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THE EFFECT OF ENRICHMENT PROGRAMMES ON IMPROVING MENTAL FLEXIBILITY AND INVENTIVE WORK BEHAVIOUR FOR GIFTED STUDENTS: A VALUE-ADDED STUDY

ALAA ELDIN A. AYOUB[1]

ABSTRACT

The current research aims to evaluate the added value of enrichment programmes in improving mental flexibility and inventive work behaviour among gifted students in the intermediate stage. Taking a sample of 92 students from the ninth grade who were participating in summer enrichment programmes, the researcher applied the scales of *mental flexibility*, and *inventive work behaviour* before and after the programme. By using cluster analysis, the sample was divided into three distinct groups according to their baseline performance (high, intermediate and low performance). The results of the research show that the programmes had a statistically significant effect on the dimensions of mental flexibility and inventive work behaviour in the three clusters. Additionally, the results indicated the effectiveness of the programme in providing low-performance students with greater added value than intermediate-performance students, and high-performance students. Also, the programme earned the intermediate-performance students greater added value than it did for high-performance students.

Keywords: Enrichment programmes, Mental flexibility, Inventive work behaviour, Gifted students, Value-added studies.

INTRODUCTION

Many researchers emphasise the importance of enrichment programmes in meeting the needs of academically, cognitively and socially-emotionally talented students. In light of this, the educational systems in many countries around the world have designed programmes that foster and nurture talented students through various enrichment programmes (Ayoub and Aljughiman, 2016). There is an increased attention on talented students and the development of the programmes that take care of them in the Kingdom of Saudi Arabia, catalysed by the 2000 programme of detecting talented students (Aljughaiman and Ayoub, 2012). At the same, the General Directorate of Talents in the Ministry of Education was established, followed the year after by the King Abdul-Aziz and His Companions Foundation for Giftedness and Creativity (also known as the Mawhiba Foundation (Mawhiba, 2015). In 2002, the summer enrichment programmes were first launched (Aljughaiman et al., 2009).

This expansion in the application of gifted programmes has necessitated an urgent need to follow up and develop these programmes in order to cope with the development and rapid growth of knowledge and the continuous changes in the educational systems. This highlights the fact that evaluation is one of the most important processes in the success of the educational programmes. The goal of evaluation is not only to present some data that are related to gifted programmes but also to identify the proper methods for developing these programmes (Royse, Thyer and Padgett, 2010; Aljughaiman and Ayoub, 2013).

Evaluation is crucial to the success of gifted education programmes (Joint Committee on Standards for Educational Evaluation, 1994). The evaluation of the gifted programme is an integral part of the programme development cycle, as well as the difficulty of maintaining

[1] Alaa Eldin A. Ayoub, Arabian Gulf University, Manama, Bahrain. E-mail address: alaaeldinaa@agu.edu.bh

continuity and improving the quality of the programme which is not subject to a systematic evaluation. This is in line with the important observation of Gallagher (1998): we face the risk of losing legal documentation of the true contribution of gifted programmes if there is no strategy to design appropriate evaluation programmes and measurement procedures for these distinctive groups. Callahan (1996) has urged those who are interested in caring for gifted students to continue their efforts to evaluate these programmes and track their impact: "we have observed a change in students in a narrative way that has earned us parental support, but we have avoided collecting systematic data that can provide strong evidence of the success of our programmes" (p. 159). White, Fletcher-Campbell and Ridley (2003) have determined that the lack of research-based practices in gifted education gives the continuity to follow experience-based practices only, which is certainly unacceptable and untenable.

Despite all efforts to evaluate the enrichment programmes, many programmes and services still operate without adequate evaluation procedures to document their effectiveness. In a review of giftedness literature, Jolly and Kettler (2008) found that the majority of this literature (83.6%) provided only a general description without good data. This shows that there is an urgent need to transform evaluation research from being descriptive to evaluating the most effective practices, in order to improve practices in gifted education. In addition, as with all educational programmes, gifted education programmes must be held accountable to demonstrate that the allocated funds to the programme have been disbursed efficiently and effectively.

