



ORIGINAL ARTICLE

**SELF-ACTUALIZATION OF THE GIFTED AND TALENTED:
A MEASUREMENT USING THE BRIEF INDEX OF SELF-
ACTUALIZATION**

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Abstract

The ultimate goal of education is to enable every student to comprehend and consolidate one's ability, which is coined as self-actualization. This study pertains to examine the self-actualization; as described by Maslow's theory of human needs; among students that are identified as gifted and talented adolescents. A total of 369 gifted and talented students were selected (purposive sampling) from three different schools for this study. The sample participants in this study consisted of students who were 16 of age and have academically excelled in the lower secondary national assessment (PT3). Respondents were administered with a questionnaire consisting 44 items on self-actualization. Items on self-actualization were adopted from the research done by Sumerlin and Bundrick (1996) which were translated back to back, from English to Malay. Multiple analysis of variance suggest that male students are more self-actualized compared to female students. Separate analysis was carried out on 25 sub-samples were identified as musically inclined respondents in comparison to the academically inclined, revealing significant differences in the areas of attaining full potential as well as exhibiting sensitivity to the needs of others. The implication of these findings calls for teachers' support for the gifted and talented students to fully maximize their potentials. The findings may provide a guideline on the aspects which gifted and talented students' need are to be addressed besides acknowledging their strengths. Further research to move beyond the limitations of this study should include a larger, more diverse samples particularly to compare with typical peer students.

Keywords: Gifted and talented students, Self-actualization, Affective competencies



Introduction

Self actualization as defined by Maslow is the desire for self-fulfillment particularly referring to the tendency of maximizing an individual's potentials (Maslow, 1943)¹. A simpler way to understand the concept can be described as the transforming process experienced by a person to increase self capacity to achieve what is desired. The ultimate objective of education is the self-actualization of a student itself Maslow (1971; Piechowski 1986)^{2,3}. Contextually, self-actualizing leads towards understanding of inner self; in this case it is vital for the gifted and talented students to self actualize their real natural gifts into competencies (Gagne, 2008; 2011)^{4,5}. Gifted and talented students are often identified on the basis of their learning capacity, thinking quality and their outstanding achievement when compared to their peers in a certain field (Ackerman 2009; Bain, Bliss, Choate & Sager Brown, 2007)^{6,7}. Other qualities include prominent leadership skills, curiosity and intensified observation. Nevertheless, the support needed by these students to self-actualize is inevitable (Cross & Frazier, 2010; Ruf & Radosevich, 2009; Zhbanova, Rule & Stichter, 2015)^{8,9,10} as many of them do not possess the ability to grasp the need to ideally self actualize as they mature and grow towards adulthood. The existing models of education for the gifted and talented students are orientated on achievement (Roeper, 2012)¹¹. Although issue on the equality in gifted education has been extensively discussed by renowned proponents (Gagne 2008, 2010)^{4,5} it is still reported that teachers are bound to their school education's model which requires all efforts to be directed towards achieving the pre aimed targets designated for the gifted and talented students. Such conditions restrict the possibility for the affective needs of these students to be addressed.

Literature Review

Maslow may not have explored specifically on the self actualization characteristics of the gifted and talented students. However, other researchers have shed light on the findings pertaining self actualization of the gifted and talented students. Initial study by McClain and Andrew (1972)¹² towards high achieving college students reported significant manifestation of self actualization. The students were found independent and preferred dominance over self solitude. Other manifestations of self actualization were intellectual competencies and ecstatic experiences which have been described as the reasons for self satisfaction in them.

Brunstein (1993)¹³, did not specifically studied on self actualization but well being instead. Findings reported that self satisfaction highly correlates with searching for challenging and exciting goals in students' life. In other words, attaining self goals and self commitment were both significant predictors of self satisfaction preceding self fulfillment of desires. These researches clearly determines that students' achievement reflect their self actualization. Self actualization were measured as a construct for mental health among gifted and talented students (Pufal-Struzik, 1999)¹⁴. Several variables were used to measure self actualization consisting fear, locus of control, creative intellectual behaviorisms and the needs for intellectual



stimulations. It was found that the gifted and talented attained higher level of self actualization when compared with control group (students with natural intellectual abilities).

