

Improving student retention through scholarly development

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ABSTRACT: Student retention is an important issue, from the deeply personal level of individual students to a higher education system level of national or even global scale. There are many motives for higher education institutes to improve their student retention – their ability to retain students and enable them to graduate. Large drop out numbers can be connected to quality problems and affect both reputation and recruitment in a negative way. This has led to a great number of interventions to improve student retention. However, many of these are based on hunches, traditions and taken-for-granted assumptions. For example, the ATTRACT-project found that less than one fifth of surveyed retention initiatives built on a scholarly foundation (Andersson, Gelin & Marklund, 2011).

Routines and practices for addressing student retention issues in a research-based fashion with a strong connection to the local context have been developed at the faculty of science and technology at Uppsala University. The process started a decade ago, when initiatives based on feelings and assumptions failed to affect student retention. A strong scientific base for new initiatives was constructed on relevant research, such as the work of Tinto (1997) and Yorke & Longden (2004). Questionnaire and interview studies were utilized to explore the local context, drawing on international research. Important areas for action were identified, such as the process of academic integration, and different initiatives were developed. Evaluation showed that some of these directly had a large impact on improving student retention. Successful initiatives, as well as the scientific foundation for these, has spread between educational programmes and institutes through communication and collaboration. We present and discuss this development process.

1 INTRODUCTION: THE IMPORTANT ISSUE OF STUDENT RETENTION

Student retention is the ability of higher education institutes to retain their students and help them achieve academic success. It is a very important issue, from the deeply personal level of individual students to a higher education system level of national or even global scale. There are many motives for higher education institutes to try improving their student retention – their ability to retain students and enable them to graduate. In many countries, the number of graduating students has an important role for finances. Large drop out numbers can be connected to quality problems and affect both reputation and recruitment in a negative way.

This has led to a great number of initiatives for improving student retention. However, these are often based on hunches, traditions and taken-for-granted assumptions. For example, the ATTRACT-project (Enhancing the Attractiveness of Studies in Science and Technology) found that less than one fifth of surveyed retention initiatives built on a scholarly foundation (Andersson, Gelin & Marklund, 2011).

This paper presents the process of establishing a scholarly foundation for working with student retention in the domain of science and technology at Uppsala University, Sweden. This process started when interventions aimed at improving student retention at our university failed. Analysis found that these were primarily based on feelings and assumptions.

2 SETTING THE STAGE

2.1 A problematic issue

A detailed analysis of student throughput on study programmes at the domain of science and technology at Uppsala University in 2005 revealed that there were some serious problems with student retention. A number of interventions were commenced to address the issue. These included mentor programmes, supporting mathematics courses and general study skills training. However, evaluation showed little or no significant impact on student retention. We were approached in our roles as educational developers to help alleviating the problems.

2.2 Strategy for scholarly development to improve retention

Discussions with instructors, student counsellors and educational leaders involved in previous initiatives revealed that these had primarily been based on private ideas, opinions and hunches. These findings were much in line with what later was seen by the ATTRACT-project. Especially striking was that none of the initiatives drew on literature in the field. This motivated our approach to address the issue of student retention, strongly inspired by the scholarship of teaching and learning.

A foundation for the work was first built by drawing on the extensive literature about student retention and associated issues. As the context and conditions for student retention vary between different institutes, a number of scholarly explorations were undertaken to investigate the views and experiences of our students. A number of initiatives were then developed and initiated based on the gathered information. These initiatives are continuously being evaluated and evolved. Details of the different parts of this approach are described in the following sections of the paper.

3 DRAWING ON STUDENT RETENTION RESEARCH

Student retention is an extensive research field where the first articles were published in the 1930's. The research during the first decades focussed on exploring connections between student retention and different structural parameters, such as housing, library access and examination timetables. This was later expanded into developing theory, performing empirical studies and informing action (Berger, Ramírez & Lyons, 2012). This research field provides a solid foundation for development work aimed at improving student retention.

3.1 Modelling student retention

Research into student retention shifted towards social and cultural perspectives with the work of Spady (1970). Spady argued that that interaction between the social and academic systems of the university and the students were central for explaining student retention. Integration of students in systems at the academy would be a key dynamic to improve retention practice.

Drawing on Spadys work, Tinto (1975) presented the *Student Integration Model* for student retention. Tinto focus on the process of integrating students into the systems of the academy through socialisation and cultural assimilation. The model highlights the importance of students' educational experiences. It has since been discussed, tested, criticized and developed (e.g. Terenzini & Pascarella, 1980; Tinto, 1982;1987; Braxton & Hirschy, 2004), but the model remains very influential on student retention research and improvement initiatives.