This is true not only in the Arab context, but for all countries with a history of gifted programmes. VanTassel-Baska (2006) has emphasised the poor levels of interest in programme evaluation in the United States compared to other programme components. Moreover, the reports of the Council of State Directors of Programmes for the Gifted in the United States have stated that there are no clear accountability procedures for half of gifted programmes in the United States and, in addition, in 20 US states the local education departments do not require reporting on their services in the area of gifted education. In another four states, local education departments must present their reports only when they require financial support (Council of State Directors of Programmes for the Gifted, 2011).

Hence, many countries have sought to find strategies and models for evaluation that overcome these problems in the evaluation of educational programmes in general and the gifted programmes in particular, and to make important contributions in assessing performance and improving accounting procedures. Value added assessment is one of the most important and modern methods to measure the performance and effectiveness of institutions and programmes (Papay, 2011; Ayoub, 2015). It significance has caused many countries, such as the United States of America, the United Kingdom and Australia, to adopt it to evaluate and make accountable their institutions and programmes. The main concern in this type of evaluation appears in issues such as programme effectiveness, accountability and retrospective and forward-looking aspects. It is both retrospective as it tries to determine if the programme is effective and forward-looking, as it is frequently used to make key decisions about the future of the programme, such as continuation or termination of the programme, and increased or reduced funding (Borland, 2003).

In addition, the problem of the current study is illustrated by the indicators of shortcomings surrounding the evaluation mechanisms of the programmes, which are represented by many questions, such as: Did the programme achieve its role in the growth of the performance of each learner?; how much did the learner achieve because of his or her presence in the programme?; and how can the progress of the learner be measured? In this regard, some researchers (Robert and Michael, 2008; Braun, Chudowshy and Koenig, 2010; Northern Ireland Assembly, 2011) suggest that shortcomings in the evaluation of the effectiveness of the programme are shown only by measuring students' growth on the pre/post

test as the interest here is limited to the average performance of student groups and not to each individual student. Therefore, we cannot make decisions or develop policies related to educational practices so that all students are considered, not only the average student. Braun, Chudowshy, and Koenig (2010) explain statistically that regression to the mean is a phenomenon that occurs when selecting groups of students who have very high or very low scores in the test, such as students' grades (in the pre- or post-application). Therefore, if there is some random dispersion and fluctuation in grades, those whose scores are high can only go down, while those whose grades are below average may rise slightly, or move upward only. It is worth mentioning that the effects of regression may work against measuring the real performance of students, and this may create some problems for those who are interested in evaluating the gifted, regardless of the amount of variance in the error. In this regard, many researchers agree that the pre/post test leads to inaccurate judgments for the following considerations: it does not take into account the previous knowledge and the level of the student and considers that all students in the pre-test have the same baseline; and it does not take into consideration the differences between students in abilities.

In light of the objectives and nature of the enrichment programmes, the present study seeks to fill the present gap in the evaluation of the gifted programmes in Saudi Arabia by using the value added approach to evaluate the growth of the performance (mental flexibility and inventive work behaviour) of the gifted students participating in summer enrichment programmes. These measures are used because these variables are related with the objectives of the enrichment programmes.

THE ENRICHMENT PROGRAMMES

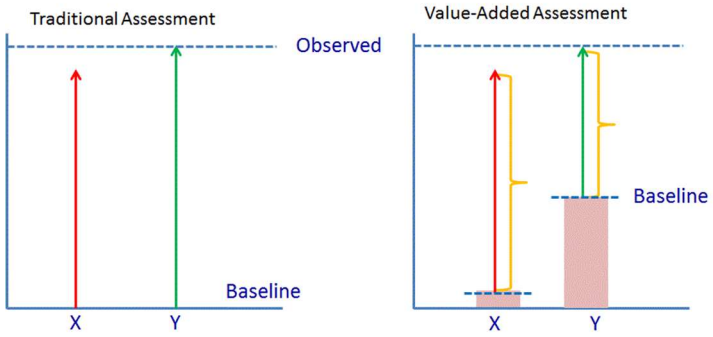
Summer enrichment programmes in KSA are four-week programmes where gifted students receive specialised scientific knowledge and advanced-level skills in order to meet the academic, cognitive, psychological and social needs of gifted students. They also include: activities to help gifted students explore their abilities and tendencies in various academic fields and acquire basic skills in thinking and scientific research and allowing students to perform scientific projects (individual and group) in a scientific field under the supervision of specialists in this field. The summer gifted programmes focus the student as s/he is the center of learning activities (the "student-centered approach"). In the literature of enrichment programmes in Saudi Arabia, summer enrichment programmes are considered as one of the most giftedness-focused activities through different regions in Saudi Arabia. Also, they are characterised with continuity as they are held annually. The first of these programmes began in 2000 through the establishment of 9 programmes for male and female students, and the number of summer enrichment programmes has continued to increase until the number of programmes in the summer of 2013 reached 51 programmes for male and female students (Aljughaiman and Ayoub, 2017).

