The Impact of an Educational Program on Emotional Intelligence In the Development of Higher Order Thinking Skills of Female Student in Islamic Education

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ABSTRACT
This study aimed at identifying the impact of an Educational Program based on Emotional Intelligence on developing the "Higher Order Thinking Skills" of the tenth-grade students in the Sultanate of Oman. A semi-experimental model was used to achieve the research aims through two groups: experimental and control groups. The population of the study (7370 Ss) was all the Female tenth grade students enrolled in the public schools in the provinces of Muscat and Batinah Southern in the academic year 2017/2018. The sample of the study which consisted of (137 Ss) was randomly distributed in two groups: experimental group (68 Ss) and control (69 Ss). An Educational Program based on Emotional Intelligence according to the Goleman model and a multi-choice Cognitive Test of the higher Order thinking Skills according to Bloom's Taxonomy (Application, Analysis, Synthesis, Evaluation) were the methods adopted to serve this study. The implementation of the research experiments lasted for two full months. The results of the (ANCOVA) showed statistically significant differences between mean difference of students’ grades on the scale of the cognitive post-test in favor of the experimental group. After isolating the effect of pre-application for each skill of the two groups, the findings indicated that the difference was in favour of the experimental group. These results are attributed to the use of Educational Programme. Given the above-mentioned results, a number of recommendations and suggestions were made. The study emphasised the importance to integrate Emotional Intelligence skills into curriculum to improve learning outcomes. It also recommended the activation of educational strategies and classroom activities in training the students to develop their higher thinking skills. Finally, this study suggested conducting other similar studies in the future.

Keywords: Emotional Intelligence, Goleman Model, Bloom’s Taxonomy, Higher Order Thinking, Islamic Education

Introduction
Educational scientists have been keen to study and discover the factors that affect the academic performance of students in educational institutions, from the pre-school stage to the university education. Research findings have revealed a variety of factors, among them the intelligence of students, the economic and social situation of students, and the relationship between the student and the teacher. Among all these factors, the results of these studies revealed that intelligence is not the only sufficient indicator of academic success. Only 20% of the individual's success can be attributed to the general IQ. This led the psychologist Daniel Goleman to publish his book: "Emotional Intelligence: Why It Can Matter More Than IQ" in 1995, in which he explained the components of emotional
intelligence, and its role of achieving success in life as well as achievement and academic success in schools and universities. (Mohzan, Hassan & Halil, 2013, 303).

Goleman (1995, 233) noticed that many learners have high intelligence, but their achievement is modest and disproportionate to their mental abilities. On the other hand, there are many others with average IQ, but their academic achievement is high due to their ability to recognize their emotions; therefore, emotional abilities are important in education as well as cognitive abilities. Additionally, children with emotional problems often suffer from attention deficit, and poor results in school assignments. Goleman (1995, 80, 83) pointed out that emotions can have powerful effects the thinking process. Anxiety, for example, paralyzes thinking especially in the face of complex tasks that require a high degree of concentration; for this reason, anxiety of some students in their studies affects their cognitive abilities.

In the same context, some researcher findings indicate that emotional skills are the main key to enhance student’s scientific thinking. Moreover, the factors that lead to low achievements are related to emotional skills, so any educational approach that seeks to improve students’ learning must solve their social and emotional problems first.

**Statement of the Problem**

What makes higher order thinking skills so important to learners is that the learner lives in a world of unprecedented changes with the massive expansion of new information, and this accelerated progress makes learners need a high level of skills to deal with this increased complexity, it requires reconsideration of the most effective teaching methods. Recently, some of expert educators such as (Alasmari, 2014; Matthews, Zeidner and Roberts) have called for a broader and more comprehensive view of successful education that enhances social and emotional skills as well as traditional academic skills. This new view requires educators to re-focus on emotional abilities along with cognitive abilities.

It can't be deniable the importance of teaching thinking skills, it's makes the role of students more active in their learning processing, which reflects on their achievement, and their success in school tests. Additionally, higher order thinking skills are not acquired through the accumulation of information only, but can be developed by training, practice, and the design of specialized educational programs that boost students’ ability to be an independent learner, and more confident about their mental abilities. In the light of what was referred to by psychological literature, academic success is not up to the cognitive aspect of intelligence, the emotional dimension of self-organization, management, and motivation towards efficient achievement is a necessary factor as well for success and for high-level rational thinking. (Alasmari, 2014; Mayer, Carus & Salovey, 2000; Goleman, 1995).

