

A Study of the Characteristics of NQU Students' Social and Learning Networks

Summary

Introduction

Four years of college life is the turning point of a person's career since during these years students are developing their professional knowledge, exploring their interpersonal relationships and enhancing their personality. For college administrators, it is significant to observe and to analyze the social networks of students because the networks may be decisive to a student's personality development and to the performance of the school. To find out the effects of social networks on students' learning and life, we select a university in Kinmen to be a case study. The features of the geological backgrounds of the National Quemoy University (NQU) students, 80% of them from Taiwan, create morphology similar to that of a melting pot. Since NQU students have fewer chances to interact with university students in Taiwan, their social life can only be confined on Kinmen, and therefore, they form an ideal isolated population for social network study. This research explores the relationship between the academic performances and the social behaviors as well as the social and learning networks of 179 students of the Department of Civil and Engineering Management at NQU. The results of this study can be useful data for student consultation and improvement of teaching for the reference of the other universities.

Method

This study employs social network analysis methods to develop the learning and social networks of NQU students with the data from

direct surveying. The students of four classes of Department of Civil and Engineering Management were asked to provide the surveyors with a list of their learning partners and social friends. Surveys were conducted on a Free Choice basis to prevent possible information losses. By the nature of the survey, the social relations are essentially directional, and therefore, the one-way relations in learning and social network had to be symmetrized before further analysis. With help of the UCInet software, some network indices were evaluated and their implications were explored. On the other hand, with the help of more computation and comparisons, the topologies of the two networks were obtained and student clusters were identified. Especially, some outliers of student networks can be pinpointed, and the network collective behaviors may be predicted. Furthermore, the correlations of clusters and the academic performance were also obtained and a clear positive correspondence was found. By interviewing the students, the causes of clustering could be clarified and categorized.

Results

The topology of student networks is scale-free like a structure with several features. One of them is that a few hubs (popular students) have more connections but most students are with only limited connections. It implies that in the social network, the status of every participant is not equal. The causes of formation of student social subgroups are, in this order, sharing dormitory rooms during freshman year, participating the same clubs, having the same gender identification, and the geographic factors. This finding tells us that the freshman year can be a predictor for students' social life in next three years. For those students isolated from the social networks, they are consulted and encouraged to join the networks. Generally speaking, for senior-year students, social and learning networks tend to be more dispersed and relationships are more fragmentary. The students' relationships seem to become closer within their own subgroups, but the number of subgroups drops. Student social circles are shrinking as they entering senior years. This phenomenon may be due to: (1) Frictions among members leading to subgroup dissolution. (2) Lack of frequent interaction among members resulting to the separation from the subgroup. (3) The long term imbalance

of friendships causing relationship turning sour. Great amount of time and resources is needed to keep each friendship intact, but for college students, they may not have that luxury to invest too much energy on broad relationship. One of the most urgent tasks for the college consultation division is to bring back the isolated students for their social networks because they may be potential problems to our society.

Conclusion and Discussion

What is found is that the social networks do not become fragmentary, even though the number of subgroups decreases for senior classes. On the other hand, learning networks, in contrast with the social networks, tend to be more fragmentary. The main causes may be threefold: (1) students spend less time studying, (2) many students prefer to study by their own, (3) the department does not provide courses that encourage group learning. This research depicts that living together during freshman year can be the most decisive factor, followed by club participating and gender identification in shaping students' social lives within the next 3 years. In comparison with the entire class, students of a subgroup have more consistent academic performances and higher attendance rates. This confirms the positive peer influence exerted by the subgroup. This research is a pilot study which applies network theorems to analyze student social networks, and the result can be used to devise student counseling and to improve the quality of teaching.

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