VALUE ADDED ASSESSMENT

Many studies (Goldstein and Speigelhalter, 1996; Schochet and Chiang, 2010) have emphasised the importance of using the value added approach in evaluating the educational institutions and programmes as an alternative to average test scores, which are commonly used as the most important indicators to express performance growth. Gascon (2006) indicates that the use of value added assessment depends on the analysis of the results of the tests by different statistical methods that take into account the characteristics of the learner, which may affect the degree and growth; the simplest way to calculate the degree of value-added growth, is to present the baseline achievement of the learner and compare it with the current observed achievement, in order to determine their growth over a certain period of time. Figure 1 shows

the difference between traditional assessment and value added assessment in measuring the growth of student performance.

Figure 1: Difference between traditional assessment and value added assessment on growth of student performance



In the traditional assessment, learning outcomes (current performance) are measured without taking into account the student's prior knowledge and their level. The students in programme Y may have prior knowledge of the subject of the programme and thus they have achieved the learning outcome unlike or opposite to the students who are participating in programme X. In the evaluation of value added, the prior knowledge and the level of the students are taken into account as figure 1 shows. The students participating in programme Y have more prior knowledge of the subject of the programme than the students participating in programme X. Although the students participating in programme Y achieved learning outcomes, the added value of programme X to student performance is more than the value added of programme Y to the performance of the students (Ayoub, 2015).

MENTAL FLEXIBILITY

Developing the mental flexibility of gifted students is one of the main objectives of the enrichment programmes. According to Matthew and Stemler (2013), mental flexibility is an individual's intellectual ability and his ability to adapt and absorb new ideas in accordance with changing circumstances and different perspectives. Wecker et al. (2005) add that it is the smoothness of an individual's thoughts and ability to transform his thinking according to the changing circumstances. The importance of mental flexibility as a mental function helps the individual to change and diversify the ways of dealing with things according to its nature, by analysing their difficulties into factors that can be grasped and utilised in finding solutions (Dennis and Vander, 2010). Mental flexibility is related to the cognitive strategies of self-organised learning and is closely linked to motivation (Cartwright, 2008). Therefore, mental flexibility is the cognitive basis of creativity and invention. The inventor possesses a high skill of diversity of visions and the construction of data in formulae that correspond to the latest developments. In addition, flexible individuals have the ability to change their views when they receive additional information and data. They share multiple outcomes and activities, build on their outcomes from problem-solving strategies, and generate self-knowledge through the interaction and complementarity of the knowledge that they receive and their prior knowledge. In light of the above, this study concludes that the choice of mental flexibility as a product of mental learning is the reason behind the superiority and distinction of exceptional people because it is the actual generator of ideas, solutions, alternatives and opportunities. Also, it helps the individual to think creatively and inventively.

INVENTIVE WORK BEHAVIOUR

Inventive thinking is considered as one of the most important skills of the modern age because it is the real bridge through which the theoretical ideas of societies and individuals can be reflected to practical creative and inventive work (Sahak, Soh and Osman, 2012). There is no doubt that today's economy is based on technology and inventive thinking, and inventive thinking is now important for gaining wealth, as Ali (2015) has observed. Inventive thinking has specific concepts and thinking has its own concept. Sokol et al. (2008) define inventive thinking as the ability to solve unusual or untraditional problems in different inventive ways while avoiding the multitude of attempts and errors. The Australian Bureau of Statistics (quoted in Curtin, Stanwick and Beddie, 2011) defines inventive thinking as a new or developed product or application, service, operational process, management process, or marketing method.

