

## **Knowing our students – different approaches to student retention Experiences of the ATTRACT project**

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## INTRODUCTION

The issue of retention in institutions of higher education may be viewed from a wide variety of perspectives. Information needs and actions taking place also vary among different stakeholders. Generally, we can divide different actors into three major strands, which represent the different approaches and perspectives. Societal **macro level** represents the educational system and global alliances approach focusing on ideology, social context and policy-making. **Meso level** represents the organisational and institutional conditions: plans, policies and everyday management. **Micro level** deals with cognitive and emotional aspects of learning and teaching including individual's learning history, learning styles, etc. taking place in classrooms and peer interactions.

In this paper we provide different perspectives towards information and actions based on the work done in the ATTRACT Work Package 8 "Student Retention". ATTRACT – Enhance the Attractiveness of Studies in Science and Technology – is a European Commission supported project aiming to increase knowledge and inform practice about student recruitment and retention in engineering and technology education. The project compares situations in the partner countries, broadens national discussion at European level, and designs and field-tests a number of interventions in the field. The project runs from January 2010 to October 2012.

## 1 BACKGROUND AND ACTIVITIES

Comparative studies in higher education tend to focus on macro-level contrasts between the structures of one system and another [1]. In the ATTRACT project, however, we wanted to explore the different practices carried out by the participating universities and the economic aspects related a little further. In other words, in the last year of the project several trials took place and provided different approaches to information and actions:

- **Footprint (trial 1)**
- **Working with questionnaires (trial 2)**
- **Interaction, academic integration and tutoring (trial 3)**

The first trial aimed to test and evaluate a method of visualising and monitoring student retention in a so-called footprint in selected fields of programmes. This trial typically represents the organisational and societal level of information gathering and visualisation. The purpose of the second trial was to benchmark practices in gathering information from large groups of students on their perceptions of studies, orientation, study choices and academic integration. This trial focused on serving the meso level, but also provided background information for actions on the micro level.

Finally, the third trial focused on the issue of interaction between students and staff with special emphasis on the interaction supporting academic integration of students and student progression, and the early identification of students at risk. Thus, the third trial focused on the institutional factors of educational persistence, but on micro level. Within this trial, good practices in different universities were collected. In what follows we will have a closer look at the last two trials, while results from the footprint trial will be discussed more in detail in Marklund's et al. (2012) paper *Retention Footprint: Visualising and monitoring student retention in study programmes across Europe*.

Building upon theories, such as those by Tinto<sup>2</sup> and Bean<sup>3</sup>, it can be argued that educational persistence is a product of a complex set of interactions among **personal** (e.g. explanations that relate to the students themselves, such as background, motivation and study approaches), **institutional** (e.g. explanations directly associated with the education, such as objectives, content, teaching, institutional climate, guidance and counselling) and **external** (e.g. statements that relate to the student's ambient surroundings, such as financial situation, housing, work and leisure time) factors where a successful match between the student and the institution is particularly important [8, 9]. In figure 1 we have mapped the different trials carried out by the participating universities against this theoretical framework [10].

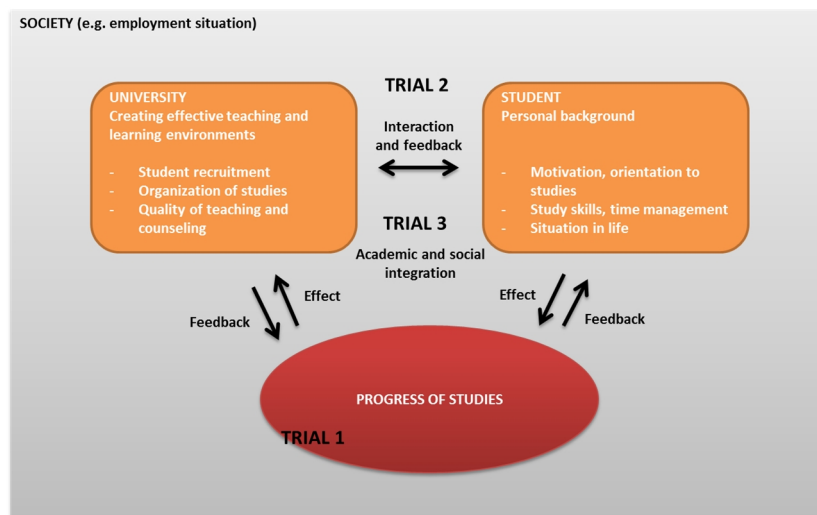


Fig. 1 The ATTRACT field trials in relation to retention theories

## 2 ECONOMIC ASPECTS OF RETENTION AND RELATED INITIATIVES

The economic aspect of student retention is also important, even if it is not the only factor (or even the primary factor) in decision making. Nonetheless, with generally perceived increasing pressures on universities to be more “business-like” in their management, it would seem timely to give the matter due consideration. There are many “actors” or stakeholders present, and analysis could take place from a range of perspectives – mirroring somewhat the macro, meso and micro paradigm referred to above. Figure 2 below gives a simplified schematic illustration with the arrows indicating flow of money on educational activities of universities.

