Inferring and visualising social networks within virtual learning environments

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Abstract

The concept of social network analysis (SNA) has attracted much attention within the fields of social and behavioural sciences. Wasserman and Faust (1994) attributed this interest to the ability for SNA to describe the relationships that occur among social actors and the associated patterns arising from these interactions. Social network analysts therefore, actively investigate the exchange of resources between social actors and how these interactions afford the establishment of relationships within a social system (Haythornthwaite, 2002). From these investigations analysts have attempted to map and visually display the interactions that occur in order to ascertain the emergence of two types of patterns: social groups and social positions. Social groups relate to the collection of actors and the associated social interactions that arise from participation in the social system and social positions refer to the classifications of the sets of actors that are similarly linked to the social system (Freeman, 2000).

A unique attribute of the online environment that affords this investigation is the capacity to retain a historical archive of interactions that have taken place among a group of social actors. For instance the use of discussion forums in educational contexts allows students to communicate, share information and, co-construct meaning regardless of temporal and spatial constraints. However, a direct repercussion of the flexibility the system affords is the archiving of written communication artefacts. Thus, within the teaching and learning domain the integration of SNA can assist in the evaluation of implemented pedagogical practices that are designed to facilitate peer-to-peer conversations. The process of SNA can be applied to online units of study via the examination of the various communication artefacts manifesting from the implemented learning episodes.

This poster discusses the application of SNA to determine patterns of student conversations in order to evaluate implemented learning activities and uncover the social dynamics occurring within the online student environment.

Keywords

social network analysis, discussion forum, data mining

References

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