In this context, invention thinking differs from innovation thinking in that invention thinking refers to the generation of a new idea or method that was previously unknown, while innovation refers to the use of a previously known idea or method in a new or better way. This confirms that invention thinking works on mental influences in generating the new idea, while innovation focuses on the economic effects of transferring the idea to a new product. The relationship between inventive and innovative thinking includes creativity as they are considered as two types of creative output. Taylor has identified five levels of creative output (quoted in Runco, 2007). Invention thinking has specific strategies and skills that can be developed or assisted by students through appropriate training programmes in school environments. Inventive thinking skills include cognitive curiosity, creativity, crisis management (Ali, 2015), adaptation, self-direction, risk management, higher thinking skills, and reasoning (Abdullah and Osman, 2010).

METHOD

Participants

This study's participants were 92 male and female (males, n = 49; females, n = 43) students from grade 9, ages ranging from 14 to 15 years (M= 15.37 years, SD = 0.81). They were randomly chosen from those students who were participating in summer enrichment programmes.

Measures

Mental flexibility test

To assess the gifted students' mental flexibility, the researcher developed a test drawing on the tests and scales of: Multiple Cognitive Abilities Assessment (MCAA) (The Mawhiba Foundation, 2015); Aurora Battery (Chart, Grigorenko and Sternberg, 2008); and The Munich High Abilities Tests Battery (MHBT) (Matthew, Beckman and Sternberg, 2009). This test consisted of 40 items and two dimensions. The first dimension was *flexible inference* which refers to the student's ability to discover one relation or more between things and events. It can be measured by two subtests, *counterfactual analogies* and *novel analogies*. The second dimension was flexible mapping which refers to the student's ability to recognise a strong relationship (high level relations) between two edges that have a weak relation (low level relations). It can be measured by two subtests: *prediction* and *insight*. A sample of 271 students was used to calculate the validity of the mental flexibility test by confirmatory factor analysis to obtain factor loadings; the method of maximum likelihood supported the construct validity of test. All the standardised loadings and their associated t-values for the counterfactual analogies, novel analogies, prediction, and insight tests were significant. The fit indices for this full three scale model were all excellent. Specifically, $\chi 2/df = 1.56$. In addition, the values of

RMSEA = 0.054, GFI = 0.95, AGFI = 0.93, and NFI = 0.94 indicated that the suggested model for Mental flexibility test fits with the data. The reliability coefficient of the Aurora-a-Battery by using Cronbach alpha was (.76) for counterfactual analogies, (0.77) for novel analogies, (0.78) for prediction, (0.79) for insight, and (0.81) for the test.

Inventive Work Behaviour scale

Inventive work behaviour was assessed with a self-report that consisted of 31 items and taken from: the Malaysian 21st Century Skills Scale advanced by Soh, Osman and Arsad (2012); the Inventive Thinking Scale developed by Abdullah and Osman (2010), and the Inventive Thinking scale prepared by Ayoub (2016). Answers were rated on a five-point Likert scale ranging from "strongly agree" (5) to "strongly disagree" (1). To calculate the validity and the reliability of the scale in the Arab environment, the researcher administered the scale to a sample of 9th grade students (N=271). As a result of the Confirmatory Factor Analysis (CFA) by LISREL (Version 8.8), the factor loading values were determined to range between 0.37 to 0.95. The fit indices of the Inventive Work Behaviour scale were $\chi 2/df = 1.86$, the values of the root mean square error of approximation were (RMSEA = 0.045), goodness of fit index were (GFI = 0.96), adjusted goodness of fit index were (AGFI = 0.92), and normed fit index were (NFI = 0.93) which indicated a good fit of the suggested model to the data. The Cronbach's α of the scale was (.76) for self-regulation, (0.76) for Creativity, (0.74) for cognitive curiosity, (0.77) for Willingness to risk, (0.78) for adaptability and managing complexity, (0.79) for higher order thinking, and (0.80) for the scale.

Results

Cluster analyses

To determine the participants' profiles on the study variables (counterfactual analogies, novel analogies, prediction, insight, self-regulation, creativity, cognitive curiosity, willingness to risk, adaptability and higher order thinking), K-means (k=3) clustering analysis was used. The researcher classified the 92 participants across the three clusters (see Table 1).