There are many other models for student retention (see for example the review by Morrison & Silverman (2012)). However, processes of interaction and integration remain central. These were also the themes inspiring our development process.

4 EXPLORING THE LOCAL CONTEXT

Informing institutional action to improve student retention on literature and research results should be central for scholarly practice in the field (Tinto, 2010). However, it has also been stressed, for example by Morrison & Silverman (2012), that initiatives should be informed by the local context. This allows the design of interventions adapted to needs, conditions and other factors at the specific institution. A detailed exploration of our local context became the next step of our scholarly development process. Participating students were informed in accordance with guidelines from the Swedish Research Council and gave their consent to participate.

4.1 Working with questionnaires

Data relevant from student surveys from our disciplinary domain were extracted for analysis during the first stage of our exploration. After our first reports, we were given the possibility to influence the general questionnaire design to better investigate retention related issues. Many of these questions have now become established parts of the regular questionnaires. The yearly beginner questionnaire for students starting our study programmes explores such issues as students' motivations for studying and their worries before starting. The bi-annual programme questionnaire to all students asks questions about perceived mistreatment and dropout. Most of these questions are open, allowing students to

elaborate and describe their situation. We have also undertaken some tailor-made questionnaire studies for students on specific study programmes.

4.2 Talking to students

Some themes from the questionnaire studies have been explored interactively with the students. This has primarily been done through individual interviews, group interviews and discussion workshops. Outcomes from these explorations have been summarized in concluding notes, recorded in more detailed field notes or recorded and transcribed depending on situation and stage in the project.

4.3 Analysing the picture

The different student answers and stories gathered were subjected to qualitative analysis. Discourse analysis was utilized to identify major themes and patterns (Gee, 2014). The data was also iteratively coded in a grounded theory approach to allow comparisons between how common different themes were in the student responses (Robson & McCartan, 2016).

5 IDENTIFYING KEY ISSUES

The analysis of student data from our local context made international literature and research findings more valid and accessible to our colleagues. This section summarizes our major findings with some quotes for illustration. Analysis of the data was done in Swedish. The quotes used as illustration in this paper were subsequently translated into English.

5.1 The importance of integration and interaction

The recurring theme in the stories of our students, from all sources, was the process of becoming part of the educational system. Beginner students described their worries on whether they would fit in at the education or not. Many expressed confusion about trying to navigate a new context where much was unknown.

One comes to this jungle, where one doesn't know a thing... where there might be hidden dangers everywhere... and one has to find the way to succeed...

These findings are well in line with the importance of integration in student retention research and literature. The importance of interaction was also strong in many narratives, especially from students later on their programmes. There were numerous examples on how interaction with academic staff, university systems or just the environment affected educational decisions, such as choosing to change study programme or drop out altogether.

5.2 Areas of concern

Four overlapping areas of concern were identified in the answers: Belonging, Goals, Success and Everyday coping. Students' interactions and decisions in relation to their education were generally expressed as being connected to one or more of these.

Belonging relates to feeling part of the system. This has regularly been the most common theme in our different studies. It is expressed in slightly different ways depending on where along the educational journey the students are. Beginner students express expectations about belonging, whereas students on later years tell about how signals concerning them belonging or not have a strong influence both on their study success and their educational choices. These frequent and strong stories about belonging are very much in line with research. However, stories from our specific programmes make this critical question more real and accessible to both students and instructors.

Both co-students and instructors sometimes treat me as not "belonging" on this programme. This is probably because of me not having the same interests or similar manners....

Goals are the intended aims of students' education. Considerations about whether the study programme will enable them to reach those goals are common among our students throughout their studies. A recurring issue is the extent to which programmes are perceived as corresponding to student expectations.

Sometimes it felt that I wasn't studying the programme I had chosen. There were so many abstract, disconnected things... Would this really take me to my goal? Should I rather just quit?

Success is another important issue for students when considering their education. Our beginner students hope for success, but express worries about the new examination forms of higher education, such as large-scale written examinations in big halls. Experienced students relate to the signals they have received when discussing this issue. This could be formal failure on exams and exercises, but also indications perceived from instructors, peers or others about their possibilities to succeed.

After failing my first two exams I thought all was over. But then I got help to realize that you actually got more chances... that one could learn more and try again.

Everyday coping concerns the general issues of being responsible for your own life. Starting higher education also means living on your own for the first time for most Swedish students. This area is also most prominent in data from beginner students. For most experienced students, everyday coping is only a problem when a major crisis occurs.

I miss my hometown... sometimes desperately so... but there is just no way to get the education I want there. I just have to find ways to cope.

