

DROPOUTS OR DISAPPOINTED? DIFFERENT REASONS FOR DROPPING OUT OF HIGHER EDUCATION

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Resumen

La deserción estudiantil ha sido una preocupación permanente, ya que la mitad de los estudiantes no logra concluir sus estudios. Varias investigaciones sugieren una amplia diversidad de causas posibles, desde factores personales hasta características institucionales. Sin embargo, estos estudios suelen analizar datos de estudiantes, sin entrevistar a los desertores. En este estudio les preguntamos sus motivos para abandonar los estudios y por sus actividades actuales. Aunque hay diversas razones para el abandono, la variedad no es muy grande. Discutimos algunas medidas para incrementar la retención y otras que no mejorarían la situación.

Palabras clave:

- Deserción
- Retención
- Currículo
- Mercado de trabajo
- Capital educativo

Abstract

Student dropout rates have been a constant concern, as half of all students never complete their studies. Research indicates a wide variety of possible causes, ranging from personal to institutional characteristics. However, these studies analyze student behavior, without interviewing student dropouts. In this study we asked student dropouts about their reasons for abandoning their studies. The variety of reasons turned out not to be as diverse as previously thought. We discuss several actions a university could undertake, and some that should be avoided, in addressing this problem.

Key words:

- Dropouts
- Retention
- Curriculum
- Labor market
- Educational capital

*Politics is the art of looking for trouble,
finding it everywhere,
diagnosing it incorrectly
and applying the wrong remedies.
Groucho Marx*

Introduction

Student dropout rates have been a concern for decades, leading to numerous studies and proposals for improvement (Tinto, 1987; ANUIES, 2000, Gonzalez, 2006). However, despite multiple proposals and policies, the problem seems unabated.

This paper presents follow up data on dropouts in the areas of engineering and sciences at the Autonomous University of Puebla (BUAP) in Mexico. These two areas were chosen because, at first glance, they exhibit serious problems: in some programs the graduation rate after five years is below 30 percent.

The study is aimed at responding to two methodological shortcomings that characterize most of the body of research found in our review of the literature. The first is related to measuring the size of the problem: virtually all studies compare data from the admission year to graduation figures or to the degree awarding five years later, only to conclude that few students manage to finish their studies in a timely manner. Those who do not succeed –the majority of students– are considered failures or dropouts. Although they get these unflattering labels, generally there is no further research on the fate of those who vanish from the school administrative statistics. Some studies (Mallette and Cabrera, 1991; Adelman, 1999) indicate that some of these dropouts may have enrolled in other courses or institutions, or joined the labor market, perhaps with a higher rate of success than those who remained in the programs. If so, it would be doubtful to label them as deserters (*desertores*, is the term commonly used in Spanish). Thus, the first objective of this study is to find out what happened to those who left their studies unfinished.

A second research shortcoming has to do with the causes for desertion (dropping out). Here, the growing body of research has revealed an increasing number of potential explanatory factors, ranging from personal characteristics to institutional, social and economic factors. The analysis of these factors tends to compare those who completed their programs to those who failed to do so, thereby discovering that, indeed, the dropout is related to a variety of factors. But because these studies analyzed student trajectories, they lack information on the dropouts themselves. In this study we interviewed these students to know the reasons why they abandoned their studies.

The measurement of student attrition

Despite multiple investigations and recommendations, attrition is far from resolved. As indicated by Tinto (1989), in the United States, the dropout rate has remained fairly constant, at around 45% –throughout the 20th century– despite dramatic changes in the educational system and the number of students.

A fundamental problem is to estimate the actual size of the phenomenon. Tinto's (1989) data are derived from raw measurements: the calculation is based on "apparent cohorts" (Martinez, 2001), i.e. comparing the number of graduates in a year with freshmen five years before, assuming it takes on average five years to complete a program.

The data arising from this form of measurement are usually discouraging. For Mexico, the National Association of Universities and Institutions of Higher Education (ANUIES) mentions, from apparent cohorts an average student completion rate of 67.8% for 2003-2004 (ANUIES, 2006: 236-237) with a rate of 73.8% for women and 62.2% for men. But the unreliability of this calculation is shown by observing, in the same report for the same year, data from the state of Baja California Sur, reporting a 231.1% completion rate for women in private higher education, while the public sector reported a 49.5% completion rate for women and 32.9% for men.

The method is dubious, since those who graduate in a given year were not necessarily enrolled five years before. When using apparent cohorts, it is possible to find completion rates above one hundred percent. However, by applying the same calculation over time, it is also evident that the completion rate usually varies from year to year but has not improved significantly for decades. Thus ANUIES (2000) reports a 39% completion rate for 2000, which happens to be a lower rate than was reported in previous years: OECD (1997: 119), data from the Secretariat of Public Education (SEP) reports an average completion rate of about 54% for the 1980's. The reported rates are also quite variable: ranging from 51.2% (1981-82) to 62% (1990-91), going back to 49.4% (1993-94) and 39% for 2000.