Table 1: K-means clustering analysis results of study variables

		Cluster_1	Cluster_2	Cluster_3
		M(SD)	M(SD)	M(SD)
Mental Flexibility	Counterfactual	21.22(1.32)	24.33(1.47)	27.86(1.28)
	Novel Analogies	22.11(1.68)	24.61(1.66)	27.23(1.69)
	Prediction	22.46(2.08)	25.49(1.84)	28.27(1.49)
	Insight	24.57(2.68)	26.39(1.97)	27.46(1.74)
Inventive Work Behaviour	Self-Regulation	13.54(1.10)	16.46(1.06)	19.23(0.75)
	Creativity	12.46(1.02)	14.73(1.07)	16.27(0.83)
	Cognitive Curiosity	10.87(0.75)	12.21(0.78)	13.23(0.61)
	Willingness to Risk	11.22(0.89)	12.39(0.83)	12.86(0.99)
	Adaptability	8.62(1.38)	9.85(1.48)	9.59(1.71)
	Higher Order Thinking	8.41(1.26)	9.67(1.53)	10.00(1.72)
	Sex			
	Boys n (%)	21 (56.76)	12 (54.55)	16 (48.48)
	Girls n (%)	16 (43.24)	10 (45.45)	17 (51.52)

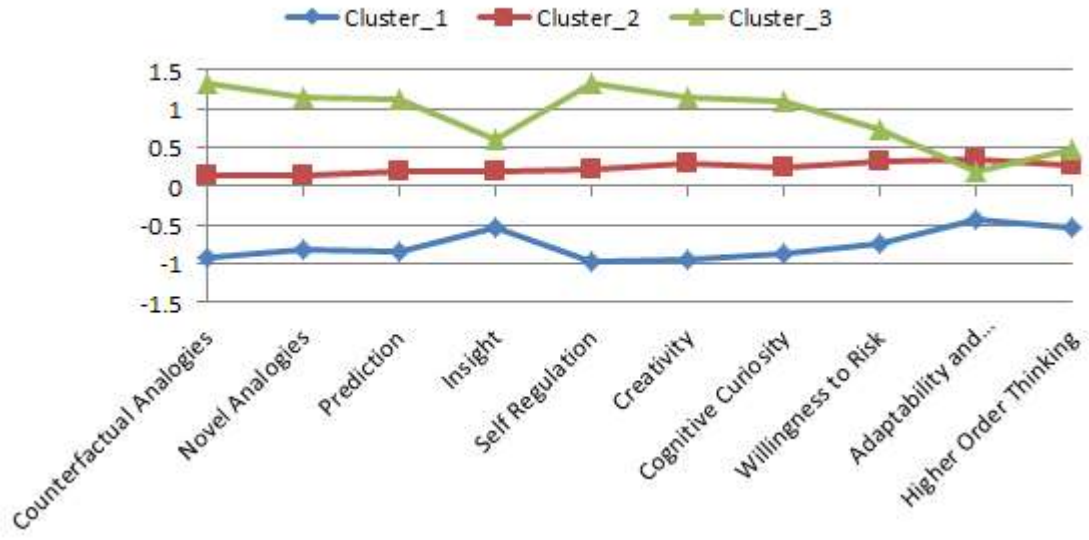
Table 1 shows that the sample size of the students in the first cluster (low performance) was 37 (40.22%), and the sample size of the students in the second cluster (intermediate performance) was 22 (23.91%), while the sample size for the participant in the third cluster (high performance) was 33 (35.87%). To determine the validity of cluster analysis or, one-way ANOVA was used. Results are shown in Table 2.

Table 2: The validity of cluster analysis - ANOVA

		Cluster		Error		
		Mean Square	df	Mean Square	df	F
Mental Flexibility	Counterfactual	35.861	2	.217	89	165.55**
	Novel Analogies	27.151	2	.412	89	65.85**
	Prediction	27.694	2	.400	89	69.21**
	Insight	10.071	2	.796	89	12.65**
Inventive Work Behaviour	Self-Regulation	37.962	2	.169	89	224.12**
	Creativity	32.308	2	.296	89	108.98**
	Cognitive Curiosity	28.714	2	.377	89	76.12**
	Willingness to Risk	17.488	2	.629	89	27.78**
	Adaptability	5.723	2	.894	89	6.40**
	Higher Order Thinking	8.479	2	.832	89	10.19**

Table 2 shows that F values were statistically significant (p <.01), which confirms the valid differentiation of the three clusters on the variables of the study. To determine the profiles of the three clusters in the counterfactual analogies, novel analogies, prediction, insight, self-regulation, creativity, cognitive curiosity, willingness to risk, adaptability and higher order thinking, all the variables were converted to standardised Z scores (m = 0, sd = 1) (Figure 2).

