children have ability and talent in art, music, dance, drama/theater, sport, etc. In Indonesia, the development of non-academic talent for school age children (especially for children with special needs) has not been touched, whereas the talent development at this age periode is very important for the progress in the next age periode.

Marker (Smith, 2003) stated that some students with special needs also have special talents. Smith (2003) argued that most students with special needs who have special talents are not included in the education for gifted and talented children. In fact, the talent of children with special needs still become a doubt. There is no support from the education system to accommodate and develop the talents of children with special needs.

In Indonesia, the government's efforts to provide special education services for students who have the potential intelligence and special talents had actually been carried out since 1974 by giving scholarships for gifted and talented students from low economic family in all level of education (elementary school, junior high school, senior high school, and vocational high school).

Furthermore, the Education and Culture Ministry also formed a working group of Gifted and Talented Education Development in 1982 to plan, develop, organize, and evaluate activities in accordance with the development of education for gifted and talented children. The working group represents the structural element and expertise element (science, math, technology, languages, humanities, and psychology). Government's efforts to provide special education services for student with special potential, intelligence, gifts, and talents are in order to meet the demands of education for all.

According to National Education Minister Regulation No. 34 of 2006 (Permendiknas No 34 Tahun 2006) on the achievement fostering of gifted and talented students, the fostering of gifted and talented students achievements become the responsibility of the educational unit, district/city/ province government, government, and society. Furthermore, the regulation of National Education Minister (Permendiknas No 34 Tahun 2006) stated that all students in all lane, level, and type of education are eligible to participate in the selection of the fostering program of gifted and talented children from the government. Hence, all students including students with special needs have the same rights and obligations in education.

The regulation of National Education Minister (Permendiknas No 39 Tahun 2008) stated that the fostering of students is conducted in all level of education (preschool, primary school, junior high school, senior high school, vocational school, and special school) for all students, including students with special needs. The fostering held according to the multiple abilities.

Unfortunately, these services have not touched comprehensively for students with special needs who are also gifted and talented, whereas the number of those kinds of students is not in a small number. Experts argue that children with special needs who accompanied by giftedness require high level intervention (Nielsen, 2002). Therefore, it becomes a challenge for educators to provide services for those kinds of students. It is necessary to identify those kinds of students to map out their talents and disabilities, so they can receive further optimal services. The collaboration from many elements such as parents, teachers, and school authorities is needed to identify the talents of students with special need. Teacher as the immediate environment of children in school has an important role in recognizing and identifying talents of students with special needs.

According to the above explanation, this study aims to identify the talents of students with special needs in Central Java Indonesia. The talent identification of students with special needs is according to the multiple intelligences theory of Gardner (2003). The results of this research can be used to define policies in fostering talented students with special need in special schools in Central Java Indonesia.

RESEARCH METHODOLOGY

Overall, this study is a mixed method research (Creswell, 2009) aimed to identify the talents of children with special needs in special schools in Central Java Indonesia. Type of data collection used in this research was explanative survey with a quantitative and qualitative questionnaire. Research samples were used for the purpose of answering the research questions. A total of 129 students with special needs in special schools in Central Java Indonesia, without consideration of disability types and education levels, were involved in this study. Sampling technique used in this research was purposive sampling. Sample of this study were derived from 18 special schools and 11 regencies/cities in Central Java Indonesia. The questionnaire in this research used a rating scale type to identify the type of talents according to the multiple intelligences theory of Gardner. The questionnaire was given to teachers in special schools in Central Java Indonesia to identify the talents of their students. The validity of the instruments used a content validity which estimated through examination of the appropriateness or relevance of the test content through rational analysis by a competent panel through expert judgment. The quantitative data was analysed by descriptive statistical techniques according to the frequency and percentage of data collected and the qualitative data is used to enrich the quantitative data.

DATA ANALYSIS

Profile of Respondents

This section discusses the background of the respondents that contains 3 items related to respondents' background. Analysis of data obtained is presented in frequencies and percentages so that it is easier to examine. Table 1 shows the demographics of the respondents involved in accordance with the frequency and percent.

Table 1: Profile of respondents according to the frequency and percentage

Aspect	Category	Frequency	Percentage (%)
Gender	Male	81	62.8
	Female	48	37.2
Education Level	Preschool	7	5.4
	Primary school	112	86.8
	Junior high school	7	5.4
	Senior high school	3	2.3
Regency	Surakarta	2	1.6
	Klaten	2	1.6
	Temanggung	13	10.1
	Cilacap	34	26.4
	Magelang	34	26.4
	Pekalongan	5	3.9
	Kudus	5	3.9
	Banyumas	12	9.3
	Wonogiri	4	3.1
	Rembang	5	3.9
	Purwokerto	13	10.1

Analysis of research question

To identify the talents of children with special needs in special schools in Central Java Indonesia.

