


COMPLETING STUDIES OR LEAVING UNIVERSITY: MODELLING THE DETERMINANTS OF STUDENT DEPARTURE

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Abstract:

Higher education is a long service process, which results in the students' –the recipients of this service– being enriched in multiple ways. Despite of the various efforts to improve the quality of education, infrastructure or institutional services, it can be frequently observed that a significant number of the students either fails to finish their studies at their current institutions or they decide to finish them somewhere else. Early termination of studies and departing from an institution are quite serious and complex decisions with a number of factors underlying. This study makes an attempt to outline a model in which we pay attention to value added, to departure factors and specifically to loyalty, which is considered as an influencing dimension beside the relationship quality determining antecedents. Further aims of this study are to define student loyalty and to show the possible relationship between loyalty and the previously examined factors of drop-out. That is to say that the study attempts at modelling the extent to which student departure is affected by such factors as personal characteristics, commitment and loyalty.

Keywords: *student departure; student commitment; loyalty; value added in higher education*

COMPLETAR ESTUDIOS O DEJAR LA UNIVERSIDAD: MODELIZANDO LOS DETERMINANTES DE LA MARCHA DEL ESTUDIANTE

Resumen:

La educación superior es un servicio con un proceso largo, el cual enriquece a los estudiantes –los receptores del servicio– de múltiples formas. Pese a los diversos esfuerzos para mejorar la calidad de la educación, infraestructuras o servicios institucionales, con frecuencia se observa que un significativo número de estudiantes no concluye sus estudios en sus instituciones actuales o decide acabarlos en otro lugar. La conclusión anticipada de sus estudios y el abandono de una institución son decisiones bastante serias y complejas, con numerosos factores subyacentes. Este estudio trata de esbozar un modelo poniendo atención en el valor añadido, los factores de abandono y en particular la lealtad, la cual es considerada como una dimensión que influye junto a la calidad de la relación determinante de los antecedentes. Otros propósitos del estudio son definir la lealtad del estudiante y mostrar la posible relación entre la lealtad y los previamente examinados factores de deserción. Esto es, el estudio trata de modelar hasta qué punto el abandono del estudiante se ve afectado por factores tales como características personales, compromiso y lealtad.

Palabras clave: *abandono estudiantil; compromiso estudiantil; lealtad; valor añadido en educación superior*

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1. Introduction

There is a serious concern both in Hungary as in other countries as a significant percentage of students leave their institutions either before their training is completed or after finishing their courses, but still without any official document to certify their training. The phenomenon has so much become a reason for concern that it is one of the high priority strategic aims of the European Union to reduce the attrition rate which has lately become a hot topic. In accordance with the objectives declared in the Lisbon strategy, which focus on competitiveness and the dynamic development of the knowledge-based society, the EU Council of Ministers of Education declared six quality indicators in the field of education, some of which are the increase of the number of higher education graduates, the encouragement of lifelong learning and the reduction of the average proportion of school leavers in the EU to at least 10%, an objective that should have been achieved by 2010. Although the concerted development programs of the 27 EU countries have resulted in a significant improvement in this field (as the 17.6% rate of early school leavers in the group of population aged 18-24 that registered in 2000 decreased to 14.1% by 2010), the objective set at the beginning of the decade has not been achieved. To confirm its commitment, in its Europe 2020 plan the European Union set its strategic objective one more time and aimed at reducing the rate of school leavers below 10% by the end of the second decade of the twenty-first century.

It is necessary to examine the underlying causes of attrition both at the level of the national economy and on each given level of education, or on institutional level whenever it becomes appropriate. Although the comprehensive statistical data available are focusing specifically on secondary education, the importance of analyzing the phenomenon in the context of higher education is indisputable. We all know that higher education has changed significantly over the past couple of decades not only in Hungary but in almost all the EU member countries. A tendency towards mass training, the reorganisation of the training structure in the Bologna Process, efforts to create student mobility between various universities of different countries, an inclination for increased mobility and worsening demographic indicators have created a highly competitive environment for educational institutions. Because of factors like coping with the intensive competition and creating and keeping a stable market position, the institutions are interested in quality based operation, quality assurance based on continuous self revision and generation of added value, one element of which is understanding why students are inclined to leave the institution before their training is completed or, after completing their courses, to leave the institution without obtaining a degree. A better understanding of the phenomenon of attrition is significant not only for reasons to fulfil quality criteria, but it is, among other things, also a financial question, since the departure of a student from the system results in a lack of potential income.

2. Quality and value added in higher education

Higher education can be perceived as a special long term service, in the course of which the student gets strongly involved in the service process, and the quality of which is evaluated by both the student, the recipient, and the institution, i.e. the provider of this service. The dynamics of this dual process is constantly changing and, by the end of it, not only an evaluation of quality will take shape but, via the service, but also of the value added, as a result of mutual effort and involvement of student and institution alike.