Figure 2: Differentiation of the performance of students at their baseline on the variables of the research



The percentage of value added

To determine the percentages of the value added of the summer enrichment programme on the dimensions of the variables of mental flexibility and the behaviour of the inventive work of the gifted students, the researcher calculated the gain score and the percentage of the value added of the programme on the performance of the students of each cluster in the study variables. Table 3 shows the degree of gain score and the percentage of value added for student performance in each of the three groups (clusters).

Table 3: The degree of gain score and the percentage of value added for the performance of students in each of the three groups

Variables	Cluster_1		Cluster_2		Cluster_3	
	Gain	Value-added (%)	Gain	Value-added (%)	Gain	Value-added (%)

Mental Flexibility	Counterfactual	18.11	36.22%	18.68	37.36%	18.76	37.52%
	Novel Analogies	19.00	38.00%	18.09	36.18%	20.03	40.06%
	Prediction	18.51	37.02%	16.86	33.72%	18.49	36.98%
	Insight	13.68	27.36%	14.32	28.64%	15.52	31.04%
Inventive Work Behaviour	Self-Regulation	15.81	45.17%	6.36	18.17%	11.33	32.37%
	Creativity	13.84	46.13%	8.55	28.50%	10.55	35.17%
	Cognitive Curiosity	10.03	40.12%	6.59	26.36%	8.24	32.96%
	Willingness to Risk	9.73	38.92%	6.77	27.08%	7.82	31.28%
	Adaptability	3.54	17.70%	4.36	21.80%	3.47	17.35%
	Higher Order Thinking	3.84	19.20%	4.68	23.40%	3.79	18.95%

The results show that the value added ratios on the dimensions of mental flexibility that were gained by students participating in the summer enrichment programme ranged from: (27.36% - 38.00%) to students with low performance; (28.64% - 37.36%) for students with intermediate performance; and (31.04% - 40.06%) for high-performing students. The value added ratios on the dimensions of inventive work behaviour ranged between: (17.70% - 46.13%) for students with low performance; and (18.17% - 28.50%) for students with intermediate performance; and (17.35% - 35.17%) for high-performing students. These results indicate the effectiveness of the summer enrichment programme in providing programme participants with value added to the dimensions of variables (academic orientation, practical knowledge processes, emotional social characteristics, and ethical sensitivity). Figures 3, 4 and 5 show the value added of the summer enrichment programme on the performance of students with low performance, intermediate performance and high performance, respectively.

Figure 3: The value added of summer enrichment programme to the low-performing students

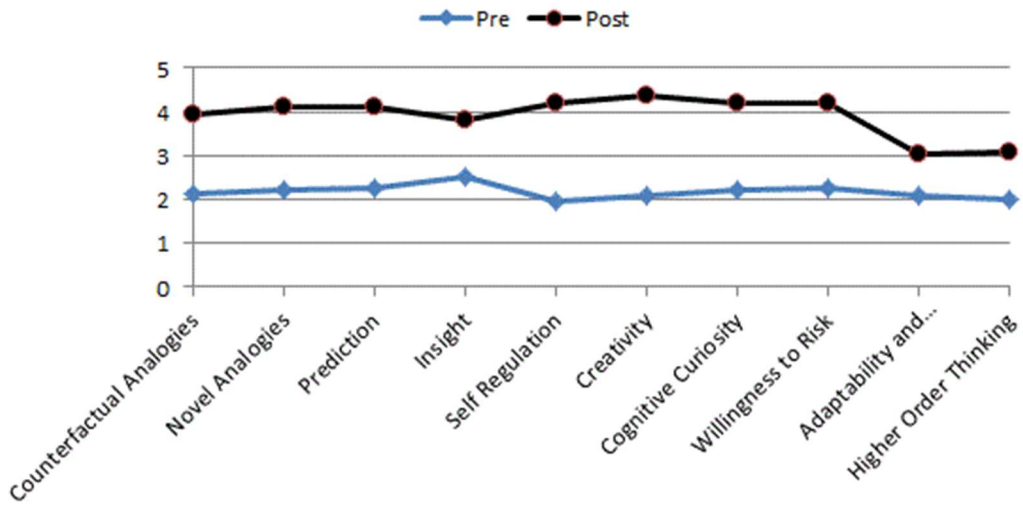


Figure 4: The value added of summer enrichment programme to the intermediate-performing students