**Purpose of the study**

This study aims investigate how to help female students to improve their higher order thinking skills in Islamic education according to Bloom's Taxonomy (Application, Analysis, Synthesis, Evaluation) by designing an educational program based on emotional intelligence skills.

**Study Questions**

Research questions for this study are as follows:

1. What is the impact of an Educational Program based on Emotional intelligence according to Goldman’s Model to develop the "Higher Order Thinking Skills" of the 10th grade female students in Islamic Education?
2. Does the impact of an educational programs based on emotional intelligence according to the Goldman’s Model differ from the different levels of thinking (Application, Analysis, Synthesis, Evaluation) among the 10th grade students?

TheorY

Goleman founded his concept of emotional intelligence based on Gardner's theory (Gardner, 1983). Gardner's extensive efforts in the theory of multiple intelligences indicate that there is a dimension of personal intelligence, and this dimension is what Goleman presented as human emotions and that intelligence is included in the emotions of the human being. Goleman was interested in practical applications in emotional intelligence, making his primary task to crystallize a special model for this kind of intelligence, and he drew the attention of scientists and researchers to the concept of emotional intelligence; providing a rich description of its components. He explained that mental abilities are not enough for the individual’s success, but that there is a complementary human side to intelligence must be activated. Goleman (1995), in his study proposed that human emotions have been neglected by researchers over the years. In his definition of emotional intelligence, Goleman began by asking: “What can we change that will help us fare better in life? For example, what factors come into play when people of high IQ flounder and those of modest do surprisingly well?” Goleman argued that the difference often lies in those abilities that are called emotional intelligence. In other words, emotional intelligence from Goleman's perspective is: Abilities and skills that can be taught to children, giving them a better chance to use whatever intellectual potential that genetics may have given them, which includes “self-control, zeal, persistence, and the ability to motivate oneself." (Goleman, 1995, xii).

Goleman (1998, 26) has developed the emotional components framework as following: Self-awareness: Knowing: “one’s internal states, preferences, resources and intuitions”. It includes: Emotional awareness, Accurate self-assessment and Self-confidence. Self-regulation: Knowing: “Managing one’s internal impulses and resources” It covers: Self-Control, Trustworthiness, Conscientiousness, Adaptability and Innovation. Motivation: Knowing: “Emotional tendencies that guide or facilitate reaching goals”. For example: Achievement drive, Commitment, Initiative and Optimism. Empathy: Knowing: “Awareness of other’s feelings, needs, and concerns”. It contains: Understanding others, Service orientation, and Political awareness. Social Skills: Knowing: “Adeptness and inducing desirable responses in others”. It incorporates: Influence, Communication Listening, Conflict management, Leadership, Change catalyst, Building bonds, Collaboration & cooperation and Team capabilities

Higher Order Thinking. Teachers must guide their students to use higher order thinking as many students don’t have the necessary skills of thinking, and cannot apply the knowledge they know in the situations which require a high level of learning, therefore they aren’t achieving the learning objectives (Ellerton, Ingerson & Williams, 2016, 373; Menden, 2012, 34). Thinking skills as Menden’s perspective (2012, 15) suggests falls into three categories: “transferring, critical thinking, and problem solving”.

Bloom's Taxonomy of Learning is a well-established framework within education. Its importance lies in being a guide that classifies skills into six levels, ranging from lower levels and gradually becoming more advanced. The Ministry of Education in the Islamic Education in the Sultanate of Oman utilizes Bloom's Taxonomy. It is divided into two main levels: Knowledge and Higher Mental Capacity, as following: Application: “apply something that requires comprehension of the method, theory, principle, or abstraction applied”. The behavioral verbs at this level are: Solve-Test. (Bloom, 1984, 120, 129). Analysis: “the breakdown of the material into constituent parts and detection of the
relationship of the parts and of the way they are organized”. The behavioral verbs at this level are: Analysis-Conclusion-Distinguish. (Bloom, 1984, 144, 146). Synthesis: “putting elements and parts together to form a whole and combining them in such a way as to constitute a pattern or stricter not clearly there before”. The behavioral verbs at this level are: plan-contrive-design. (Bloom, 1984, 162, 164). Evaluation: “making judgments about the value, finding purpose of ideas, works, solutions, methods and material “It involves the use of criteria as well as standards for appraising the extent to which are accurate, effective, economical, or satisfying. The behavioral verbs at this level are: makes a decision-judged-criticizes. (Bloom, 1984, 185, 192).