Table 2 shows that the data collected in two parts, namely data from the closed-questions and opened-questions associated with the talents of children with special needs. It shows that children with special needs in Central Java Indonesia has a tendency of naturalistic (18.8%), visual/spatial (18.04%), interpersonal (17.29%), bodily/kinesthetic (13.54%), music (10.53%), intrapersonal (9.77%), language (9.02%), and numerical (3:01%) talent. These findings indicate that children with special needs in Central Java province has the talent scattered in various areas according to Howard Gardner's theory of multiple intelligences (bodily/kinesthetic, verbal/linguistic, logic/mathematic, interpersonal, intrapersonal, visual/ spatial, music, and naturalistic).

Table 2: Talents of students with special needs in special schools in Central Java Indonesia

No	Talent	Opened-question (%)	Closed-question (%)	Sum (%)
1	Bodily/Kinesthetic	3.01	10.53	13.54
2	Verbal/Linguistic	-	9.02	9.02
3	Logic/Mathematic	-	3.01	3.01
4	Interpersonal	0.75	16.54	17.29
5	Intrapersonal	-	9.77	9.77
6	Visual/spatial	4.51	13.53	18.04
7	Music	2.26	8.27	10.53
8	Naturalistic	-	18.8	18.8
	Sum	10.53	89.47	100

DISCUSSION, RECOMMENDATIONS AND IMPLICATIONS

Based on Table 1, it shows that 13.54% of children with special needs in Central Java Indonesia have a kinesthetic talent. Bodily kinesthetic is the ability to use the body effectively to express feelings and ideas, to communicate through body language, to do athletic or dance movements, and to do other activities which use the body (Gargiulo, 2012). The professions related to the bodily kinesthetic talent include dancers, athletes, and surgeons. According to the result, it indicates that the disabilities of children with special needs do not restrict them to have a bodily kinesthetic talent.

Furthermore, 9.02% of children with special needs have a tendency of verbal/language talent. Verbal/linguistic talent is the ability to use words to express themselves effectively in both oral and written with rapidly verbal skills development (Gargiulo, 2012). Professions in accordance with the type of linguistic talent are teachers, novelists, lawyers, and writers. The finding indicates that the disabilities of children with special needs do not restrict them to have a verbal/language talent.

The tendency of logic mathematic talent of children with special needs is lower than other types of talent. The result shows that only 3.01% of children with special needs in Central Java Indonesia have a logic mathematic talent. Logic mathematic talent is an ability to understand through the use of patterns, symbols, and logical thinkings (Friend & Bursuck, 2002). Professions in accordance with the type of logic mathematic talent are a scientist. Stephen Hawking and Albert Einsein are some examples of successful scientists who have a logic mathematic talent. The result indicates that the disabilities of children with special needs do not restrict them to have a logic mathematic talent.

Furthermore, the tendency of interpersonal talent of children with special needs in special schools in

Central Java Indonesia is 17, 29%. Interpersonal talent is the ability to observe, understand, and act upon the mood, emotion, perception and other aspects of the relationship with the people (Friend, 2005). The professions appropriate with this talent are counselors, teachers, politicians, and marketing sales (Gargiulo, 2004). The finding indicates that the disabilities of children with special needs do not restrict them to have an interpersonal talent.

The tendency of intrapersonal talent of children with special needs in Central Java Indonesia is 9.77%. This talent is associated with the ability to analyze and understand them selves and act on their insight. The types of work that is suitable for this talent are therapists and spiritual leaders. The result indicates that the disabilities of children with special needs do not restrict them to have an intrapersonal talent.

There are 18.04% of children with special needs in special schools in Central Java Indonesia who have a tendency of visual/spatial talent. Visual/spatial is an ability to visualize the shape, form, pattern and design, and also the ability to discern the position in space and direction. This ability is identical to the professions as architects, sculptors, interior decorators, engineers, and decorators. The result indicates that the disabilities of children with special needs do not restrict them to have a visual/spatial talent.

Furthermore, the result also shows that 10.53% of children with special needs in Central Java Indonesia have a music talent. Music talent is the ability to perceive, analyze, create and display music. Professions in accordance with the type of linguistic talent are composers, critics, and musicians. The finding indicates that the disabilities of children with special needs do not restrict them to have a music talent.

There are 18.8% of children with special needs in Central Java Indonesia who showed a tendency of naturalistic talent. This talent is an ability to understand, respond, and explain nature phenomenon. Garguilo (2012) argues that naturalistic skills are useful for people who want to become conservationists and experts in forestry and agriculture. The professions appropriate with this talent are farmers, hunters, and veterinarians (Gargiulo, 2012). The finding indicates that the disabilities of children with special needs do not restrict them to have a naturalistic talent.

The results of this study indicate that children with special needs are also able to demonstrate other prominent abilities. Their talent tendency is most likely the result of the interaction of potentials, interventions, and opportunities presented by the environment. Tomlinson (Tomlinson et al., 2002) notes that talent is not a static ability. It is heavily influenced by chance and environment. He argues that schools should create the opportunity and environment to maximize every potential of students.

