

摘要

隨著資訊科技的進步，學生們除了以往的面對面溝通 (FTF) 方式外，亦可透過電腦中介溝通 (CMC) 進行合作式概念構圖。然而，上述兩種溝通的媒介各有其利弊，因此在本研究中，研究者希望深入了解國中學生在運用 CMC 進行合作式概念構圖時，其在情意態度與學習成效等面向的表現。另外，研究者亦想要初步比較學生們在使用這兩種不同的溝通媒介進行合作討論時，在參與情形與溝通內容上究竟會有什麼樣的差異性？為達上述研究之目的，本研究採準實驗設計法，以班級為單位，抽取臺中市某所國民中學 4 個二年級班級，約 125 位同學作為此次實驗活動的樣本。有關分組方面，研究者以班級為單位，隨機分派一班為參照組，其餘三班則為實驗組進行為其三週的歷史合作式概念構圖活動。

在研究結果部份，透過學習問卷、概念圖成績以及合作過程錄影和錄音等資料分析，研究者有以下兩點之發現：

一、和 FTF 相較而言，學生們在使用 CMC 進行合作式概念構圖時，雖然在情意態度和參與情形有良好的表現，但是在溝通內容上小組成員間較不易有深度的意見交流與協商。

二、在運用 CMC 進行合作式概念構圖之前，倘若可以先讓學生們自行思索並練習建構主題概念圖形，將可多少改善合作效率不良的缺失，使得學生們所建構完成的概念圖形能具有較好的組織與結構性。

關鍵詞：概念構圖、合作學習、面對面溝通、電腦中介溝通

Abstract

This study aims to investigate junior high school students' attitude, affective status, and learning performance when they collaborate on concept mapping in groups either via face-to-face communication (FTF) or via computer-mediated communication (CMC). This study also attempts to explore the differences in the way students participate in concept mapping and the content they contribute to discussion as a result of collaborating via FTF or CMC quasi-experimental design was adopted with a participation of 125 8th grade students from a junior high school in Taichung City, Taiwan. After a three-week session on training students to apply concept mapping to history learning, data including questionnaires, evaluation of concept maps, videos of the process of concept mapping, and interviews were collected and analyzed. It was found that CMC groups showed better affective attitudes and participatory behaviors than FTF group did, but FTF group had more constructive team discussions than CMC had. And, individual practices prior team collaboration help to improve collaboration effectiveness, but the reverse was not true.

Keywords: concept mapping, collaborative learning, face-to-face communication (FTF), computer-mediated communication (CMC)