It should be noted that alternative taxonomies have been developed for education, but Bloom's classification is still the first reference point used in many educational systems (Seaman, 2011, 30; Forehand, 2010, 44). Its significance has been highlighted by focusing on the higher levels of thinking skills that are rarely given sufficient attention in the measurement of outcomes of the learning process. Both (Forehand, 2010, 45; Bissell & Lemons, 2006) confirm that Bloom's classification provides tools that measuring a different thinking styles, closely related to multiple intelligences, creative and critical thinking.

Methodology

Research Design

A two-group quasi-experimental design methodology was used. Table 1 shows the quasi-experimental design of the two study groups.

<table>
<thead>
<tr>
<th>Study Groups</th>
<th>Pre-Test</th>
<th>Treatment</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>Cognitive Test of the higher Order thinking Skills</td>
<td>Educational Program Based on Emotional Intelligence</td>
<td>Cognitive Test of the higher Order thinking Skills</td>
</tr>
<tr>
<td>control group</td>
<td>Cognitive Test of the higher Order thinking Skills</td>
<td>The common teaching method</td>
<td>Cognitive Test of the higher Order thinking Skills</td>
</tr>
</tbody>
</table>

Population and Sampling

The sample of the study consisted of (137) tenth grade female students from Um Saad Ansaryyah school in Muscat Governorate and Alamal school in Batinah South governorate. They were randomly distributed into two groups: experimental group (68 students) and control group (69 Students) in each school. Both schools were deliberately selected. The equivalence between the two cooperating teachers have been confirmed by taking into account their years of experience and teaching competence.

Instrumentation

Emotional Intelligence Program. An educational program based on the components of emotional intelligence according to the Goleman model was designed to determine whether explicit instruction could be used to increase students' higher order thinking skills of the experimental groups. The program included the following:
1. Theoretical framework: it included the introduction, the definition of emotional intelligence and its components, and the identification of thinking skills. Additionally, it included a general guidance for both teachers and students during the implementation of the program.

2. Procedural framework: it included all the actions taken by the teacher within the classroom to implement the lessons according to the components of emotional intelligence. It included behavioural objectives of the lessons, classroom activities, learning resources and formative and summative assessment.

3. Activities booklet: it included worksheets through which students carry out class and non-classroom activities with the objectives of each activity, the time required to apply it and the type of activity (individual, pair or group activity).

4. A training bag: An integrated training package consisting of worksheets for each training session, a power point presentation and practical exercises. The two teachers were trained for three consecutive days.

After preparing the program, it was presented to a committee of specialists in the curriculum of Islamic education, specialists in the field of educational psychology, guidance, and specialists in training programs, who have previous experience in the field of emotional intelligence to review the content of the program.

**Cognitive Test.** The researchers designed a multiple-choice cognitive test of higher order thinking skills according to Bloom’s Taxonomy (application, analysis, synthesis, evaluation). They analysed the content of the curriculum units and the cognitive objectives they contained. The researchers prepared two versions of the test at the same level of higher order thinking. The first one was implemented before the experiment to control students’ levels of higher order thinking. It also was used to control the difference between experimental and control groups in higher thinking levels. The second version was implemented after the application of the program to compare the performance between the two groups, and to know the impact of the program on the experimental group. Multiple choice items were composed, taking into account the relevance of the items, the suitability of wording for grade 10 students, and the clarity of the scientific language included in the items.