<sup>2</sup> According to Tinto's Student Integration Model, the processes of interaction between the individual and the institution lead to differing individuals to drop out from institutions of higher education. The model stresses the importance of academic and social integration of students in the prediction of student retention [2, 3].

<sup>3</sup> The Student Attrition Model, building upon process models of organisational turnover [4] and models of attitude-behaviour interactions [5, 6], argues that student attrition is analogous to turnover in work organisations and stresses the importance of behavioural intentions as predictors of persistence behaviour. The Student Attrition Model also recognises that factors external to the institution can play a major role in affecting students' attitudes and decisions [7].

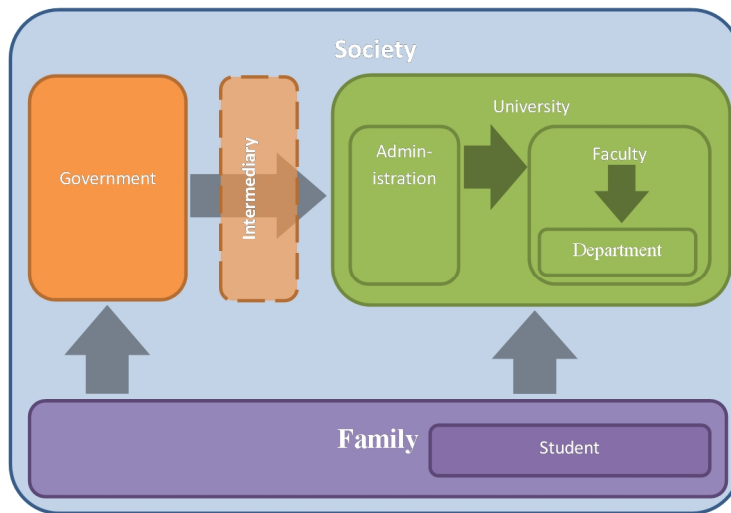


Fig. 2. Economic actors in university education (incl. student retention)

As the universities are the primary actor considered in this paper, the following analysis is written from that perspective. Associated with each student there will be a marginal income/revenue. Depending on the structure of the education system the source of this income may be any or all of government (local or national) or student (or their family), or in some cases may be paid for by an employer. Similarly there will be a marginal cost associated with delivering education and ancillary services to each extra student. The majority of universities will not be set up as profit-maximising enterprises, and thus it is to be expected that (certainly in the medium term) the balance between income and cost for the average (not the marginal) student will be equal – the revenue associated with each student will cover the associated cost. The difference between the marginal and average costs is of course explained by the quantised nature of costs incurred by the universities – buildings have to be built, people must be employed, equipment must be purchased etc. – with such strategic decisions being based on estimated utilisation. However, the income is typically denominated in terms of the average student – i.e. student fees, governmental support etc. Furthermore, resource planning is based largely on the assumption that a majority (if not all) students will progress successfully through the system. It may readily be seen therefore that “saving” a student who would otherwise have left before completing their studies will accrue a financial benefit to the university – in addition to the benefits to the student themselves.

Should the university seek to put in place new initiatives (or to increase funding to current initiatives) it needs to know that this investment can be economically justified. At the most basic level this would require that the cost of the initiative is matched by the marginal revenue from the extra students retained within the system. There may of course be other less quantifiable benefits which justify such investment when considered in addition to this simplified cost/benefit analysis.

### 3 WORKING WITH QUESTIONNAIRES

#### 3.1 Questionnaires as part of the institutional quality structure

Questionnaires are an integral part of the quality work of universities. They provide information about practice and can support our educational development activities. Thus, they can play an important role when working to improve student retention and building an educational quality culture. In this trial a number of representatives from four ATTRACT partner universities met at a workshop in Uppsala in May 2012 to report results, share ideas and discuss practice about student questionnaires. It was soon discovered that, despite the differences in contexts and structures, central issues are often quite the same.

The different activities that build our educational practice are constantly evolving. This development can be enhanced significantly through relevant information and feedback as shown in figure 3. Institutions build different structures for this and questionnaires can play an important role in the systems. They can also have multiple purposes and aims, which should be reflected both in design, delivery, and analysis, as well as in resulting initiatives. Two different structural purposes can be identified – feedback and feedforward. The questionnaires can provide means for monitoring development or creation of new activities within the organisation, thus, being part of the **feedback** system of the university, or they can be used to create **feedforward** systems, thus, developing practice by identifying critical changes in student populations before the situation actually reaches a critical point.