The quality of education can be viewed from different perspectives. The interpretation of quality can either be an exception that exceeds a plausible minimum criterion, or perfectness resulting from a process. It can also be interpreted as something that is fit for a purpose, that is to say anything that fulfils its function represents quality, or, if the emphasis is placed on the "value for money" ratio, quality can be any service that corresponds with the given value (Harvey and Green 1993). In our study, we emphasize the interpretation of quality as a converting, modifying factor, which contributes to change at the end of a process which is being created as the value added of that process (Harvey and Green 1993; Tam 2002; Hetesi and Braxmair 2011).

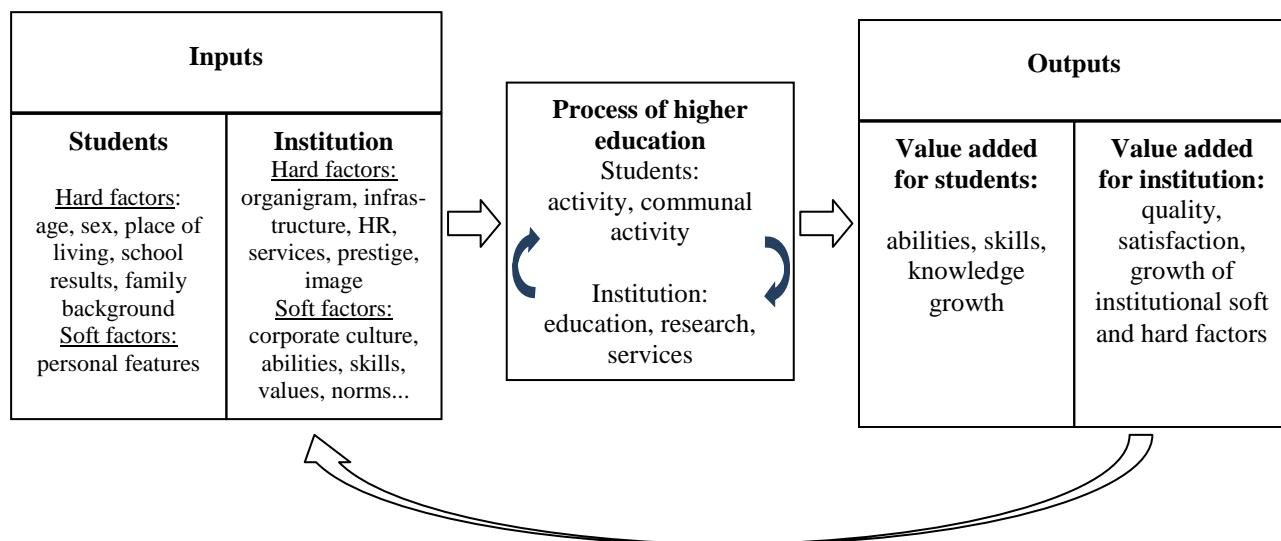
Thus, one way to measure the quality of higher education as a service is the value added that has accumulated during the process, which is considered to be the extra value the student gains by attending higher education. The acquired knowledge, abilities, skills or some other factors may constitute this extra value. To be able to measure it, we must know the performance of the student both when he begins and finishes his studies. Value added is the difference between the two levels of performance (Bennett 2001; Pascarella and Terenzini 2005). Differences between institutions, courses and students make extremely

difficult to measure and quantify the value added. The introduction of a possible conceptual model of measurement which reflects an input-output approach was attempted in a previous research (Hetesi and Braxmair 2011). The model is based on the assumption that both parties invest their existing resources into the process, and the application of these resources in conflict and co-operation will result in return of investment for both parties (see Figure 1). The following assumptions were also introduced:

1. Service functions of higher education institutions lead to student development.
2. The increase in value is not solely an increase in knowledge, but also includes other areas of social activity, such as active participation in academic and community life, benefitting from cultural and other service options, establishing networks of relationships and adjusting a system of accepted norms and values.
3. Efficiency of higher education equally depends on personal and social characteristics of students and the characteristics of the given institution.
4. The value added is the product of the mutual activity of two parties: the student and the institution. The development of each of the parties is based on a process in which the characteristics, quality, intensity, and length of the interactions between the students and the institution are given a significant role. The more capable the institution is to offer opportunities for development, and the higher the level of co-operation is between the institution and the student, the greater the added value will be.
5. The higher the investment of the two parties is, the greater the return on investment for both will be.
6. During the long service process, quality varies significantly, so the way the two parties evaluate it will frequently be modified.
7. Quality output of efforts can only be interpreted in the long term.
8. The evaluation of value added will affect the input side of the service process.

This model does not include, as a variable, the examination of those higher education students who depart from the institutions, although it could add an important dimension to value added research. What will the future prospects of those students be who on the one hand invested their energies into the development of their knowledge and skills, and on the other hand used the resources of the of the state, the university or their families. A number of questions arise: is there a relationship between value added generated in the course of the service process in higher education and the decision to leave the institution? what can be done in order to ensure that these students persist in the system? is it worthwhile to hold them back in the hope of a more efficient solution for all the parties?