**Validity.** To verify the validity of the tests, the two versions were presented to a group of Islamic education curriculum experts in Sultan Qaboos University, Ministry of Education, teachers and educational supervisors of Islamic Education. They reviewed the tests in terms of language accuracy, item’s relevance to the identified level of thinking, and the appropriateness of alternatives in each item. Most of the specialists approved the tests as it is with suggestions to modify the wording of some items because they do not belong to the level of thinking to be measured. The appropriate adjustments have been made accordingly. The final versions of the test contained (40) items each, so the total score of each test is (40) marks.

**Reliability.** To check the reliability of the tests, it was implemented to (56) students out of the study’s main sample. The internal consistency of the tests was checked using (Cronbach-Alpha) and the tests consistency values were (0.667), (0.711) respectively. There was also statistically significant correlation between the two tests as determined by Pearson correlation coefficient, of (0.850).

**Research Procedures.**

1. A consent letter was sent to the principal of each study’s school on August 2018. After that, the two teachers were trained on educational program, and emotional skills.

2. The pre-test was implemented on the two study groups, and the average test time was (52.5) minutes.
3. The experimental group was taught by the teaching method based on emotional intelligence skills, while the control group was taught by the traditional teaching method.

4. The test was corrected by (0-1), giving a score of (1) if the answer is correct and (0) if it is wrong.

**Data Analysis.** Means, standard deviations, Cronbach alpha coefficients, Pearson correlation coefficients and Univariate Analysis of Variance were calculated using SPSS software.

**Literature Review**

Educators and practitioners are interested in studying the impact of emotional intelligence on academic achievement, and on improving the thinking process in general. Alasmari (2014) investigated the relationship between emotional intelligence and the improvement of academic achievement among 200 undergraduate students in the specialization of English in the Kingdom of Saudi Arabia. The results revealed a positive relationship between emotional intelligence skills, and students’ achievement. The researcher believed that emotional intelligence plays an important role in English performance tests. These results contradicted with Mohzan, Hassan and Halil’ study (2013), which revealed that there was no statistically significant relationship between the level of emotional intelligence and its components with students’ academic achievement. Yet, the results did reveal that students who are aware and can understand their feelings and emotions are better able to deal with academic pressures in higher education institutions.

In a correlational study, Nelson (2009) explored the role of emotional intelligence on academic achievement. A study of (142) eleventh grade students was conducted in a small urban school district in Virginia. The study found that emotional intelligence plays a significant role in predicting academic achievement for all students but more specifically for at-risk students. Murphy & Janeke (2009) explored the association between thinking styles and emotional intelligence among (309) students from the University of South Africa from different disciplines. Statistical analysis indicated that there is an overlap between emotional intelligence and creative thinking, and the results showed that thinking styles are significant predictors of emotional intelligence and that participants who have high emotional intelligence prefer more complex and creative thinking styles.

Kvapil study results (2007) supported the view of Goleman (1995) that there is a positive relationship between emotional intelligence and students’ performance. The purpose of his study was to investigate the relationship between emotional intelligence and the academic performance of at-risk students, (300) regular students participants who have been labeled as at-risk, according to national standards and Texas state standards. The findings of this study supported the hypotheses that there is a correlation between emotional intelligence and the performance of at-risk students. In addition, the findings supported a connection between the academic performance of non-at-risk students and emotional intelligence. Woitaszewski (2000) measured emotional intelligence, as conceptualized by J. D. Mayer and P. Salovey (1997), in order to better understand its contribution to the success of gifted adolescents. Thirty-nine gifted adolescents participated and the results revealed that emotional intelligence did not significantly contribute to the social and academic success of these adolescents. The researcher explains this result that the main purpose of the study is to provide an intellectual and social environment that enables students with exceptional abilities to create and produce
more in an exceptional educational community commensurate with their abilities, tendencies and goals.

Findings

Research Question 1: What is the impact of an educational program based on emotional intelligence according to the Goldman’s Model on developing "higher order thinking skills" of grade 10 students in Islamic Education? To find the result, means, standard deviations and estimated marginal means of students' post test scores in the experimental and control groups were calculated. Table 2 shows the results.