The gifted and talented also stated that self dependency and competency are vital in the process of self actualizing. Apart from that, heightened sense of actualization correlates highly with self acceptance. Intellectual stimulation thus is mainly emphasized by the gifted and talented students to achieve self-actualization. However, they do not possess the understanding of their own actions as their locus of control is still low. Similarly, Karner and MGinnis (1996)¹⁵ reported that emotional and behaviour regulation promotes self-actualization characteristics.

Longitudinal study by Ruf and Radosevich (2009)⁹ discovered several factors including family, school, social background and self concept highly correlate with self-actualization. Gifted and talented students experience difficulties to adapt themselves during their adolescence. They also struggled to discover their inner self which clearly defines that identity crisis endured by gifted adolescent hinders the process of self actualization. Ruf (2009)¹⁶ related such circumstances as defined by Dabrowski's theory of emotional development. Dabrowski (1966)¹⁷ clearly time lined the emotional development process of the gifted adolescents illustrating the kind of identity crisis which at first deters the self actualization of these students before eventually attaining an ideal state of self fulfillment.

The gifted and talented however are much more self-actualized and are far more morally matured when compared with typical peer individuals (Kaya, Edroğan & Yurtkulu, 2017)¹⁸. These findings reminisced the kind of initial support should be given for the gifted and talented students in order to maximize their potentials. Gifted students when compared with their peers are found to be more self actualized and showed higher interest in learning as they are able to use their cognitive strategies in complete. These qualities are described by Berkowitz and Hoppe (2009:137)¹⁹ as the students' "*strength*". Such strength and qualities are manifested in many facets including productivity, competency and self-confidence of the students.

Similarly, Tsai and Fu (2016)²⁰ reported that significant habits among gifted college students resulted underachievement which are lack of motivation and not applying self-actualization on subject matters, focusing on memorizing and mastering skills and exercising counterproductive learning strategies, a lack of genuine interest in the subject. On the contrary, they also found that although these gifted students had clear career goals and generally positive conceptualization of self, their professional development suffered from a lack of execution. These findings clearly alarms teachers to be more extensive in terms of addressing the needs of the gifted students and not making academic achievement as the central hub in education.

Gender comparison in self-actualization among gifted students in a high school in Kathua revealed no significance differences regardless of the grade levels in which the students studied (Singh, 2016)²¹. It is expected that gifted and talented who are self actualized may have cognitive functioning, problem solving, sensitivity to complex situations, regulated feeling and garnering positive response from teachers (Peterson, 2015)²². However past comparative



studies between the gifted and the typical (Kaya, Erdogan & Caglayan, 2014; Tortop, 2015)^{18,23} students were compared in the aspects of emotional intelligence levels, communicative abilities, learning styles, approaches and preferences towards reading, self-regulating abilities for learning science, school life qualities and friendships, levels of success and creative thinking, the capacity to use problem-solving strategies, perfectionism, their levels of depression and anxiety, and planning abilities. However, no such study related to their level of self-actualization has been encountered.

The aim of this study is to determine self actualization characteristics of both gifted and talented boys and girls adolescents in West Malaysia. A subsequent comparison was intended to investigate the self-actualization characteristics between the academically gifted and musically talented. Gagne (2011)⁵ defined academic is a transformation of intellectual giftedness, in at least one ability domain, to a degree that places an individual at least among the top 10% of age peers. While talent designates the outstanding mastery of systematically developed abilities, called competencies (knowledge and skills), in at least one field of human activity to a degree that places an individual at least among the top 10% of age peers who are or have been active in that field.

