The Effect of Using a Virtual History Strategy on the Development of Historical Thinking Skills for Undergraduate Classroom Teachers

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Abstract
The primary purpose of this study was to investigate the effect of using a virtual history strategy on the development of historical thinking skills among a sample of undergraduate classroom teachers from one public university located in the middle part of Jordan. To achieve this purpose, a historical thinking test was adapted from Al-Safadi (1999), and applied to one classroom with (54) students who studied Arab world history course during the 2016/2017 academic year. The results of the study indicated significant differences (α = 0.05) between the pretest and posttest in the students' historical thinking as a result of utilizing the virtual history approach. The study was concluded by proposing practical and theoretical recommendations for the field of study.

Keywords: virtual history, historical thinking, approach, undergraduate university students.

Introduction and Theoretical Framework
History is of particular significance in the school curriculum, as it assures building the learner’s integrated personality to face daily problems in general, and the cognitive revolution requirements in particular, in scientific method and sound logical thinking (Al-Najdi, 2013). It avails the learner of an opportunity to contemplate the historical events, which develops his/her ability to think and
enhances his/her personality and self-confidence (Reisman, 2012). Therefore, it is no longer accepted to teach history in a mere traditional method, based on “feeding” the historical information to the student by the teacher, and limiting the learner’s role to receive and learn by heart, and later remembering and retrieving the information (Al-Maksousi, 2013).

On the other hand, the historical text is no longer thought of as a mere stable, abstract text, as many historical texts hide a lot of information within their folds, which could be written by vague words and structures. For example, many latent facts might be hidden behind the words, idioms or terms, or in between the lines. Furthermore, some texts conceal different meanings from those shown by their apparent meanings (Mohammad, 2016).

The study of history as an explanatory science requires skills of scientific research and historical thinking, as well as employing these skills, so that the learner can become able to interpret historical texts, recognize historical facts, learn about the past and draw a picture for it, identify its effect on the present and prospect future events (Hal, 2013). This requires, among other things, taking care of the historical thinking and its related intellectual and research skills (Salinas, Bellows & Liaw, 2011).

Based on that, history has attracted the attention of many educators and specialists. Its skills are deemed as basic competences necessary for the history teacher. Development of these skills with the learner is among the main objectives of the history subject at all educational stages. They assist the learner to criticize and explain historical events, understand the related phenomena, and understand the historical text in a scientific method, which leads to understanding, explaining and perceiving the relationships between historical events and the degree of their influence on the present (Al-Najdi, 2013). Subsequently, this will leave positive effects on the learner and make history learning meaningful (Levesque, 2016).

Although there are multiple definitions of historical thinking, they all revolve around the learner’s ability to understand historical events and process them one way or the other. In this regard, Buchanan (2015) sees it as one of the sound, logical thinking styles and an integrated part of its skills, which cannot be done without explaining, perceiving or fully understanding historical events through positive interaction with them and involvement in the learning process. On the other hand, Al-Habbad (2015) considers historical thinking as a pool of interconnected skills, which the learner acquires through their interaction with historical texts that help them perceive the relationships between historical events and process them scientifically in preparation for understanding. Eventually, this will lead to interpretation of historical events in the light of what happened in the past.
Dergham (2015) added to the above definition that it is the ability to take decisions concerning historical issues and events, judge the event objectively in scientific critique, and show its reliability extent based on scientific evidence.

Most of the specialists in this area agree that historical thinking consists of a number of skills. For instance, the ability to access historical information from different sources, approach historical facts as far as possible, understand the reality of historical changes, their inevitability and continuity. It also consists of skills to perceive the relationships among the historical events that seem far from each other with no relatedness between them, and analyze them as cause-and-effect relationships, in an approach that enables the learner make scientific prediction and understand these events (Delapas & Ramos, 2013).

It is also the ability to reconstruct historical events and arrange them according to a particular system. After understanding them, the learner will be able to perceive contemporary historical phenomena and relate them to their counterparts in the past and consequently, become able to predict future events. All within the framework of the historical research ethics in addition to the scientific ethics, such as objective commitment and impartiality and non-alignment in favor of an opinion or idea by ignoring other ones (Mohammad, 2016).

There are various positive indicators in the theoretical literature that may reinforce the historical thinking skills and develop them with the learner, using certain strategies through different entries. Concerning this matter, Mansour (2011) emphasised the importance of the accompanying enrichment activities in developing the historical thinking skills.

The virtual history term (What if?) is a modern one originating from the writings Neil Ferguson, professor of history at Harvard University (Cocks, 2016). It is a kind of historical research that does not adhere to the framework in which the historical incidents occurred. Rather, it hypothesizes the occurrence of events that are different from what originally and actually occurred. It consists of a number of images that include answering the question “What if?”, especially in the important and particular points that constitute important shifts in the course of historical events. “What if Hitler won the Second World War?” for instance. Eventually, these visions provide an alternative history to the actual or factual historical record (Collin, 2007).