Table 2
Means, Standard Deviations and Estimated’ Marginal Means of the Students' Post Test Scores in the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Estimated Marginal Means</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>experimental</td>
<td>68</td>
<td>0.779</td>
<td>0.170</td>
<td>0.775</td>
<td>0.018</td>
</tr>
<tr>
<td>Control</td>
<td>69</td>
<td>0.504</td>
<td>0.147</td>
<td>0.509</td>
<td>0.018</td>
</tr>
</tbody>
</table>

Table 2 shows differences between the means of female students in the experimental and control groups in the post-test of the higher-order skills test. The results show that the mean of the female students in the experimental group was (0.779) with a standard deviation of (0.170) while the mean of the female students in the control group was (0.504) with a standard deviation of (0.147). In order to investigate the differences between the experimental and control groups in the post-test and to isolate the differences between the two groups in the pre-test, a Univariate Analysis of Variance (ANCOVA) was used. ETA Squared (η²) was also used to identify the effect size of the teaching method. Table 3 displays these results.

Table 3
The (ANCOVA) Results of the Test Scores of Higher Thinking Skills According to the Teaching Method Variable after Controlling the Effect of the Pretest

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreMeans</td>
<td>0.519</td>
<td>1</td>
<td>0.519</td>
<td>23.964</td>
<td>0.000</td>
<td>0.152</td>
</tr>
<tr>
<td>Group</td>
<td>2.405</td>
<td>1</td>
<td>2.405</td>
<td>111.01</td>
<td>0.000</td>
<td>0.453</td>
</tr>
<tr>
<td>Error</td>
<td>2.902</td>
<td>134</td>
<td>0.022</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results in Table 3 show statistically significant differences at (α=0.05) between the mean scores of the students in the experimental and control groups in the post-test of higher thinking skills, F(111,016) after controlling the effect of the pre-test. These differences are in favor of the experimental group as the estimated marginal means for the experimental and control group (0.775, 0.509) respectively as shown in Table 2. The educational program based on the components of emotional intelligence on higher thinking skills explains (45%) of variance.

Research Question 2: Does the impact of an educational program based on Emotional intelligence according to Goldman’s Model differ according to the thinking level (Application, Analysis, Synthesis, Evaluation) among grade 10 students? To answer this
question, means, standard deviations and estimated’ marginal means of students’ scores in the post-test were calculated. Table 4 shows the results.

Table 4
Means, Standard Deviations and Estimated’ Marginal Means of Students' Scores in Both Groups for Each Skill of Higher Order Thinking Skills

<table>
<thead>
<tr>
<th>Skills</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Estimated Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>68</td>
<td>0.784</td>
<td>0.196</td>
<td>0.785</td>
</tr>
<tr>
<td>Application</td>
<td>Control</td>
<td>69</td>
<td>0.614</td>
<td>0.189</td>
<td>0.614</td>
</tr>
<tr>
<td>Analysis</td>
<td>Experimental</td>
<td>68</td>
<td>0.744</td>
<td>0.198</td>
<td>0.741</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Control</td>
<td>69</td>
<td>0.410</td>
<td>0.153</td>
<td>0.414</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Experimental</td>
<td>68</td>
<td>0.790</td>
<td>0.215</td>
<td>0.790</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Control</td>
<td>69</td>
<td>0.485</td>
<td>0.240</td>
<td>0.486</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Experimental</td>
<td>68</td>
<td>0.834</td>
<td>0.165</td>
<td>0.830</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Control</td>
<td>69</td>
<td>0.601</td>
<td>0.192</td>
<td>0.606</td>
</tr>
</tbody>
</table>

The results in Table 4 show that there are statistically significant differences between students’ means in the experimental and control groups in the post test of each skill: Application, Analysis, Synthesis and Evaluation. In order to isolate the differences between the two groups in the pre-test application for each skill, Univariate Analysis of Variance (ANCOVA) was used. Partial ETA Squared ($\eta^2$) was also calculated to identify the size effect of teaching using an educational program. Table 5 displays these results.

