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# Study of Conditions Leading to Persistence and Success in University Distance Education: S@MI-Persévérance

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## ABSTRACT

Universities are increasingly challenged by the problem of students abandoning their studies at the undergraduate and the graduate levels. In the Province of Québec, Canada, more than one third of full-time students drop out before program completion (Ministère de l'Éducation du Québec, 2001). The drop-out rate rises to 59,5% when applied to part-time students (MÉO, 1998). Québec-based research shows that students abandon their studies at various stages of their programs, but that the problem is particularly acute during the first year of university study. This early drop-out phenomenon holds true for traditional on-campus studies as well as for distance offerings. A research team from three universities (offering campus and distance studies) has developed a multi-media support environment (S@MI-Persévérance) featuring tools to stimulate conditions favouring success and persistence in university studies. The electronic environment created by the researchers allows educators to determine the learning characteristics of students at University entry. These characteristics include their learning styles, their learning preferences, their conceptions of learning, their motivation, their degree of commitment, their learning difficulties, etc. This portrait of the learner allows the researchers to personalize S@MI-Persévérance according to the needs of the individual.

## KEYWORDS

*Persistence, drop-outs; university studies, learning characteristics, support tools, S@Mi-Persévérance.*

## Introduction

North American universities are increasingly challenged by the problem of students abandoning<sup>1</sup> their undergraduate and graduate programs. In the United States, 28.5% of students drop out before completing their undergraduate degrees. (Tinto, 1993, quoted by

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<sup>1</sup>In this study the term "abandoning" and the term "dropping out" refers to the action of a student who voluntarily leaves a university program without having obtained the diploma.

Braxton, Milem, and Sullivan, 2000). In the engineering field, about 50% of students discontinued their studies before degree completion in the nineteen eighties (Haydon and Hlloway 1985: quoted by Levin and Wyckoff, 1995).

In the Province of Québec, Canada, more than 33% of full-time students abandon their studies ((Ministère de l'Éducation du Québec, 2001) and 59,5% of part-time students abandon their studies (MEQ, 1998). Research undertaken in Québec shows that while students abandon at all stages of their programs, the drop-out rate is particularly pronounced during the first year of studies in higher education, both on campus and among distance students.

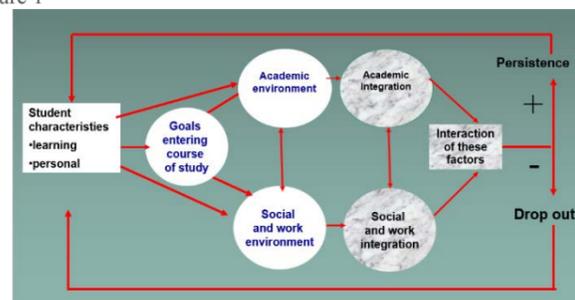
A high drop-out rate has major consequences for society, for universities, and for the students themselves. A society must maintain a high level of perseverance in university studies if it is to remain competitive in the context of a global economy which is increasingly knowledge-based. Universities play a particularly important role in preparing highly-qualified professionals to meet the needs of the evolving economy. Providing access to university studies for an increasing number of students is not enough: the institutions must also offer a high quality of initial training as well as continuing education programs for those who wish to pursue their studies on campus or at distance. As the Québec Superior Council of Education states (CSE, 2000: 5): "*the development of knowledge, accelerated by information and communication technologies and the global economy, calls upon the universities to fulfill their collective mission and, in this context, education becomes an advantage for the student and for society.*"

Since dropping out often occurs in the first months of university studies, (Langevin and Ménard, 2002) we hypothesize that it is at this stage that students feel at once less competent, less autonomous, and more isolated. It is for this reason that universities should provide, right from the start, an environment which stimulates the development of learning competencies and autonomy among new students, particularly those at risk. According to Tinto (1999), any measures established to stimulate persistence in studies should take into account the learning characteristics of the students to be successful. What characteristics should be taken into account to better counter the drop-out phenomenon in universities? Which weigh most heavily in the student's decision to abandon or persevere in a course of studies? Is there a characteristic profile of a student who tends to drop out as opposed to a typical profile of one who tends to persevere? Are there help mechanisms and tools corresponding to the needs of students demonstrating the various profiles? To what extent can an online learning environment rich in help mechanisms and tools support and successfully promote persistence and academic success? Answering these questions will help teachers, tutors, and other educators to identify the learning variables linked to abandoning studies. They would then take into account the variables to which they can reasonably respond in the course of their duties in working with learners on campus and at distance.