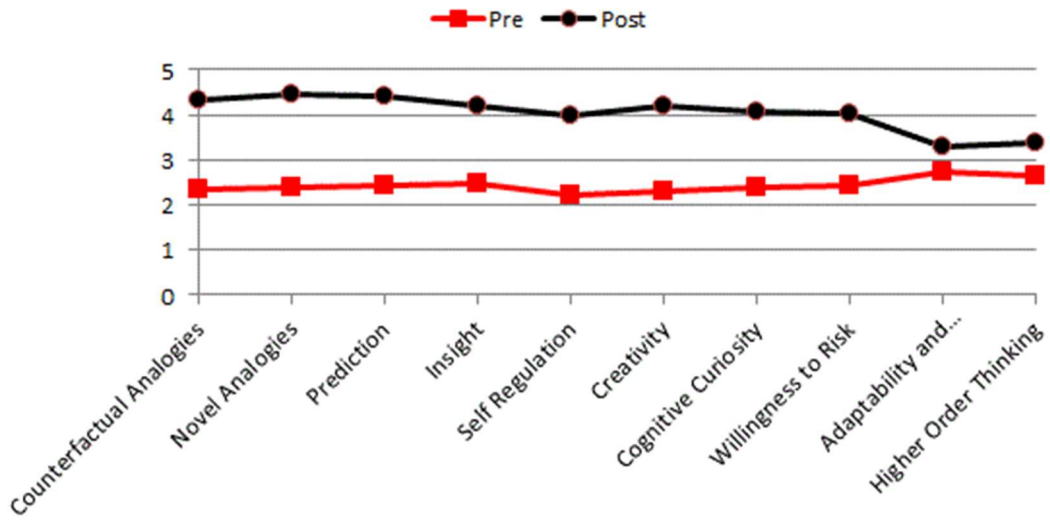
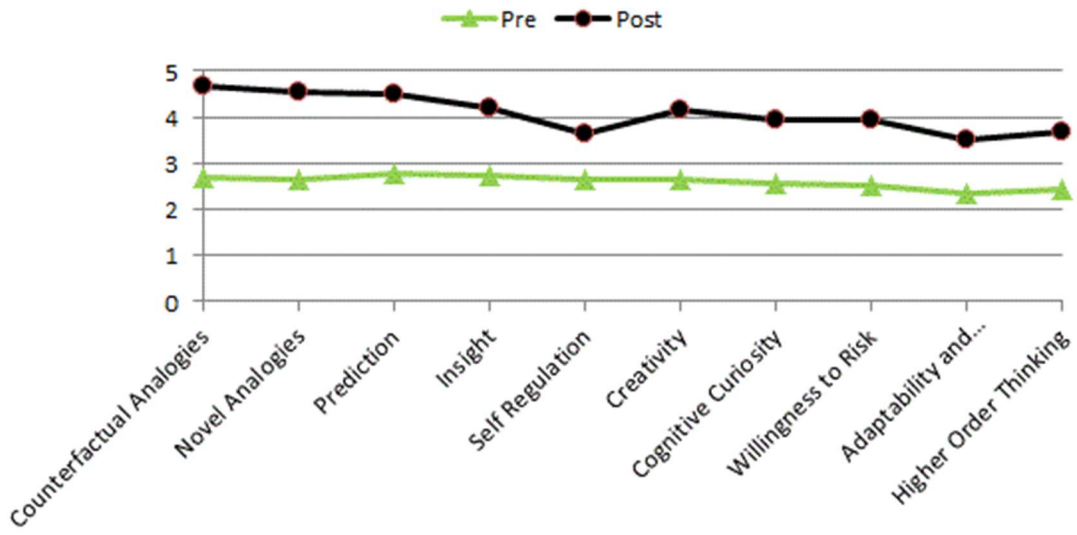


Figure 5: The value added of summer enrichment programme to the high-performing students



DISCUSSION

The research goal was to identify the value added that the summer enrichment programme confers to the performance of gifted students in the dimensions of mental flexibility and inventive work behaviour. Three groups of students who were participating in the enrichment programme were identified according to their starting point on the variables of the research (low-performance, intermediate-performance and high-performance). The sizes of the sub-samples of the three groups were 37, 22 and 33 (40.22%, 23.91%, and 35.87%.) The results of the ANOVA among the three groups confirms the validity of the three distinct groups of the basic study sample, based on their scores on the sub-measures of the mental flexibility variables and the behaviour of the inventive work. This result can be attributed to the fact that the sample of students were from different schools, and it was possible that some students had enrolled in previous gifted programmes at school or had participated in some enrichment programmes and activities in their schools.