Table 5
(ANCOVA) Results of the Test Scores in Each Higher Thinking Skill According to the Teaching Method after Controlling the Effect of the Pretest

<table>
<thead>
<tr>
<th>Skills</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>PreMeans</td>
<td>0.047</td>
<td>1</td>
<td>0.047</td>
<td>1.226</td>
<td>0.263</td>
<td>0.009</td>
</tr>
<tr>
<td>Application</td>
<td>group</td>
<td>0.992</td>
<td>1</td>
<td>0.992</td>
<td>26.729</td>
<td>0.000</td>
<td>0.166</td>
</tr>
<tr>
<td>Application</td>
<td>Error</td>
<td>4.971</td>
<td>134</td>
<td>0.037</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>PreMeans</td>
<td>0.344</td>
<td>1</td>
<td>0.344</td>
<td>11.871</td>
<td>0.001</td>
<td>0.081</td>
</tr>
<tr>
<td>Analysis</td>
<td>group</td>
<td>3.649</td>
<td>1</td>
<td>3.649</td>
<td>125.898</td>
<td>0.000</td>
<td>0.484</td>
</tr>
<tr>
<td>Analysis</td>
<td>Error</td>
<td>3.884</td>
<td>134</td>
<td>0.029</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synthesis</td>
<td>PreMeans</td>
<td>0.642</td>
<td>1</td>
<td>0.642</td>
<td>13.477</td>
<td>0.000</td>
<td>0.091</td>
</tr>
<tr>
<td>Synthesis</td>
<td>group</td>
<td>3.176</td>
<td>1</td>
<td>3.176</td>
<td>66.615</td>
<td>0.000</td>
<td>0.332</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Error</td>
<td>6.388</td>
<td>134</td>
<td>0.048</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>PreMeans</td>
<td>0.227</td>
<td>1</td>
<td>0.227</td>
<td>7.421</td>
<td>0.007</td>
<td>0.052</td>
</tr>
<tr>
<td>Evaluation</td>
<td>group</td>
<td>1.710</td>
<td>1</td>
<td>1.710</td>
<td>55.790</td>
<td>0.000</td>
<td>0.294</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Error</td>
<td>4.107</td>
<td>134</td>
<td>0.031</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5 results show that there are statistically significant differences between the mean scores of the students in the experimental and control groups in the post-application of each skill of thinking as indicated by (F) values. Students in the experimental group scored better than students in the control group in the four sub skills of the cognitive skills. The marginal estimated means of the experimental group’s students are higher than the marginal estimated means of those in the control group in all skills as shown in Table 4. These results are attributed to the educational program after isolating the pre-test effect for each skill. Partial
ETA Squared (\(\eta^2\)) indicates that the size effect of the educational program was high in all four skills.

**Discussion**

For the first Research question, the results indicated that there was a statistically significant difference between the mean scores of the experimental and control groups in the post-application of the cognitive test in higher thinking skills in favor of the experimental group. This finding is consistent with the results of the (Alasmari, 2014; Murphy & Janeke, 2009; Nelson, 2009; Kvapil, 2007). It is also consistent with the results of some studies that measured higher thinking skills of students in Islamic Education, such as (Al-Ghubawi, 2017; Alawneh, 2007; Al-Asmari, 2005). The findings agreed with the results of the studies that dealt with thinking skills according to Bloom's taxonomy as (Menden, 2012; Bissell & Lemons, 2006). On the other hand, they contradicted the findings of Woitaszewski (2000). They also differed partially with Akinde’s study(2015) which showed no significant differences in the levels of (application, analysis and evaluation), while it revealed differences in the level of (Synthesis) in favor of the experimental group.

This positive result can be explained in the light of the psychological literature. It confirms that the positive relationship between emotional intelligence and thinking skills indicates that the academic success depends not only on the cognitive aspects of intelligence. It emphasized that emotional dimension is a necessary factor to improve the learning process. In this context, Akinde (2015) emphasizes that students who are able to regulate their feelings to improve their thinking skills, according to Bloom's classification, reach the highest level of learning (self-assessment).

For the second research question, the results after isolating the effect of the pre-test application for each skill showed that the difference came in favor of the experimental group. The following is a detailed result discussion of each four skills measured in the test:

1. **Analysis**
   
The program explained (48%) of variance in students’ performance on the analysis level. The development of analysis skill among female students in the experimental group can be attributed to what was actually observed during the field follow-up of students' responses. Students of the experimental group were able to analyze the texts of the verses and Prophetic Hadiths. The students were able to distinguish between the main ideas and sub-ideas and between the causes and consequences. For example, in summative assessment activity (Caliph Omar bin Abdul Aziz (2) / Unit II) the purpose of the activity was to analyze the role of social skills in spreading values of justice and equality, and then write a summary about it. Students’ answers indicated their ability to analyze and deduce. This result agreed with the results of (Alawneh, 2007; Al-Asmrai, 2005) where they revealed a significant increase in the ability of the experimental group’ students to use analysis skill in the Islamic education. Yet, it differed with the results of Akinde (2015).