In this account we will emphasize early results of the study of the conditions leading to Persistence and success in university studies: an analysis of the means of supporting students as a function of their learning characteristics. Let us first describe the factors linked to *the learning characteristics of students* taken into account in examining the drop-out versus Persistence phenomenon in university studies. Next, we will review those conditions leading to persistence and success in university studies relating to "encadrement", a term referring to those support measures educators put into place to support students beyond the classroom (Gauthier, 2004). Finally, we describe the conceptual model and prototype, designed to

## Factors leading to persistence or abandoning university studies

In developing our prototype we adapted the work of Kember (1990) and of Tinto (1992, 1999) regarding the factors leading to abandoning or perseverance in higher education studies as illustrated in Figure 1



Learning characteristics (see Gibson and Graff, 1992; Pageau and Bujold, 2000; Garton et al, 2000; Bédard and Viau, 2001; Sauvé and Viau, 2003; Santosh et al, 2004) including prior knowledge, learning styles<sup>2</sup>, learning strategies<sup>3</sup> and management strategies<sup>4</sup>, motivation<sup>5</sup> in the learning context, etc. Among these learning characteristics, motivation has often been studied in various educational settings (Reeve, 2003), including the distance education milieu (Kember, 1990; Depover et al, 1998; Vallières and Rivière, 2003; Gauthier, 2004). As far as other learning characteristics are concerned, Garton et al (2002), DfES (2002) and Prendergast (2003) conclude that taking them into account in teaching increases the chances of persistence and success of students.

Personal characteristics include socio-demographic variables such as gender, age, job status (technical, professional) family situation (married, single, single parent) and prior education. According to Kember (1990), these characteristics are significant entering university inasmuch as they influence the goals of the student. They do not, however, directly effect the decision to abandon or to pursue.

In undertaking studies in higher education the student's goals may be strictly *extrinsic*, that is to say the student may take no particular interest in his or her courses but aims only for benefits related to higher salaries, promotion and prestige. Goals may, on the other hand, be

2 Learning styles refer to a series of distinctive behaviours – cognitive, affective, physiological and sociological, serving as relatively stable indicators of how the student sees and treats information, interacts and responds to the learning environment

3 Learning strategies refer to a series of actions and means, some observable, (behaviours, thoughts, techniques, tactics) employed by an individual with a specific intention and adjusted according to the situation. These strategies vary according to the knowledge sought.

4 Management strategies refer to strategies used when a person manages and assumes responsibility for his learning.

5 Motivation in this study deals with the perceptions of the student of himself or herself (one's self and one's competence), of value, and of locus of control. More precisely, the perception of one's competence to successfully complete a task which may involve some uncertainty as to outcome: the perception of value is the judgement a student places on the interest or the utility of a learning activity as a function of the goals of the student, and the perception of control refers to the degree of autonomy and control that the student exercises with regards to the unfolding and the outcome of a given activity.

*intrinsic*, in the case of students who see that their course will help them personally and in the quality of their work produced in their chosen careers.

The quality of the "encadrement" (attention to the needs of the students) offered by the professoriate, as well as the quality of administrative support, are two components of the academic environment in a given institution. We will return to this variable below. To this end, Gauthier (2004) defines the institutional conditions for an "encadrement" leading to successful completion of a program of studies: establishing a support system for beginning students to allow them to verify their cognitive and affective dispositions, to carefully consider the stakes of succeeding in university studies, and to prepare their learning and management strategies. This early measure allows the student to reduce the impact of the obstacles he or she will encounter during the first term of studies and therefore maintain academic motivation. The signature of a teaching and learning contract between the student and the professor or teacher (a re-negotiable contract) allows the student to define his or her learning time and space, to self-evaluate, to be evaluated (both formative and summative) to discuss and adjust learning strategies, to modify perceptions of what is at stake, to modify perceptions of extrinsic goals, to delineate new intrinsic goals, and to globally re-negotiate and find the right balance with regard to the various components driving his or her motivation to pursue studies in higher education. The actions of the professor or tutor permit the student to grow as an autonomous learner through the regular evaluation of his or her strengths and difficulties, through frequent suggestions for changes or clarification of learning priorities, and through advice with regards to disciplinary as well as methodological aspects of the academic developmental process.

