A Review of Student Churn in the Light of Theories on Business Relationships

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Abstract. The goal of this review is to use business theories in student retention research, which has so far been informed by economics, organizational behavior, psychology, sociology. Relationships in business networks are compared to these between students and universities, putting forth relevant characteristics for student churn/retention research. Theories regarding a taxonomy of customer churn, its determinants and consequences are also viewed in this context and implications for educational data mining (DM) are put forth.

The relationship between entities is traditionally either following a strict hierarchical fiat (HF) – if the parties belong to the same organization –, or it's essentially an arm's length transaction (ALT) – if there is a market relationship between the entities. Recent business theories describe a more nuanced reality. In the light of wider changes in research, today's corporations are found to be heterarchical; other authors speak of autonomous strategic initiatives that take place in corporations violating the principles of hierarchy. The relationships between companies are neither of ALT type. The works of Uppsala school [1] show that not only is a corporation essentially a network of units (as is elsewhere described both from multinational corporation (MNC) and its subsidiary perspective), but it is also embedded in a business network of its own. The picture is further complicated by the individualism-collectivism dimension. Big MNCs are comprised of internal markets (within one firm!) with an ongoing internal competition for world product mandates, centers-of-excellence, etc. between the subsidiary units; whereas the supply chain relationships that a firm belongs to, have been described as coevolving systems. Concentrating our attention on the relationships in business networks, we see that two firms gradually increase their commitment, as they do business with each other. A process of learning about each other's capabilities, needs and strategies takes place, as well as a formation of routines for undertaking transactions. Sides adapt to each other incrementally. Knowledge transfer is inherently present – with organizational learning taking place – the results being often tacit and intangible.

The relationship between a student and the university varies on the HF-ALT dimension. A student can simply purchase single classes from the Open University; one may be a full time student with an opportunity to call the university his *alma mater* after graduation; within the university's administrative framework, the studies can also in part be paid for by giving consults to one's peers; during the post graduate studies becoming a teaching assistant and teaching simultaneously with the studies is even more common; and finally – it is a goal of universities to populate the ranks of its faculties with the best graduates, in which case the student would administratively become a part of the organization. Entering studenthood comprises of overcoming various entry barriers. The curriculum is substantially different from that of a high school and the university studies are qualitatively harder as well – as the amount of independent work is greater, the tempo in the classes faster and as in some universities general courses can be amongst the most

difficult in the undergraduate curricula. At the same students have to learn scheduling, budgeting, develop their EQ and career. The steep entry barriers underline the commitment it takes to enter the university relationship. Therefore sunk costs are formed, which are reflected in the fact that student churn lessens considerably later on. The mutual commitment and adaption is evident in the following: the student will be able to pursue further career goals after graduation; the student becomes familiar with the university life, procedures and administrative system; the youth helps to keep the university abreast of times; the university assesses its employees based on student feedback. And perhaps most importantly – the students adapt to the university and their academic mentor's profile. For both sides knowledge transfer and (organizational) learning ensue and as ties with the industry are created, so are the intangible assets.

Student churn taxonomy as a basis for further work

Customer churn is the propensity of customers to cease doing business. The cost of acquiring new customers is many times higher than that of retaining the existing ones. Customer (monetary) lifetime value(CLV) has been linked to customer tenure and is also something that previous research has considered in educational settings, although misinterpreting the NPV term. The most important determinants of customer churn are switching costs, satisfaction and future usage. The switching costs are transaction costs (while transferring from one university to another), learning costs (differences in curricula) and artificial costs (a scholarship keeping a student at the university). It can be inferred from the discussion above that satisfaction is a key determinant of student churn and that future usage plays an important role in the relationship. Bringing a parallel from business, according to a taxonomy [2], involuntary external churn occurs in the case of exmatriculation or accrued debt; voluntary external churn in case of relocation, switch to another university or alternative career path, for family considerations (this type can furher be classified as either deliberate or incidental according to whether the locus of origin lies with the student); internal churn takes place inside the university framework – such as moving between full time and part time study plan; churn can furthermore be either customer or competitor initiated, the one at hand being mainly the former.

This review has resulted in an identification of a need to develop a classification model for several student churn definitions, which will additionally be informed by the student-university relationship information. Performance, demograhpic, high school and satisfaction data is available. DM and visualization will use seriation, matrix reordering, clustering and feature selection. As research has combined social network analysis with DM, student network data (the classes taken with the peers; the supervisors; the specialization; but also in the mid-term the facebook data) will be utilized. The retention effort is pinpointed by „quantifying" the students (CLV). In Estonia, projects analyzing the global effectiveness of students allocation, further reducing churn, are possible.

References

[1] Forsgren, M. *Managing the embedded multinational,* 2005. UK: Edward Elgar.

[2] Mattison, R. *The telco churn management handbook.,* 2005 Illinois: XiT Press.