2. **Synthesis**
   
The results indicated that the effect size of the program was (33%) on students’ Synthesis level. The growth in this level can be attributed to the fact that activating the skills of emotional intelligence in the educational situation has contributed to encourage students to look at scientific issues in unconventional and unusual way. Self-regulation, self-motivation, and social skills that were practiced during the classroom activities have encouraged students to understand the educational situations in the activities and to respond to them with ideas that were not usually expected. Students at this level were able to plan, and synthesize uncommon ideas. For example, students were asked to
think about the following situation: (think about the following: your classmate does not respect teamwork between groups). In this context of expressing their ideas, students have been able to provide answers that demonstrate their ability to gather ideas, arrange and to integrate knowledge system that did not exist before. The students replied: "she has to cooperate with us, the teamwork generates love, she may have gone through a bad day". These results agreed with (Akinde, 2015; Alawneh, 2007; Al-Asmari, 2005).

3. Evaluation
The results of the study indicated that the impact of the program at the Evaluation level was significant as it explained (29%) of variance. The growth in the evaluation level of the experimental group's students can be attributed to the fact that educational activities have been designed in form of various problems and situations that take different angles and dimensions that require knowledge of the perceptions of the students, their views and the opinions of their colleagues. They were asked to accept or refute ideas based on objective criteria. By repetitive training on this type of activities, the experimental group students were able to use the evaluation skill in the implementation of activities. These results agreed with (Alawneh, 2007; and Al-Amri, 2005), and differ with Akinde (2015).

4. Application
The results of the study indicated that the program explained (16%) of students' performance in the application skill. The growth in this skill can be attributed to the fact that the use of instructional strategies based on emotional intelligence skills helped in training students to use theoretical principles and generalizations to apply them in new situations. It helped them to deal with the activities and attitudes contained therein (interpretation, and the link between previous learning and the current situation). This level requires applying the concepts and this helped them to improve their skills in the level of application. These results are in consistent with (Menden, 2012; Alawneh, 2007), and contradicted Akinde (2015).

Limitations
There were a number of challenges in the implementation of this study, and they were dealt with immediately to reduce their negative impact on the procedures of the study. For example, the two study’s schools were in two different governorates and this made it difficult to follow up daily. So, the two classes in those schools were taught in different times, so that the daily follow-up in both schools can be done in a timely manner. In order to ensure that the two teachers are trained simultaneously and in one place, it was difficult to provide the suitable place for training and transportation. This difficulty was overcome by agreement with the school administration in Muscat Governorate to allow the teacher to be trained in Batinah South for three days.

Recommendation
In the light of the findings of the current study, researchers recommend the following:
1. Integrating the components of emotional intelligence in the Islamic education because of their positive educational effects on the development of higher thinking skills among students.
2. The importance to develop higher thinking skills of students in schools through the activation of educational strategies, and classroom activities to ensure practice of these skills, and achieve students’ emotional balance.
3. Preparing educational and training programs in the components of emotional intelligence according to Goleman model in Islamic education in different stages of learning, and study their impact on different thinking patterns.
Conclusion

The results of the current study revealed the impact of the program based on emotional intelligence on achieving the educational goals sought by the educational institutions, especially in improving the performance of students' learning and development of their cognitive abilities. Therefore, it is very important to develop educational programs that help in the emotional development of the learners like the programs that are concerned with the growth of knowledge. In fact, ignoring these aspects causes a large gap between theoretical and realistic education. In addition, Bloom's taxonomy of higher thinking complies with the perspective of curriculum planners and educators. They emphasize the importance of providing learning experiences at varying levels of difficulty to suit learners' needs and their levels of thinking. Besides, teaching of higher thinking skills responds to the contemporary educational trends that seek to prepare learners to acquire the requirements of technology era and scientific progress.

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