In light of this, Aljughaiman and Ayoub (2017) point out that the performance of students who enrol in gifted programmes is better than that of students who receive special services in heterogeneous classes and of those students who have never received services.

Delcourt et al. (1994) also mention that school principals see that students who participate in gifted programmes have significant positive changes in their personalities several weeks later. These findings support the hypothesis that participation in well-designed programmes with enthusiastic peers and distinguished teachers can have far-reaching effects on the lives of these students.

The statistically significant impact of the programme on the mental flexibility refers to the development of the ability of the students participating in the programme to look at the situations and problems facing them from different angles, and to think about the different ways of solving the problem, taking into account all the available facts and information, and the multiple and diverse choices before making decisions and overcoming the difficulties and problem solving. This result can be explained by the success of the programme in helping participating students to: develop their abilities to gather facts and information, face difficult situations and problems; think in multiple ways to solve the problem; look at difficult situations from different angles; and take into account the different choices before response and decision-making. Students who are characterised with cognitive flexibility are more aware of employing the mental processes in their own experiences, and this is for their cognitive development comparable to others who are characterised by cognitive stagnation (Schraw and Moshman, 1995). The enrichment and training programmes also help students to be aware of the alternatives involved in the situation, the willingness to adapt the situation, and the student's tendency and self-efficacy to demonstrate cognitive flexibility in any situation (Bub, Masson and Deák, 2003; Chevalier and Blaye, 2006; Lalonde, 2006).

The statistically significant impact of the programme on the behaviour of inventive work in light of the activities of the programme, which emphasise the importance of promoting the tendency to read in the preferred field for each student and reading about outstanding scientists in that field, encourages students to generate self-knowledge and mental mobility from multiple angles of new situations. Additionally, the enrichment programme's activities focus on the importance of learners in organising and modifying their own knowledge and experiences, and in encouraging them to change their knowledge-processing system. Many studies (Neihart et al., 2002; Hughes, 2003; Tieso, 2005) agree that enrichment programmes provide real services and opportunities for gifted students to work for some time with others who have similar interests, abilities and incentives in the programme. Teachers benefit from this freedom in developing students' social and emotional characteristics by forming flexible groups within activities.

CONCLUSION

The results of this study indicate that gifted programmes are effective in helping the students of the first group (low performance) to achieve greater value added than the students of the second group (intermediate performance) and the students of the third group (high performance). Also, it helps the students of the second group (intermediate performance) to achieve greater value added than the students of the third group (high performance). The current outcome can be explained in the light of the activities of the programme that have provided the opportunity for students to collaborate, participate, and benefit from each other's experiences, and from the transfer of learning and experience impact from high-performing to low- performing students. This result should be understood in the light of a recent review by a team of the National Association of Gifted Children (quoted in Neihart et al., 2002). It found that all gifted students needed to have the opportunity to learn with others of similar interests, abilities, motivations, and also needed an appropriate level of challenge within their own programmes (Neihart et al., 2002).

Based on students' achievement files, this study found that a large number of high-performance students have participated in school enrichment programmes. So, the current

result that the programme does not confer high value added to the high-performance students compared to low and intermediate performers can be explained as due to the partial similarity in the objectives and the content of the programmes offered to gifted students in schools or enrichment programmes in special programmes. This result can be understood in light of research that indicates that students who enrol in gifted programmes or receive special services in heterogeneous classes are better than those students who have never received services or enrolled in any gifted programmes (Matthews et al., 2008). It can be concluded that the value added (the difference between the post-measurement which represents the impact of the programme and the pre-measurement represents the prior knowledge) of the programme on the performance of the low-performing students is higher than the value added of the programme to the performance of the high-performing students.

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