Figure 1. The model of value added in higher education as a service



Source: Hetesi and Braxmair (2011)

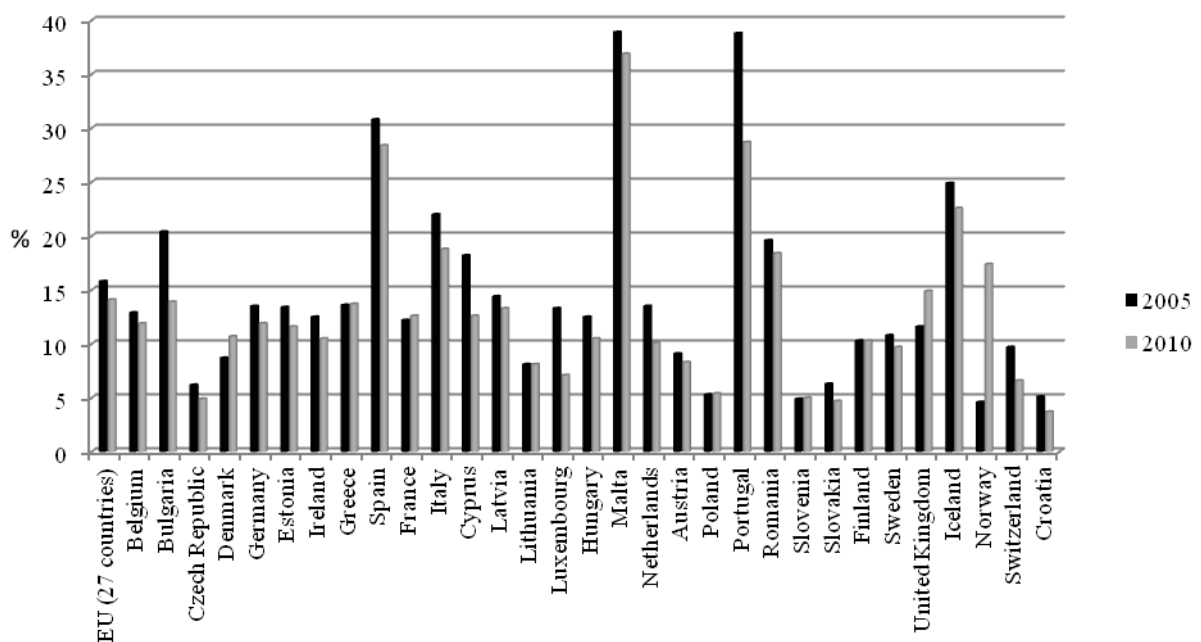
3. Student departure

In the previous introduction it was mentioned that the European Union regards it to be its strategic objective on the field of education to reduce the rate of early school leavers in the group of population aged 18-24 below 10% by 2020. The achievement of the member countries, with the exception of Norway and Great Britain, has improved by 2010 if compared to the data by 2005, but while the attrition rate was around 5% in the Czech Republic, Slovakia and Slovenia, it reached or exceeded 25% in Spain, Portugal and Malta (see Figure 2).

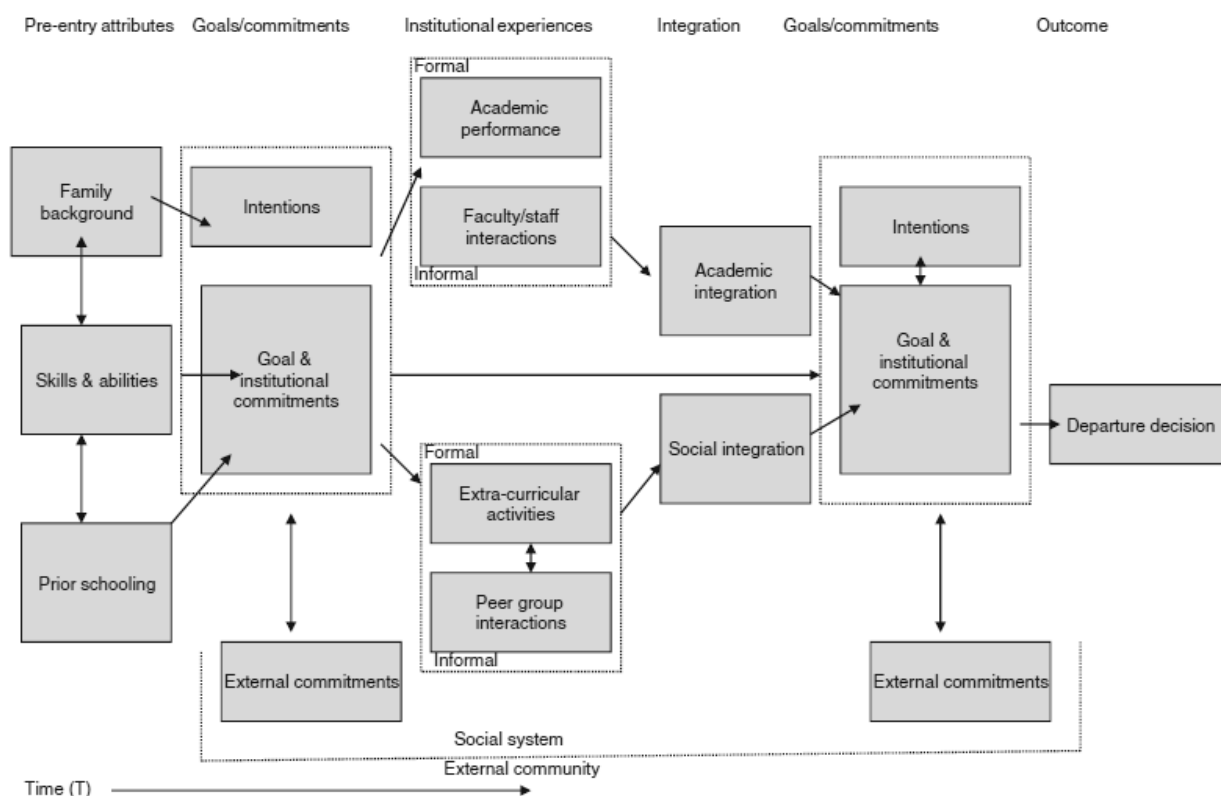
We must note that the above mentioned data allowing international comparison provide information about a segment of the 18-24 age group which at most have completed secondary education. No considerable information is available for our aims about higher education, which fact shows that although American researchers started to examine of attrition in higher education in the 1970s, the examination of the underlying causes of the phenomenon is less studied in other countries (Yorke 1999; Hovdhaugen 2009). In spite the above mentioned fact, some publications mention that the attrition rate in certain groups of students in the USA exceeds 40%-60% (Braxton et al. 2004; Mannan 2007), and examples show that in some institutions in Norway more than half of the students depart before completing their studies (Hovdhaugen 2009). These data also make us assume that the attrition rate of students in higher education is likely to be much higher than in secondary education.

