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A social network analysis on elementary student engagement in the networked creation community

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Abstract

The recent development of social networking tools has enabled students to collaborate to learn in the social constructivists' approach. Yet, the learning process in the networked creation community involves complex dynamics of social networking activities between students to produce online artifacts. This study thus investigated how elementary students teamed and collaborated with peers to create multimedia stories and analyzed their engagement with social network analysis (SNA). This study confirmed that the free teaming between students had a positive impact on their engagement. The SNA also revealed that no particular gender showed higher popularity (in-degree centrality) and activeness (out-degree centrality) in the social network. However, students' knowledge level had a significant impact on their structural positions in the social network. Students of lower proficiency were more active in the social network while their knowledge level did not directly influence their popularity. Further triangulating the social network with students' perceptual engagement indicated that students' structural positions in the social network significantly influenced their flow perception and motivation in the networked creation activity. The students who occupied the central position in the out-degree centrality perceived higher level perceptual engagement, while those who occupied the central positions in the in-degree centrality perceived lower level perceptual engagement. The implications of the educational practice are discussed and the direction for future studies is also addressed.

Keywords: Learning communities, evaluation methodologies, cooperative/collaborative learning, teaching/learning strategies, multimedia/hypermedia systems

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