Methodology

Research Sample

The sample in this study consists of students age 16 years who excelled with grade “A” in all academic subjects in the lower secondary national standardized assessment namely Pentaksiran Tingkatan 3 (PT3) after completing three years of secondary school.

Table 1: Demographic Profiles of the Gifted and Talented Students

Gender	School	Academically Gifted (N)	Musically Talented (N)	Total Σ
Boys	Conventional High Performance School	44	0	136
	Fully Residential School	83	9	
Girls	Conventional School	99	0	233
	Fully Residential School	118	16	

These students were referred to as Academically Gifted chosen from both conventional which are recognized for its high performance as well as the fully residential schools. Both



denomination of schools are acknowledge by the Ministry of Education Malaysia (MOE) for its outstanding performance in academic and co-curricular achievements. A subsample group from the large group of samples was identified as musically talented. Demographic features of the student who participated in the study are provided in the Table 1.

Research Instrument and Procedure

This study utilized quantitative research methods in which descriptive analysis were used to determine and compare the self-actualization characteristics of the gifted and talented boys and girls. Demographic details and data on self-actualization were measured using Brief Index of Self-actualization developed by Sumerlin and Bundrick (1996)²⁴. The instrument contained 40 items which was developed wholly from Maslow's theory of self-actualization. The Brief Index of Self-actualization is composed of seven domains: core self-actualization, Jonah complex, curiosity, comfort with solitude, openness to experience, democratic behaviour, life meaning and purpose. The scale was formed as a 5-point Likert scale. The scales were graded from "Strongly agree" up to "Strongly disagree."

The originally developed instrument was administered among college students as well as unsheltered homeless samples. The reliability of the original instrument was Cronbach's α .87. Sumerlin and Bundrick (1996)²⁴ reported that the girls and boys college students do not differ in their self actualization. However, a race difference was significant with black students scoring higher than white college students. Brief Index means were lower in the homeless sample than in the college sample. Since the original version of the instrument was constructed in English, the questionnaire was back to back translated from English-Malay-English to maintain the originality of the content and equivalence of each item as devised by Brandt (2005)²⁵. The reliability score for the translated version in Malay language was analysed using Rasch Analysis software (Bond & Fox, 2007)²⁶ obtained α .92. Table 2 shows the translation process which was conducted in this study.



Table 2: Translation, adaptation and content validation process of Brief Index of Self Actualization from English into Malay language

Translation steps of the process	Instrument version used	Methodological step	Resulting revised version of instrument
Step 1	Original version of Brief Index of Actualization in Bahasa Inggeris	→ Translation into Malay language	→ Test version of the Malay version
Step 2	Test version of the Malay version	← Preliminary testing	→ Malay version of Brief Index of Self-actualization
Step 3	Malay version of Brief Index of Self-actualization	← Investigation of content and equivalence	→ Pilot test

Data Analysis

Demographic features include gender and students competencies were compared with students' level of self-actualization were studied in terms of the seven domains. MANOVA factorial (2x2) analysis was conducted to determine if gender and types of competencies are cause-effect factors interacting with the seven domains constructing self-actualization. Inferential statistical reports include Multivariate Tests, Test of Between Subjects Effects, and Estimated Marginal Means.

Results

The results of MANOVA factorial analysis which were used to determine the significance of gender and types of student competencies to the seven domains of self-actualization are displayed as followed:

Table 3: Pillai's Trace test related to variable effects of demographic features interacting with self-actualization characteristics of the gifted and talented students.

Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	.973	1746.754 ^a	7.000	337.000	.000
gender	.105	5.666 ^a	7.000	337.000	.000
competencies	.073	3.768 ^a	7.000	337.000	.001
gender * competencies	.061	3.127 ^a	7.000	337.000	.003



According to Table 3, Pillai's Trace test shows that gender [F (7,337)= 5.67, p< .05], and types of students' competencies [F (7,337)= 3.77, p< .05] manifest significant effects interacting with the seven domains of self-actualization characteristics. Findings also show the presence of significant combined effects both gender and competencies [F (7,337) = 3.13, p< .05] interacting with all seven domains of self-actualization. These results describe effects of gender and types of students' competencies independently interact with self-actualization as well as combined factors.