The decision of the student to leave the institution before his training is completed is backed by a complex, interrelated system of numerous factors, which Braxton (2000) aptly called the “departure puzzle”. The label not only refers to the high number of the influencing factors and the close relationship between them, but it also reflects the impact that attrition makes on the enrolment results of the institution and on its financial and social judgment (Braxton et al. 2004; ASHE 2007). All research on attrition, almost without exception, refers to Vincent Tinto’s Interactionist Theory (Figure 3). This theory suggests that the underlying causes of attrition can be characterised by the quantity and quality of continuous interactions between the student and his environment. The student, possessing a pattern of characteristics, enrolls at an institution and begins his studies. On the one hand, characteristics at this entry directly affect the decision to persist or leave the institution over time; on the other hand they also have an indirect effect by influencing the initial commitment at the time of enrolment to the institution and to personal objectives.

Figure 2. Early leavers from education and training (% of population aged 18-24 with at most lower secondary education and not in further education or training)



Source: based on EUROSTAT (2012)

Figure 3. Tinto's model of student departure

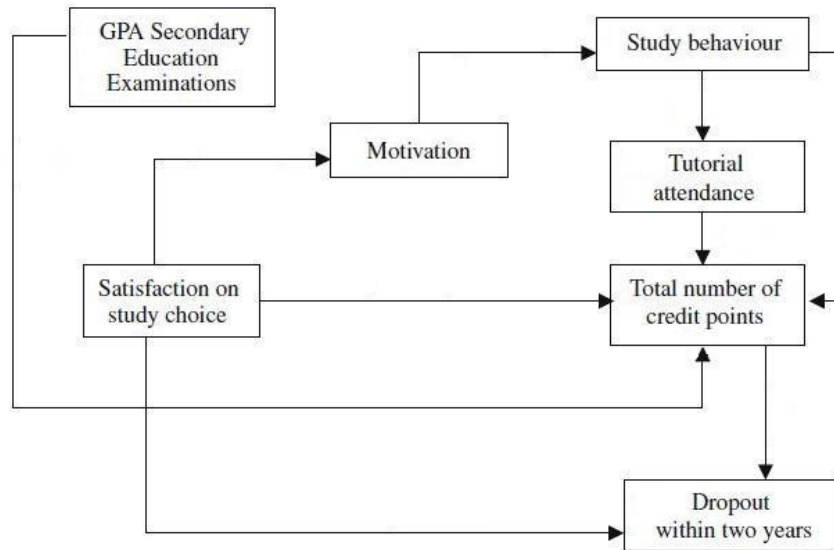
Source: based on Tinto (1993)

While living his life as a student, the individual not only grows in knowledge, but gains diverse experience, creates contacts with others, learns about the institutional expectations and standards, develops commitment, which will help him to adapt both academically and socially. Depending on the achieved degree of integration, the level and quality of the commitment undergoes continuous change, which will affect the student when making a decision whether to stay in the institution or not (Tinto 1993, 1975).

An almost infinite number of researches have attempted to prove whether Tinto's hypotheses are correct or wrong when examining certain types of institutions or different levels of training, and which of those give more importance to certain variables, compared to other ones, in the model. There may be sociological reasons behind attrition, like in Tinto's model, institutional characteristics like structure, size or available resources, psychological factors like individual performance or efficiency, and cultural or economic factors (ASHE 2007). Further influencing factors studied in researches are gender, ethnicity, institutional support services, finance-related features, integration courses, major subjects of study (Herzog 2005), attained academic results or participation in clubs and student communities (Johnson 1996).