Successful integration into the academic environment happens when the student understands and adopts the rules and conventions governing learning in the specific institutional setting and when he has resolved his learning difficulties, notably difficulties related to approaches to studying, related to managing the various demands of the program, related to inadequate preparation in certain areas, and related to insufficient mastery of reading and writing competencies (Lafontaine and Legros, 1995; Romainville, 1998; Debeurme, 2001; Carter and Langevin, 2001: 355).

Considerations of the social and work environment of the student touch upon his or her life beyond the institutional setting: the encouragement of friends, family, and working colleagues, as well as their support, the provision of working conditions favouring the pursuit of studies (flexible scheduling, time management, valuing studies, etc.). Social and family integration is complete when the student is able to make his or her studies a priority and at the same time overcome difficulties related to the challenge of reconciling work, family, and Academic responsibilities.

### **Help mechanisms and support tools leading to persistence in university studies**

Few studies have been undertaken to determine the impact of professor and tutor "encadrement" on campus and in the distance education setting (Sauvé and Viau, 2003). However, the work of Bertrand et al (1994), Crespo and Houle (1995), Deschênes (2001), and Chomienne and Poellhuber (2004) all refer to the lack of "encadrement" on the part of professors as one of the reasons students most often mention to explain abandoning their studies. What do we mean by the "encadrement" in the context of universities studies?

"Encadrement" consists of the activities designed to provide individualized help to learners. They are interventions involving individuals and groups of students designed to foster the kind of social and personal development that allows the student to take control of his or her own education. We can classify these interventions according to a system developed by Deschênes and Lebel (1994).

Our research study is establishing a support system, then, consisting of the following help mechanisms and support tools:

(i) *methodological tools* allowing students to acquire, to practice, or to improve (1) their learning strategies (e.g. how to place, in a table or a figure, information provided during a demonstration), (2) cognitive strategies (e.g. how to conduct research and cite sources) and (3) management strategies (e.g. agenda and time management);

(ii) *communication tools* allowing students to know and to understand the organizational structures of the institution they attend (e.g. finding one's way in the administrative jungle);

(iii) *a virtual tutor* including interventions by professors and tutors in the first session of studies as described by Gauthier (2004);

(iv) *motivational tools* favouring autonomy and stimulating and supporting interest, engagement, and persistence in the pursuit of studies.

In order to try out all of these tools and mechanisms, a multi-media environment designed to encourage the pursuit of higher education studies will be accessed by all students in the research study.

### **S@mi-Persévérance: A Prototype**

The multi-media environment to support persistence in university studies (S@MI-Persévérance)<sup>6</sup> offers students a personalized environment taking into account their learning context, their personal characteristics, their learning profiles, their learning goals at entry, their learning as well as their work and family difficulties, in proposing help mechanisms and support tools adapted to their situation. To learn more please consult the following Web address: <http://sami-persistence.savie.ca><sup>7</sup>.

### **Conclusion**

In order to answer the question "What are the support and "encadrement" tools adapted to those characteristics likely to lead students to abandoning their first term of university studies?", a study financed by the Fonds québécois de la recherche sur la culture et la société was established. Various factors leading to abandoning studies and to persistence in the pursuit of studies were examined and help mechanisms and support tools were placed on line in a prototype of a multimedia system designed to stimulate persistence in university studies (S@MI-Persévérance). This system will be tested with undergraduate students (from the Université de Sherbrooke, the Université du Québec à Rimouski: Campus de Lévis, and the Télé-université) enrolling for the first time in university studies.

We hope that the results of this study will allow us to (1) better understand the "encadrement": measures favouring persistence among students new to the university; (2) to gauge the extent to which learning characteristics, current personal and family difficulties as

<sup>6</sup> This environment is intended as an adaptation of SAMI-DPS.

well as socio-demographic factors (sex, age, prior learning) impact abandoning or persisting in one's first year of university studies; (3) to sensitize professors and tutors to diversify their "encadrement" (on campus and at a distance) to take into account the clientele at risk and their learning difficulties; (4) to make available support tools in the college and university environment and, finally (5) to pursue research designed to predict factors leading to abandoning of university studies and to develop strategies to intervene and to ensure an "encadrement" favouring persistence and student success.

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