Table 4 displays the related findings whereby gender differences are significant in four aspects of self-actualization which were measured. Gender differences were significantly seen in Core self-actualization [F(1, 343) = 5.59, p< .05], Curiosity [F(1, 343) = 3.84, p< .05], Openness to Experiences [F(1, 343) = 11.46, p< .05] and Comfort with Solitude [F(1, 343) = 10.95, p< .05].

Table 4 MANOVA "Test of Between Subjects" related to gender and types of competencies as factors related to self-actualization and interaction effects between the variables.

Source	Dependent Variable	Type III Sum of Square	df	Mean Square	F	Sig.
Gender	Core-self Actualization	91.043	1	91.043	5.587	.019
	Jonah Complex	38.642	1	38.642	2.138	.145
	Curiosity	77.283	1	77.283	3.841	.051
	Openess to Experiences	55.224	1	55.224	11.466	.001
	Comfort to Solitude	182.642	1	182.642	10.949	.001
	Democratic Character	.428	1	.428	.381	.538
	Life Meaning and Purpose	4.130	1	4.130	1.532	.217
Competencies	Core Self-actualization	98.813	1	98.813	6.064	.014
	Jonah Complex	1.082	1	1.082	.060	.807
	Curiosity	37.117	1	37.117	1.845	.175
	Openess to Experiences	6.451	1	6.451	1.339	.248
	Comfort to Solitude	46.541	1	46.541	2.790	.096
	Democratic Character	9.783	1	9.783	8.700	.003
	Life Meaning and Purpose	6.870	1	6.870	2.549	.111
	Core Self-actualization	42.044	1	42.044	2.580	.109
	Jonah Complex	5.780	1	5.780	.320	.572



Gender*Competencies	Curiosity	44.787	1	44.787	2.226	.137
	Openess to Experiences	12.877	1	12.877	2.674	.103
	Comfort to Solitude	195.020	1	195.020	11.691	.001
	Democratic Character	.033	1	.033	.030	.863
	Life Meaning and Purpose	.229	1	.229	.085	.771

Table 5 demonstrates the comparison of mean between genders on the four significant domains. The results show that gifted and talented boys are more self-actualized in the aspects of Core Self-actualization (*M*: Boys = 34.13, Girls = 32.18), Openness to Experiences (*M*: Boys = 11.22, Girls = 9.56), and Comfort to Solitude (*M*: Boys = 11.22, Girls = 9.56). On the contrary, the comparison of mean reveals significant difference in the aspects of Curiosity which gifted and talented girls are more self-actualized than the boys (*M*: Girls = 37.78, Boys = 35.81).

Table 5. Comparison of mean scores between gender and self-actualization

Self-actualization domains	Gender	Mean (<i>M</i>)
Core-self Actualization	Boys	34.313
	Girls	32.175
Jonah Complex	Boys	33.852
	Girls	32.459
Curiosity	Boys	35.807
	Girls	37.777
Openness to Experiences	Boys	11.220
	Girls	9.555
Comfort to Solitude	Boys	17.963
	Girls	14.936
Democratic Character	Boys	6.129
	Girls	5.983
Life Meaning and Purpose	Boys	8.861
	Girls	8.406

Table 3 also reveals the significant differences between academically gifted students and the musically talented in two aspects of self-actualization which are Core Self-actualization [F(1,



343) = 6.06, $p < .05$], and Democratic Character [F(1, 343) = 8.7, $p < .05$]. These findings are further explicated by data in table 6. The comparison of mean between the two types of competencies exhibit musically talented students are more self –actualization in both the aspects of Core Self-actualization (M : Musically talented =34.36, Academically Gifted =32.13) as well as Democratic Character (M : Musically Talented =6.41, Academically Gifted=5.71). Significant interactions between gender and competencies manifested its effect on the aspect of Comfort with Solitude [F (1,343)=11.69, $p < .05$] only.