Specifically Suhre et al. (2006) examined the role of training satisfaction in their research based on Tinto's model (Figure 4). They assume that if the student gets dissatisfied with the training when beginning his studies or soon afterwards, he/she will lose motivation and will conduct studies inadequately or in a poor quality, which will lead at the end to drop out.

Above the previously mentioned factors, student loyalty, the attachment of students to an institution and fidelity are given particular emphasis by other researchers as Alves and Raposo (2007) or Méndez et al. (2009). The following section aims to underline that student satisfaction is not enough to decrease attrition and to prevent student departure; much more attention should be paid to the efforts of the institution to generate student loyalty from the first moment. Therefore we will first attempt to reveal the special features of loyalty in higher education, then we will examine which factors affect student loyalty.

Figure 4. Impact of degree program satisfaction on the persistence of college students

Source: based on Suhre et al. (2006)

4. Components of loyalty

The definition of loyalty is extremely varied in the marketing literature. Some authors define it as repurchase, while others have a more complex approach and describe it as an emotional bond or commitment. Classic models about loyalty emphasise the dimensions of perceived quality and satisfaction as the most important factors affecting loyalty. These models, based on empirical research, justified that perceived quality will lead to satisfaction and satisfaction leads to loyalty (Grönholdt et al. 2000; Martensen et al. 2000). Although there are divided opinions considering what a student's status is in a higher education institution (Hill 1996; Brookes 2003; Sirvanci 2004), if we consider the student to be the consumer of a service (higher education), we may use the above mentioned dimensions of loyalty in this context (Méndez et al. 2009). It must also be noted that in long-term organizational (B2B) relationships the dimensions of loyalty are even more complex. Further factors of loyalty, such as trust, fairness, commitment and willingness to cooperate are also investigated in these markets. The importance of long-term relationships in higher education is emphasised by several authors as well. Therefore, if we assume that student loyalty is one of the decisive factors of attrition, it is not enough to consider perceived quality and satisfaction, but because we are studying a long term relationship and a service, the above mentioned dimensions should also be investigated.

4.1. Loyalty in higher education

Loyalty in higher education is shaping the kind of relationship with the students which will significantly affect the future operation of the institutions. One of the most important factors of the competitive edge of an institution may be loyalty: on the one hand obtaining a new student is more expensive than keeping an old one; on the other hand loyal students support the institution with their word-of-mouth, i.e. their recommendation may increase the number of new entrants. Numerous research shows that students who are bound to their *alma mater*, produce a very powerful effect on the enrolment process as well as on the later support of the institution (Henning-Thurau et al. 2001; Alves and Raposo 2007).

What dimensions of student loyalty are worth studying? What factors may generate attachment of the students to the institution and what marketing strategies or marketing tools can help to establish loyalty? In the following paragraph we briefly summarise what dimensions can be used to describe loyalty in higher education, how the specification of the justified dimensions gets realised in this context, and to what extent they can help reduce drop-out. Out of the factors affecting loyalty, we examine the factors of perceived quality, satisfaction, trust, commitment and fairness, the significance of which Andaleeb (1994) also emphasised in his research.

4.2. The role of perceived quality in loyalty

Education is a service process in the course of which both sides spend a very long time in the “system”. Then, the process has a great significance when the consumer evaluates the quality of the service. Our opinion concerning the quality of higher education has been mentioned when previously discussing the topic of value added. Our preference in determining quality in higher education is the wide interpretation of Tam (2002), according to which student progress, i.e. value added, has to be interpreted holistically and not only in intellectual terms, but also social, emotional and cultural development are to be taken into account (Tam 2002). We believe that “student life” is an extended period of the human lifetime during which not only new knowledge is acquired by the individual but he/she takes part in events and becomes part of processes which result in a particular socialisation contributing to the establishment of networks of personal connections that may be capitalised during the career. As a result of the long-term relationship, each member of the institution is connected to each other, they create a community, and this will create a support of the institution or loyalty (Dirks 1998; McAlexander et al. 2004). Previous research supports that quality detected in the field of higher education is much more “people-based” than “equipment-based” (Thomas 1978). Moreover certain authors found that university educators invest much more energy into their communication with the students than other service providers (e.g. financial institutions) to support their customers (Tang and Zairi 1998).

4.3. The role of satisfaction in loyalty

Long time participation in the process also means that the student gets very much involved in the service process. Thus, compliance with consumer expectations should not be interpreted for two reasons: on one hand the expectations are much more diverse, the expectations of the students can hardly be segmented, rather, they are unique; on the other hand in this service process there is a double role. The role of the teacher or the lecturer gains higher significance in this process, and the context of “consumer and service provider” being shaped here is quite different from other services where the customer is right to require expected quality. In education, and particularly in higher education, it is not only the customer who makes the evaluation, but rather the service-providing lecturer. Students tend to avoid making much effort, although this does not comply with their long term interests, while lecturers strive to get the most from the students. The quality of the service will be the result of this fragile double game. The consequence of the above mentioned factors is that it is extremely difficult to study satisfaction in higher education; therefore, the opinions concerning what can be considered student satisfaction vary considerably in the literature.