Virtual history is of great importance to study and understand actual historical events, through comparison of antipodes, raising possible doubts about different historical events, and developing historical creative awareness, through the ability to anticipate historical events; not only knowing the facts and events of history (Black, 2016). This requires the history teacher, in addition to the learner, while
studying history, to take into account all the possibilities of what the historical event might be.

It is unlike fictional history, which is based on, e.g., scientific fiction. Virtual history is actual history, meaning that the possibility of occurrence in reality is very high, but it did not occur, such as the victory of a party in a particular battle, hypothesizing that the defeated party is victorious, then imagining new historical events based on this hypothesis. Meanwhile, fictional history is based on imagining a history that would never happen, or of very low occurrence possibility. For instance, star war, invasion of the earth by creatures from other planets, and many other science fiction stories (Roberts, 2011).

Therefore, when making alternative scenarios for virtual events and their hypothesized courses, it is necessary that these scenarios are serious, acceptable, reasonable and viable in reality. They should draw new, doubtless, rational courses of historical events, so that a person not familiar with history can believe that they are real history, never thinking that they are fictional or unreal stories (Gilley, 2013).

Statement of the Problem

Historical thinking is an important skill that helps learners increase their awareness of historical events, through building an integrated cognitive framework, explaining the relationships of past events with current events and their effects on the future. This study was conducted in order to explore the impact of teaching history, according to the virtual history strategy, on the development of historical thinking skills among a sample of undergraduate teachers. Namely, the study aimed at answering the following question:

What is the effect of teaching history using a virtual history strategy on developing historical thinking skills among undergraduate classroom teachers in Jordan?

Significance of the Study

It is anticipated that the study results will be important for history teachers, as it opens a new perspective on history teaching that can replace the traditional methods depending on rote learning and memorization. It is also important for learners as it shifts them from being a mere recipient and memorizer of the information to a positive participator, thinker and analyzer. Furthermore, they can
provide their own views on historical events and make activities and projects, and participate in evaluating their mates. The study results are hoped to be important to the planners of history teaching, by including these plans of topics in virtual history, which allows the learner to practice thinking, criticism, and analysis and evaluation skills.

**Methodology**

**Study Participants**

The study participants consisted of 54 male and female undergraduate students majoring in teaching from a public university in Jordan.

**Instruments**

To achieve the study purpose, the authors employed the historical thinking skills test prepared by Al-Safadi (1999). This test consists of 25 multiple-choice items, with a reliability coefficient of .84, based on the Kuder-Richardson 20 equation. To ensure the test reliability, it was applied to an exploratory sample of 50 students of the faculty of education from outside the study sample, whose major was classroom teacher. The test items were analyzed through calculating the difficulty and distinction coefficients and the Kuder-Richardson equation.

**Procedures**

The study was conducted with the use of the following procedures: first, applying the historical thinking skills test on the study sample prior to the use of virtual thinking as a pretest. Second, teaching the subject of Arab World History based on this strategy by the researcher himself, according to the following steps (Roberts, 2011): (a) explaining the lesson objectives to help the learner define main points he/she has to understand and take into account, providing a general idea explaining this strategy and how to put forward the virtual questions. Explaining the new concepts and general ideas in multiple ways, through lecture, power points, and discussion; (b) the learners were asked to make five questions about the virtual history “What if?”, in which they were asked to search for the subject matter of the lesson, which was different from the reality and sequence of the historical events; (c) the learners were required to choose three out of the five questions they had put forward, and deepen their revision with reference to the different learning sources. This would increase their awareness of the historical events, through focusing on the following axes: What do they know about the question? What do they want
to know? Why do they want to change the course of the historical events in this way? What is the new knowledge and skills they learned after this research and exploration? (d) the learners were asked to choose one of the three questions to be the base of their project in virtual history, explaining the reason for this selection, such as its importance over others, occurrence likelihood, or any other reason; (e) initiating an imaginary alternative geographic plan for how the new (virtual) reality would be in the light of answering the question “what if?”, which uncovers the aspects in which they need help; (f) holding comparisons between virtual history and real history, in terms of similarities, differences, amount of difference; and (g) the learners selected the most interesting works and made comments on them.

**Statistical Analyses**

Means and standard deviations of the learners' grades in the pre-post tests were calculated. T-test was also applied to the paired sample t-test, to calculate the significant differences between the pre-posttests. Then the volume of the effect was calculated with the use of Cohen d, to verify the effect of virtual history on developing historical thinking skills with the study population members.

**Results and Discussion**

To answer the study question, means and standard deviations of the learners’ grades in the pre-posttests were calculated as shown in Table 1. To detect t significant differences between the pre-posttests, paired t-test statistic was applied, as shown in Table 2.