Fig. 3. The feedback loop

### 3.2 Tools for multiple purposes

Students, teachers and the surrounding society are continuously changing. To be able to talk to the students with their own language, to provide them with the support they need and to see if the students and the university share the same goals, information needs to be transferred from the students to the university and possibly the other way around. Questionnaires can be seen as one way out of many to get particular information, but they can also be used as a tool for starting discussions. Furthermore, it has been made clear that it is not only the students that we need to get to know but also the universities and their staff. Creating a quality culture needs involvement from all the different groups at the university; students, teachers, and faculty.

The questionnaires should also be aimed at something that the institutions can actually change. So the use of results is highly dependent on the questions asked, purpose and aims. However, the use of results is critical in creating involvement in the quality culture and improving response rates for the questionnaires. There is also a need to make the whole process as transparent as possible. If the stakeholders are not aware of how their answers are used, they are less likely to provide the institution with the information they need.

## 4 INTERACTION, ACADEMIC INTEGRATION AND TUTORING

### 4.1 Focus on human support

Universities' activities to increase student retention can be divided into three major strands:

- Changes in the structure of studies
- Changes in progression rules

- Changes in human support – both academic and well-being

In this trial we focused on the third strand; changes in human support. The institutional support services often operate at a number of different levels. In this context, the different levels of actions can be categorised as shown in figure 4. **Provision of information** is usually a one-sided activity building upon mainly fact-based information and the provision of it. Counselling and guidance are both two-sided. However, the difference is that in **counselling** the students usually get help or advice with their particular problems or questions, whereas in (personal) **guidance** the advice and support are often long-term and there may not even be particular problems or questions as such. Furthermore, the universities tend to offer their counselling and guidance services not only for individuals but also for groups. In various **group activities** the significance of peer interactions and relationships becomes of high importance.

<b>PROVISION OF INFORMATION</b> <ul style="list-style-type: none"> <li>• building upon fact-based information and the provision of it (e.g. websites, flyers, databases)</li> <li>• usually one-sided</li> </ul>	<b>COUNSELLING</b> <ul style="list-style-type: none"> <li>• helping and advising students with their problems; answering to their questions (e.g. face-to-face, email, telephone)</li> <li>• usually two-sided</li> </ul>	<b>PERSONAL GUIDANCE</b> <ul style="list-style-type: none"> <li>• providing long-term support and guidance to students</li> <li>• usually two-sided</li> </ul>
	<b>GROUP ACTIVITIES</b> <ul style="list-style-type: none"> <li>• tutoring/mentoring groups where one can discuss a wide range of questions from study skills to future career plans</li> <li>• peer interactions</li> </ul>	

*Fig 4.* Institutional support services: different levels for interventions

In this trial the methodology chosen was to collect narrative descriptions of good practices in different universities. The goal was to provide sufficient information on what really works and why in different contexts and to enable benchmarking between universities with similar activities. The criterion was to choose case studies that others can learn from and which may be unique. Majority of the case studies (examples given in the conference) focused on 1st and 2nd year actions covering areas such as:

- Learning soft skills
- Mathematics support
- E-learning
- Student monitoring practices
- Counselling and guidance
- Future career opportunities
- Activities in the curricula

#### 4.2 Seeking evidence of the impact

The case studies are a collection of actual practices implemented in the participating universities in order to decrease dropout rates among higher education students. The generalizability of different activities, however, is obviously limited due to the complex nature of the retention phenomenon, the difficulty in measuring the impact of these activities in a reliable manner (particularly in what concerns measuring the impact of the activities on student retention data) and in identifying the “active ingredients” which, in each activity, could be responsible for positive changes in retention data. Furthermore, the fact that these activities are very much dependent on both institutional and (inter)national contexts, calls for contextual analysis which enables us to take into account the culture of organisations as a powerful determinant of what works in student retention for each university.

## 5 CONCLUSIONS

Feedback is essential for all parties to know how well they live up to expectations. The different activities building our educational practice are constantly evolving. This development can be greatly enhanced through relevant information and feedback. Two different structural purposes can be identified – feedback system and feedforward system. The latter develops practice by identifying critical changes in student populations well before the phenomenon itself reaches the critical point. This helps the institutions to make foresights, with the help of early warning systems – on institutional, programme and individual level. An example of this is the development of an early warning system which aims at identifying students at risk of failing, thus, activities can be created already before the students fail. Effective foresight helps the universities to manage their own future.

Support in different forms can also help the participants reach their respective goals. The support can help clarifying expectations and providing feedback, but it can also have many other forms. This support can be formal or informal. Human support must include both academic and well-being support. Teaching can be seen a support system for learning. Good teaching is reported to be the component with the smallest fraction of positive experiences.

Finally, the universities need to understand their own contexts. The generalizability of different activities for instance is obviously limited due to the context dependency. There seems to be plenty of similar activities (e.g. tutoring, first-year programmes) across universities but dissimilar execution. Universities seeking to put in place new initiatives also need to know that their investments can be economically justified.

## 6 SUMMARY AND ACKNOWLEDGMENTS

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