Models assessing student satisfaction are hugely varied, although overlaps in dimensions can be observed and in the measurement models the main variables can be identified. Alves and Raposo (2007) set up a remarkable model to measure active students’ customer satisfaction. In their complex model, hypotheses are set up by separating satisfaction history from its consequences. Variables of satisfaction history consist of expectations, perceived quality, image and perceived value, while loyalty and word-of-mouth are considered to be the consequence of satisfaction. According to their hypotheses, there is a significant relationship between student expectations and satisfaction: the expectations have a direct and indirect effect on the perceived quality; the institutional image has a significant impact on students’ expectations; and the image also increases student loyalty. These authors also assume that if students are satisfied with the institution, they will demonstrate their loyalty and they will use positive word-of-mouth to recommend the institution to others. They draw also attention to the fact that student satisfaction variables tend to transform and they have an indirect impact on quality evaluation. The main result of their research is that student satisfaction increases loyalty through spreading positive word-of-mouth. A different approach is used in the model by Kara and DeShields (2004), where satisfaction is measured with the intentions the students and their attachment to the institution.

4.4. The role of trust and commitment in loyalty to higher education

The role of trust in higher education has been less studied than satisfaction and quality issues, but the importance of trust has not been questioned in literature (Massy 2003; Enders 2005; Harvey-Williams 2010). Although the majority of those involved believe that it is necessary to establish student trust, the various theoretical approaches are uncertain about what means can be used to achieved the trust of students (Stensaker-Harvey 2011).

Specifically Stensaker and Gornitzka (2009) attempted to bridge the gap by defining trust from two viewpoints. In higher education, the trust of students can be perceived as faith in the reliability of the institution which builds up in the course of personal experience between the student and the staff of the higher education institution. Long-term and long-lasting relationship between the students and the institution can only be created if the students regard it to be trustworthy. The less the student is dedicated to the institution, the more difficult it becomes to maintain confidence between the two parties (Andaleeb 1994).

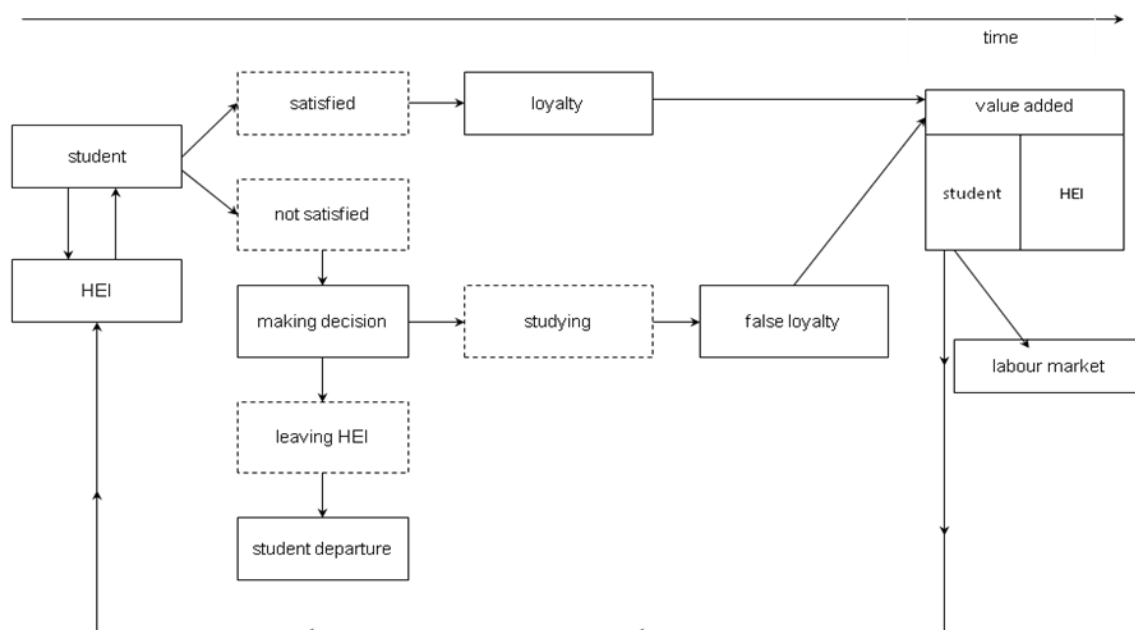
According to Tinto (1975, 1993) the commitment of the student is determined by the degree of integration into the surrounding segment of society (e.g. friends or fellow students), which is backed by the degree and quality of compatibility between personal abilities, skills, norms and values, and the expectations on the system of the norms and values propagated by the institution.