Implication on research findings

Based on these findings, it is suggested that the government of Central Java can be defined policies in

fostering students with special abilities or talents in special schools in the province of Central Java. Therefore, student with special needs still can develop their talents because they get the support from family, school, and also government. The supports of the government can be showed by giving continuous coaching, training, special education, facilities, insurance, and also scholarships for students with special needs who have special abilities or talents.

CONCLUSION

This study aims to identify the talents of children with special needs in Central Java Indonesia. The research results show that children with special needs in Central Java province has the talent scattered in various areas according to Howard Gardner's theory of multiple intelligences (bodily/ kinesthetic, verbal/linguistic, logic/mathematic, interpersonal, intrapersonal, visual/spatial, music, and naturalistic). The results also indicate that the disabilities of children with special needs do not restrict them to have other special talents. Based on this result, the Central Java government can define policies in fostering students with special abilities or talents in special schools in the Central Java Indonesia.

REFERENCES

- Assouline, S. G. & Lupkowski-Shopluk, A. (2012). The Talent Search Model of Gifted Identification. *Journal of Psychoeducational Assessment*, 30(1), 45-59.
- Chan, D. W. (2005). Perceived Multiple Intelligences and Learning Preferences among Chinese Gifted Students in Hong Kong. *Journal for the Education of the Gifted*, 29(2), 187-212.
- Chan, D. W. (2006). Perceived Multiple Intelligences Among Male and Female Chinese Gifted Students in Hong Kong: The Structure of the Student Multiple Intelligences Profile. *Gifted Child Quarterly*, 50(4), 325-338.
- Chan, D. W. (2008). Giftedness of Chinese Students in Hong Kong: Perspectives from Different Conceptions of Intelligences. *Gifted Child Quarterly*, 52(1), 40-54.
- Chen, H., Chiang, C., & Lin, W. (2013). Learning Effects of Interactive Whiteboard Pedagogy for Students in Taiwan from the Perspective of Multiple Intelligences. *Journal of Educational Computing Research*, 49(2), 173-187.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches* (3rd Ed.). USA: Sage Publication, Inc.
- Friend, M. & Bursuck, W. B. (2002). *Including students with special needs: A practical guide for classroom teacher* (3rd Ed.). Boston: Allyn & Bacon.

- Friend, M. (2005). *Special Education: Contemporary Perspectives for School Profesional*. USA: Pearson.
- Gardner, H. (2003). *Kecerdasan Majemuk (Multiple Intelligences) Teori dalam Praktek*. Terjemahan oleh Alexander Sindoro. Batam: Interaksa.
- Gargiulo, R. M. (2012). *Special Education in Contemporary Society an Introduction to Exceptionality*. Los Angeles: Sage Publication.
- Gargiulo, R. M., (2004) *Young Children With Special Needs*. Clifton Park, NY: Thomson/Delmar Learning,
- Ghamrawi, N. (2014). *Multiple Intelligences and ESL Teaching and Learning: An Investigation in KG II Classrooms in One Private School in Beirut, Lebanon*. *Journal of Advanced Academics*, 25(1), 25-46.
- Jung, T. H. & Kim, M. (2005). *The Application of Multiple Intelligences Theory in South Korea: The Project Spectrum Approach for Young Children*. *School Psychology International*, 26(5), 581-594.
- Mueller-Oppliger, V. (2010). *Experiences and Concepts Related to Gifted Education and Talent Development in Switzerland*. *Gifted Education International*, 26(2-3), 219-233.
- Nielsen, E. (2002) *Gifted Students With Learning Disabilities: Recommendations for Identification and Programming*. *Exceptionality A Special Education*. Vo. 10, 2002- Issue 2.
- Olszewski-Kubilius, P. & Thomson, D. (2015). *Talent Development as a Framework for Gifted Education*. *Gifted Child Today*, 38(1), 49-59.
- Olszewski-Kubilius, P. & Lee, S. (2004). *The Role of Participation in In-School and Outside-of-School Activities in the Talent Development of Gifted Students*. *Journal of Secondary Gifted Education*, 15(3), 107-123.
- Peraturan Menteri Pendidikan Nasional Nomor 34 Tahun 2006 tentang Pembinaan Peserta Didik Bakat dan Cerdas Istimewa.
- Peraturan Menteri Pendidikan Nasional Nomor 39 Tahun 2006 tentang Pembinaan Kesiswaan.
- Smith, D. D. (2003). *Introduction to Special Education Teaching in an Age of Opportunity*. Boston: Pearson.
- Tomlinson, C. A., Kaplan, S. N., Renzulli, J. S., Purcel, J., Leppein, J., & Burns, D. (2002). *The Parallel Curriculum: A Design to Develop High Potential and Challenge High Ability Learners*. Thousand Oaks CA: Corwin.
- Wairire, G. G., Mungai, N. W., & Mungai, K. (2013). *Gifted and talented education: Some social work implications in emerging approaches for children's rights in Kenya*. *International Social Work*, 58(2), 297-308.

