Understanding Knowledge Sharing Among Researchers by Social Network Analysis

TREO Talk Paper

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Abstract

The progress and development of any organization or institution is directly dependent on the level of knowledge sharing. In an academic and research institution, the student researcher's creative mind, innovative potentials, and the specific abilities for self-standardization play a vital role; it is of primary interest to segregate and pool competencies at individual level and resources and to create effective synergetic effects and optimal co-operations. Social network analysis helps to gain objective insights into the network structures and roles using simple patterns and arrangements of relationships (like who interacts with whom) thoroughly based on a definitive single event of data collection via questionnaire or survey method. The work includes different parameters like knowledge sharing in different departments, motivation for research, research environment, the first point of contact at the instance of a problem (Figure 1), the degree distribution of that network (Figure 2), the next point of contact (Figure 3), the seating arrangement, the guide interaction, time spent with guide, etc. This gives an idea about the hub nodes and the relatively important power centres viz. the knowledge sharing. This work mainly concerns with the differential analysis of the knowledge sharing pattern among the research scholars with the aid of Pajek software and R programming; whereby a holistic knowledge sharing network for the entire set of research scholars in the institution is established and the centrality features of the network is analysed.

Similarly, other networks are generated and analyzed which brings out some interesting outcomes in the knowledge sharing dynamics amongst the researchers. This study also brings out some of the pertinent problems the researchers are facing which were typically established with the aid of a word cloud. The study is a novel attempt to understand the barriers in knowledge sharing within the research fraternity by mapping the interactions on a social network.

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Figure 1 First Point of Contact (Network 1)

Figure 2 Degree distribution of the network

Figure 3 Next Point of Contact (Network 2)