5. Presentation of our model extended to include loyalty and attrition

We have presented that in higher education several authors emphasise the importance of the role of loyalty affected by perceived quality, satisfaction, trust and commitment. Therefore we assume that these concepts also play a role in attrition and value added. Thus, our previously outlined model of value-added becomes expanded to integrate the dimension of loyalty (Figure 5). In this sense, our initial suppositions are still the following:

1. Higher education as a long-term special service process leads to student development, which development can be described not only as a widening knowledge of their profession, but includes experiences gained while leading the life of a student, new social relationships and the adjustment of norms and system of values.
2. The resulting value added is the product of the joint activities of the institution and the student, which greatly depends on the quality, quantity and intensity of the interactions of the two sides, and on the investment of both parties into their relationship. The more they invest, the greater the return on investment for both becomes.
3. The quality output of the efforts, which varies considerably during the service process and the consideration of which is frequently modified by both parties, can be interpreted only in the long term.
4. The extent of value added will affect the input side of the service process.

Figure 5. Higher education as the augmented model of value added of the service



Source: own elaboration

Our further suppositions are:

5. During the time spent in the training, the evaluation of the quality of higher education will be modified just as well as the student satisfaction with the service.
6. Changes in satisfaction may become more positive or negative.
7. Student's satisfaction has an impact on his persistence in the institution.
8. During the training period, a satisfied student becomes gradually integrated and more committed to the institution.
9. A satisfied student becomes loyal to the institution.
10. A part of dissatisfied students leave the institution prior to the completion of training time, they drop out.
11. Another part of the dissatisfied students, despite not being satisfied, continue their education, will gradually integrate, but will not become committed to the institution.
12. Those students who stay without being satisfied, develop a false loyalty.
13. The more loyal a student is, the greater the value added at the end of the process becomes.

Our model reflects an input-output approach. First, the candidate with given characteristics, such as age, sex, educational level and family background, is given an offer by a higher education institution for a given course. The institution has a kind of structure, organizational culture, human resources and a range of training and services. During the training period in higher education as a service process, there is continuous interaction between the student and the institution. The student participates in the training, uses all the services the institution has to offer, develops contacts not only with his teachers, but with other members of the staff, with fellow students and other people in his environment as well.

Then, if the student is satisfied, his social and institutional integration increases, which increases his commitment, so with time he becomes progressively loyal to the institution. If the student is not satisfied, then reaching a critical level of dissatisfaction, he is compelled to make a decision. Either he leaves the service process and departs from the institution before the completion of the training time, he drops out, or continues his studies despite being dissatisfied. In this case, the social and institutional integration becomes a slower process than in the case of a satisfied student and, as a result, a compelled form of loyalty is generated.

During higher education, in the course of the service process, value-added is generated both by the student and the institution, and the amount of value added depends on the degree of loyalty. The resulting value for the higher education institution is experienced in students' feedback, their evaluation and the pattern of changes in their needs and expectations from the services during the training period, while the student experiences the generated value through the process of participation in the training, exhibiting effort and energy, the result of which is not only a gain of professional knowledge but also a development of attitudes and new relationships. When entering the labour market, the amount of the value added will have an impact on the student's chances to find placement opportunities and on his labour market activity. The increased value on the side of the students, at the same time, has an indirect effect on the higher education institution because it gains recognition as a good quality training institute if its students make headway on the labour market, because strong alumni relations start forming, and because students communicating their good opinion give an incentive to others when they make their education decisions.

6. Conclusion

In our study, advancing our examination of value added in higher education, we completed our model with the factor of attrition. We believe that attrition constitutes a loss for all concerned parties, it is therefore necessary to prevent it. We regard the generation of student loyalty at their entry and strengthening it throughout the process of education to be an important tool in reducing attrition.

As an attachment to the institution, loyalty is important in all its aspects, but it may be of particular importance when attempting to decrease attrition. Because of reasons detailed above, we made a revision of factors affecting student loyalty and came to the conclusion that attachment to the higher education institution is different from consumer loyalty as regarded from the marketing perspective.

Due to the long-term relationship, loyalty is more affected by dimensions examined at organisational markets by market research. Thus in our study, beyond the dimensions of quality and satisfaction, we have underlined the role of trust and commitment when reviewing student loyalty to the higher education institution.

Based on this model, our hypotheses are to be tested with deep interviews and focus group research. Deep interview tests are planned to be conducted with early leavers of institutions, while focus group discussions with university leaders and experts. Based on the results of the qualitative research, a questionnaire survey is planned to be carried out to define the causes of attrition and find ways to reduce it. The purpose of the research and the model is to provide marketing tools and strategies to higher education institutions to enable them to increase student loyalty and contribute to the prevention of attrition.

