The Effects of Concept Maps on Students’ Attitude, Academic Achievement and Retention of Knowledge in Social Studies

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Summary

Purpose
Based on experimental research design, the purpose of this study was to investigate the effects of the use of concept maps, as an instructional technique when teaching historical topics in social studies, on elementary school students’ attitudes, achievement, retention of knowledge and concept comprehension skills in the subject. 106 sixth grade students in two classrooms participated in the study. Students were divided into two groups as experiment and control group, which consisted of 54 and 52 students respectively. After ‘The Turks at Silk Road’ Unit was taught to students via concept maps during a period of two months, research data were gathered on the study variables by the use of Social Studies Attitudes Scale, Student Achievement Test, Knowledge Retention Test, student essays and semi-structured interviews. The collected data were analyzed by means of SPSS statistical computer program and descriptive qualitative analysis.

Results
The analysis of both quantitative and qualitative data indicated that concept mapping as a teaching technique does have positive effects on elementary school students’ attitudes, academic achievement, retention of knowledge and concept comprehension skills in the subject. It is found that students in the experiment group had far more favorable attitudes toward social studies than students in the control group who were not instructed via concept mapping as shown by the increase in the experiment group’s post-test attitudes scores. There were statistically significant differences between the two groups’ pre and post-test test scores. Students’ own explanations in interview transcripts also supported this finding. Students made favorable comments about the positive effects of the concept maps on their understanding of historical concepts and their attitudes toward the subject. Similar results were obtained for students’ academic achievement, retention of knowledge and concept comprehension skills as indicated by the experiment group’s substantially increased higher test scores than control group’s and by student essays.

Discussion
Even though social studies as a school subject draws its content from the past and present human activities and human’s interaction with the environment, both of which have a strong connection with students’ lives, many students dislike social studies finding it boring and lifeless facts. The findings of this study support some previous researchers’ assertion that students’ dislike for social studies results not from its content but from its methods of teaching by the hands of teachers. The findings have also given rise to the notion that concept maps can be used as an effective tool to enhance students’ motivation to learn social studies and to make a change in student attitudes toward the subject. On the basis of the findings, it is also argued that concept mapping as a learner-centered teaching technique is viable to use in crowded classes as opposed to the wide-spread assumption that posits the opposite idea; i.e. learner-centered teaching methods cannot be effectively used in crowded classrooms. The study results raise question about that assumption.

Conclusion
In this study, concept maps did increase students’ detoriated attitudes toward the subject, boost their willingness to learn historical topics, raise their academic achievement,

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enhance their retention of knowledge and concept comprehension skills. For this reason, social studies teachers can use concept maps in their classroom without hesitation. On the basis of the findings that drew on multiple methods of data collection and analysis, it can be confidently concluded that concept maps has proven to be an effective educational aid in teaching elementary school students the historical topics and concepts in social studies classrooms.