**Table 1.** Means and SDs of the Learners’ Grades in the Thinking Pre-Posttests

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>SD</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>10.03</td>
<td>3.97</td>
<td>54</td>
</tr>
<tr>
<td>Post-test</td>
<td>16.79</td>
<td>4.30</td>
<td>54</td>
</tr>
</tbody>
</table>

**Table 2.** Results of Paired Sample T-Test.

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean</th>
<th>SD</th>
<th>Lowest Value</th>
<th>Highest Value</th>
<th>Lowest Value</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest-Posttest</td>
<td>6.75</td>
<td>4.92</td>
<td>5.41</td>
<td>8.10</td>
<td>10.07</td>
<td>53</td>
<td>0.00</td>
</tr>
</tbody>
</table>

The above table shows a statistically significant difference at α=0.05 level between the pretest and posttest means in favor of the latter. This indicates an improvement in the historical thinking of the study population, after studying
history using the virtual history strategy. The researchers calculated the effect size using Cohen D to ensure the size of using the virtual history strategy, which was 1.37, a large value as per this indicator. This study result is in line with those of the studies of Al-Najdi (2013) and De La Paz & Wissinger (2015). The common result in all these studies underlines the ability of well planned, untraditional teaching and strategies input in the development of the historical thinking skills for students. These results could be interpreted as follows:

Virtual history strategy begins with an introduction, illustrating the main concepts and objectives of the theme. This allows for an important structure to the learner, which helps him/her explore all the aspects of the topic. It further enables him/her to pose the virtual questions “What if?”, which is totally different from the course and sequence of the real historical events. This is quite beneficial in focusing learners’ attention, organizing the historical information and motivating them to start answering these intriguing thoughts and interesting questions per their statements. Putting forward these questions requires a deep awareness of real historical events, to allow for asking related virtual questions, which would lead to developing the learner's skills in understanding and perceiving the historical event.

Then the learner selects three (only) from the five questions he/she puts forward at the beginning to research them deeply; and he/she elects one question only out of the three as a basis for his/her project. This step is difficult for learners during the implementation of this strategy because it requires them to recall previous experiences, look into the topic anew, and discuss different points of view, to justify this selection by searching for evidence and logical arguments.

As a result, the learner will form scientific opinions built on logic and justifications, which helps in developing historical thinking skills based on cause-and-effect relationships, finding relations and providing arguments. This is in line with the results of Salim’s study (2011), showing that processing historical search for evidence and weighing it, justifying its significance and value, and disclosing the relations between different facts, contribute to developing historical thinking skills, since the learner follows the scientific work of the historian and comes very close to his/her thinking.

In the last step of this strategy, the learner draws a substitute map, in which they express their images of the new world, in the light of their virtual questions. This step requires the learner to increase their reflective abilities of perceiving images, which deepens their understanding of historical events and links them to new events. In addition, it provides a visual image that takes root in the brain, as well as concrete experience, making the historical events information easy to
understand, which enables the learner to hold historical comparisons between the new world image they achieved through this strategy, and the actual historical reality. Understanding the similarities and differences between these two images helps the learner develop historical thinking skills concerning these comparisons, and interlink the historical events. This is in line with the result of Alex (2015), showing that it is possible to develop historical thinking skills using charts, graphs and drawings as visual organizers, as they lead to observing the wholeness of historical events, in addition to their parts, which facilitates connecting and understanding the historical events.

Learning with the use of the virtual history strategy limits the dominance of the traditional learning based on mere receiving the history topic, which causes learner boredom. The strategy also enhances the pivotal role of the learner in the active work based on understanding and analyzing historical events, and imagining alternatives and parallel events thereof. There would be multiple opportunities for the learner, such as using all senses in the learning process, providing a new method to express thoughts, presenting through Power Point or wiring projects and computing use to benefit in this area. Similarly, Hall (2013) ensured that the use of multimedia and technology in the classroom directly enhances the development of the historical thinking skills, integrates the learner into the learning process to the widest extent, and, at the same time, prevents them from boredom.

Based on the above discussion, a number of practical and theoretical recommendations are provided for the field of study. First, history teachers are recommended to adopt this strategy in teaching because of its effect on the development of the historical thinking skills of the learner. Second, planners of the curricula are required to place particular importance on this method when designing history courses. Third, researchers are highly advised to carry out more studies to identify the effect of this strategy on history teaching and learning accurately and apply this study to other samples of college and school students and measure its effect on other variables, such as critical thinking or achievement in the history topic.

With regard of the contribution of this study to the field, it is emphasized that virtual history as a teaching strategy has proved useful in improving the historical thinking skills of undergraduate students majoring in classroom teaching in Jordan. This is an addition to the research especially for cross-cultural comparisons.
The Effect of Using a Virtual History Strategy

References