References

- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management and Business Excellence*, 18(5), 571-588.
- Andaleeb, S. S. (1994). Technical complexity and consumer knowledge as moderators of service quality evaluation in the automobile service industry. *Journal of Retailing*, 70(4), 367-381.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *The III-structured problem of college student departure. ASHE-ERIC Higher Education Report 30(3)*. San Francisco: Jossey-Bass.
- ASHE (2007). *Major theoretical perspectives on student success in college. ASHE Higher Education Report 32(5)*. San Francisco: Jossey-Bass.
- Bennett, D. C. (2001). Assessing quality in higher education. *Liberal Education*, 87(2), 40-46.
- Braxton, J. M. (2000). *Reworking the student departure puzzle*. Nashville TN: Vanderbilt University Press.
- Brookes, M. (2003). Higher education: marketing in a quasi-commercial service industry. *International Journal of Nonprofit and Voluntary Sector Marketing*, 8(2), 134-142.
- Dirks, A. L. (1998). Higher education in marketing theory. Published on-line by author. <http://webhost.bridgew.edu/adirks/ald/papers/mktheor.htm>. Accessed 28 March 2006.
- Enders, J. (2005). Higher education in times of discontent? About trust, authority, price and some other unholy trinitities. In I. Bleiklie, & M. Henkel (Eds.), *Governing knowledge: a study of continuity and change in higher education* (pp. 31-48). Dordrecht: Springer.
- Grönholdt, L., Martensen, A., & Kristensen, K. (2000). The relationship between customer satisfaction and loyalty: cross-industry differences. *Total Quality Management*, 11(4/5/6), 509-514.
- Harvey, L., & Green, D. (1993). Defining quality. *Assessment and Evaluation in Higher Education*, 18(1), 9-34.
- Harvey, L., & Williams, J. (2010). Fifteen years of quality in higher education. *Quality in Higher Education*, 16, 3-36.
- Henning-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and managing student loyalty: an approach based on the concept of relationship quality. *Journal of Service Research*, 3(4), 331-344.
- Herzog, S. (2005). Measuring determinants of student return vs. dropout/stopout vs. transfer: a first-to-second year analysis of new freshmen. *Research in Higher Education*, 46(8), 883-928.
- Hetesi, E., & Braxmair, Z. (2011). University impact and impress on student growth – a conceptual model of the measuring value added in a higher education institution. In I. V. Pereira (Ed.), *Proceedings of the 10th International Congress of the International Association on Public and Nonprofit Marketing* (pp. 1-8). Porto: Universidade do Porto.
- Hill, N. (1996). *Handbook of customer satisfaction measurement*. Hampshire: Gower Publishing.
- Hovdhaugen, E. (2009). Transfer and dropout: different forms of student departure in Norway. *Studies in Higher Education*, 34(1), 1-17.
- Johnson, G. M. (1996). Faculty differences in university attrition: a comparison of the characteristics of arts, education and science student who withdraw from undergraduate programs. *Journal of Higher Education Policy and Management*, 18(1), 75-91.

- Kara, A., & DeShields, O. W. (2004). Business student satisfaction, intentions and retention in higher education: an empirical investigation. *MEQ*, 3(Fall), 1-24.
- Mannan, A. (2007). Student attrition and academic and social integration: application of Tinto's model at the University of Papua New Guinea. *Higher Education*, 53(2), 147-165.
- Martensen, A., Gronholdt, L., & Kristensen, K. (2000). The drivers of customer satisfaction and loyalty: cross industry findings from Denmark. *Total Quality Management*, 11(4/5/6), 544-553.
- Massy, F. W. (2003). *Honoring the trust: quality and cost containment in higher education*. Bolton, MA: Anker Publishing.
- McAlexander, J. H., Koenig, H. F., & Schouten, J. W. (2004). Building a university brand community: the long-term impact of shared experiences. *Journal of Marketing for Higher Education*, 14(2), 61-79.
- Méndez, J. R., Párraga, A. Z. V., Kari, A., & Urrutia, A. C. (2009). Determinants of student loyalty in higher education: a tested relationship approach in Latin America. *Latin American Business Review*, 10, 21-39.
- Pascarella, E. T., & Terenzini, R. T. (2005). *How college affects students*. San Francisco: Jossey-Bass.
- Sirvanci, M. B. (2004). Critical issues for TQM implementation in higher education. *The TQM Magazine*, 6, 382-386.
- Stensaker, B., & Gornitzka, Å. (2009). The ingredients of trust in European higher education. In B. M. Kehm, J. Huisman, & B. Stensaker (Eds.), *The European higher education area: perspectives on a moving target* (pp. 125-139). Rotterdam: Sense Publishers.
- Stensaker, B., & Harvey, L. (2011). *Accountability in higher education: global perspectives on trust and power*. London: Routledge.
- Suhre, C., Jansen, E., & Harskamp, E. (2006). Impact of degree program satisfaction on the persistence of college students. *Higher Education*, 54(2), 207-226.
- Tam, M. (2002). University impact on student growth: a quality measure? *Journal of Higher Education Policy and Management*, 24(2), 211-218.
- Tang, K. H., & Zairi, M. (1998). Benchmarking quality implementation in a service: a comparative analysis of financial services and institutions of higher education. Part I. *Total Quality Management*, 9(6), 407-421.
- Thomas, D. R. E. (1978). Strategy is different in service businesses. *Harvard Business Review*, 56(4), 158-165.
- Tinto, V. (1975). Dropout from higher education: a theoretical synthesis of recent research. *Review of Education Research*, 45, 89-125.
- Tinto, V. (1993). *Leaving college: rethinking the causes and cures of student attrition*. 5th ed. Chicago: The University of Chicago Press.
- Yorke, M. (1999). *Leaving early: undergraduate non-completion in higher education*. London: Falmer Press.