These areas and the examples students gave from them became an important guide for us when planning interventions. The answers also gave indications on which problems to address when.

6 INFORMING AND IMPROVING PRACTICE

6.1 Facilitating student integration and navigation

Based on literature, research findings and our own explorations, we became convinced that the major task for improving student retention on our programmes was to facilitate students' integration with and navigation through our educational system. This was well in line with the recommendations later published by Tinto (2010).

6.2 Strategies for success

We formulated five strategies for success, drawing on literature and our findings.

- **Holistic perspective** is about making initiatives part of a greater whole. All stakeholders should comprehend the motivation behind the activities. They should be an integrated part of the whole study experience and be a concern for all. Previous interventions had often involved just a few people and sometimes been aimed at only some of the students.
- **Cultural awareness** became central when the focus was shifted towards interaction processes. This strategy was also enforced through the discourse analysis where it became clear that workings of educational culture often were integral and obvious to older students and academic staff, but deeply bewildering for new students. The processes of socialisation and cultural assimilation discussed in retention literature are greatly facilitated by making these aspects visible and explicit.
- **Student engagement** enhances the integration process by making students engage with each other. It helps students find new contacts and strengthen their social networks. This is a common part of introduction activities, but was often expected to occur spontaneously. A strategic approach to student engagement enhances this and reaches all students.
- **Personal meetings** are another way to create connections and help students become integrated in the academic system. This is especially important in regards to persons of relevance for their studies, such as those who, in one role or another, can act as contacts and information brokers, such as instructors, academic counsellors and programme coordinators. Personal meetings can also strengthen the feeling of being seen as an individual, and not only as part of a big collective. This can play an important role for students' feelings of belonging in the academic context
- **Signposting** is the process of making a trajectory comprehensible. This is often discussed in relation to narratives, but can be equally important when working to improve retention. Showing how activities are parts of a progression help students make sense of them. This also helps students see the importance and relevance of activities. It can furthermore make distant goals more visible and accessible.

6.3 Initiating and developing initiatives

A number of initiatives have been started since the beginning of our overarching project. These draw on literature, research and our findings. The strategies detailed above have also been an important guide. This solid scholarly foundation has generally resulted in good evaluations of the initiatives. These have been continually enhanced based on evaluation results. Other programmes and institutions have later adopted and adapted many of these practices. Some examples from our project are presented below.

The registration to a study programme is commonly one of the first steps into the university context. This was previously done by gathering all new students in big lecture hall and holding a roll-call. Many new students experienced this as overwhelming and impersonal. Conference-like registrations were introduced, where all new students are personally met and greeted by someone involved with their programme. Students also often receive some tools for their coming studies as part of the welcoming. The information session during the start-up was also broken up in parts, with interspersed coffee breaks and walks to provide opportunities for students to meet, discuss and digest the provided information.

Raising the awareness of cultural aspects of the studies is a continuous effort. Workshops for instructors and students interacting with beginner students have been developed to remind them about the potential difficulties of entering a new context. This is especially important, as the diversity among university beginners in Sweden has increased. Sessions familiarizing new students with academic culture have also been introduced as an integrated part on some of our programmes.

Development of study skills is an important part of becoming engaged in a constructive way with the academic system. In our interviews, students described previous study skill initiatives as unconnected add-ons that failed to reach students who needed them the most. We chose to address this by connecting study skill training to regular courses. This allows us to reach all students and also exemplify the usefulness of these skills. Our approach to study skills has also expanded the previous conceptualization of study skills as a collection of tips and tricks to efficiently manage the education. The sessions include aspects such as motivation, metacognition and forming supportive networks.

Examination is a part of the academic practice that worried many of our beginner students. This led to the inclusion of sessions discussing the purpose and practice of examination in higher education. On one programme where many students had a non-academic background, a special introduction examination was initiated. Students on this program underwent a regular examination with all standard procedures, but where they were aware that the stakes were lower. They also had to reflect upon the examination process and discuss it afterwards.

7 A SCHOLARLY PRACTICE FOR IMPROVING STUDENT RETENTION

We have experienced a distinct shift in practice during the time of our overarching project to improve student retention at our study programmes. Where initiatives once were based on hunches and opinions, they now draw on research and literature. The awareness of both instructors and students about cultural aspects, such as interaction and integration has been raised significantly. An important reason for this is that parts of the project continuously have been presented, both locally, at conferences and in publications. This has created a network of scholars engaged with the common endeavour of improving student retention. This scholarly development has also provided valuable arguments for the constant process on motivating the importance of student retention in our local context.

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