Table 6 Comparison of mean scores between types of competencies and self-actualization

Self-actualization domains	Types of Competencies	Mean
Core-self Actualization	Academically Gifted	32.131
	Musically Talented	34.358
Jonah Complex	Academically Gifted	33.039
	Musically Talented	33.272
Curiosity	Pintar Akademik	37.474
	Pintar Muzik	36.109
Openness to Experiences	Academically Gifted	10.103
	Musically Talented	10.672
Comfort to Solitude	Academically Gifted	15.685
	Musically Talented	17.214
Democratic Character	Academically Gifted	5.706
	Musically Talented	6.406
Life Meaning and Purpose	Academically Gifted	8.340
	Musically Talented	8.927

Discussion

The findings attained from this study manifest the interaction effects between gender and four aspects of self-actualization. Gifted and talented boys are more self-actualized in the aspects of Core Self-actualization, Comfort with Solitude and Openness to Experience in comparison with gifted and talented boys. These findings support previous studies revealing that gifted and talented boys are more self-actualized (Preckel, Gotz & Frenzel, 2010; Sak, 2004)^{27,28}. The significant characteristics of Core Self-actualization were elaborated by Holt (2008)²⁹ whereby gifted and talented boys demonstrate maturity in their career aspiration. The boys are also found



to be more adaptive compared to gifted and talented boys which include being self autonomous towards their future and being able to make effective choices in life (Lun 2010; Phan 2008)^{30,31}. Meanwhile gifted and talented girls are reported to exhibit more Curiosity in comparison with the gifted and talented boys. This explains their tendency to think creatively and continuously as well as to explore new things. As such these findings explain previous findings manifesting gifted and talented girls are more self-actualized than gifted and talented boys (Elbogen, Carlo & Spaulding, 2010; Lee & Olszewski-Kubilius, 2007)^{32,33} although the dominant aspects were not elaborated.

The comparison between the gifted and talented shows higher level Democratic Character in musically talented students than the academically talented. This finding validates Zimmerman (2004)³⁴ findings that musically talented students exhibit advance social norms in comparison with students with other competencies. The musically talented also exhibited higher level of Core self-actualization than the academically talented. This finding confirm Persson (2010)³⁵ that the musically talented distinctively possess a different cognitive ability. The overall findings sum up that gifted and talented students have not self-actualized fully during their teenage but have acquired certain aspects of self-actualization as measured with Sumerlin and Bundrick's (1996)²⁴ Brief Index of Self-actualization.

Conclusion

The Brief Index of Self-actualization in this study presented findings pertaining the affective traits of gifted and talented students in their teenage who are at the verge of knowing their identity and life goals. There were seven aspects which are measured contributing to its variables. Gifted and talented students exhibited significant gender difference in four aspects which are Core Self –actualization, Openness to Experience, Comfort to Solitude as well Curiosity. The boys apparently are more self-actualized than the girls who indicate that gifted and talented boys move faster than girls to attain their full potential. They included preparation of the future, contributions to human kind, strength to encounter the future, happiness, focus, pride in accomplishment and a continued commitment to learning. Openness to experience is critical for ongoing growth while comfort with solitude indicates the intrapersonal trait of the gifted and talented. Teachers of the gifted therefore need to understand those special characteristics and the development needs of the students. They will have to be accommodative of the students' thoughts and feelings, and to facilitate the students to interpret experiences and life events. These results are intended to highlight on the support needed by gifted and talented students to meet their affective development as well as to maximize their potentials. Future research may be conducted with larger and diverse sample of the gifted and talented particularly to compare the heterogeneity of traits as well as with their typical peers.



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