The calculations for "real cohorts" paint an even grimmer picture. ANUIES (2000: 53) cites a study stating that "out of 100 students entering the degree program, 60 complete the subjects in the curriculum five years later and only 20 obtain their degrees. Of those who do, only 10% do so between the ages of 24 and 25 years, the others obtain their degrees between the ages of 27 and 60 years." Therefore, as an estimate, we can say that about half of Mexican students fail to finish their required courses within a period of five years and that only about 10% obtain their degree within this timeframe.

Something similar occurs in the rest of Latin America: as González (2006) and ECLAC (2003), point out, student attrition in Latin American universities ranges at around 50%, with variations between countries. In short, it remains a serious problem.

There are various speculations about the harmful effects of attrition. According to González (2006), dropping out might be causing physical and mental health problems in young people. Also it implies huge economic losses, for part of the public and private investments do not translate into a complete higher education.

However, these studies and data show several issues. The main one being that simply labeling all of those who failed to finish their programs on time as deserters. As Mallette and Cabrera (1991) and Adelman (2006) pointed out, this type of accounting considers those who finished after the established timeframe and those who moved to other programs or institutions as deserters. Some of them may not be dropouts, but simply learners who followed different paths than that of the 'ideal' student.

Another problem is that, due to a lack of follow up, it is assumed that deserters are less successful in the workplace or in their personal life than those who persisted, which supposes economic and social losses for individuals and society. However, by not interviewing dropouts, it is impossible to determine if this is so.

The causes for dropping out

A second area of complications concerning the potential causes for dropping out. With the increasing number of investigations the number of possible explanations also seems to grow. For example, in the early eighties when there was virtually no investigation, the Secretariat of Public Education's (SEP) conjectures were simple. The problem was due to three main factors: low grades in high school, marital status and the need for students to balance studying and working (ANUIES, 2001).

Later, several researches added other factors. Tinto (1993), Bean (1990) and Cabrera et al. (1992) have explored how educational institutions and students manage, or fail to, fit together. These studies led to explanatory models which included student personal factors (socioeconomic background), educational background (high school GPA); institutional factors (financial support for students, organizational culture); and academic factors (program demands, learning systems).

As a result, attrition now seems to be due to a swarm of variables, which may also interact. The university organization can create obstacles for the student (Tinto, 1993), the student may show traits that make his integration difficult (Bean, 1990) and the level of involvement felt by the student within the institution may also be important (Kuh, 2002).

Subsequent studies have confirmed the influence of these factors. Curricular flexibility, administrative organization, infrastructure as well as academic and social factors seem to influence retention. Thus, proper attention to students, which encompasses academic, familial, social and economic elements, would matter for youth when deciding about continuing or abandoning their studies.

Hence there is a growing literature that points toward multiple factors. The proposition emerging from the literature is that dropping out or continuing are heavily dependent on a successful engagement between the institution and the individual. This coupling is mediated by individual and institutional factors. Depending on the approach, the main problem may lay in the student or in the institution. Thus, to Tinto (1993), student integration is crucial, and occurs when the student adapts to the university values, norms and practices. He believes that this integration depends on institutional conditions such as contact with other members of the university community or teaching methods. This is consistent with Astin's observations (1984, 1997) about the importance of the organizational culture to generate a "coupling" between the individual and the institution.

Raush and Hamilton (2006) reviewed these quantitative factors when analyzing students who had decided to abandon their studies. The factors they found were difficulty in socializing and adapting to the university environment, the feeling of social and academic isolation as well as the feeling of a lack of integration. These studies have led to recommendations such as reducing group sizes, creating "learning communities" and tutoring systems (Tinto and Pusser, 2006).

This explanatory model, however, also shows several weaknesses. Metz (2004) points out that the explanation seems plausible for traditional universities, but notes that other factors may exert influence when it comes to dissimilar actors or environments, as in the case of students belonging to minorities, students in other age ranges, or atypical college options, including vocational programs.

Also, in the case of Latin America, some studies have indicated that the reasons for dropping out may be different. Gonzalez (2006) notes as potential factors the lack of financial support for students and institutions, high youth unemployment rates, shortcomings of previous studies, a lack of career planing, or a lack of teacher's qualifications and updating.

Latin American studies tend to focus on the particular socio-economic plight of youth. For Mexico, Zúñiga (2006) notes that the commitment or "engagement" aspect is not as relevant as in US studies. According to his study, factors such as economic conditions, the irregularity of academic trajectories, or the failing of subjects are more relevant in Mexico's context. Similarly, in the case of Chile, Donoso and Schiefelbein (2007) found that students' economic background plays a crucial role, generating great inequalities within the educational system. Schwartzman (2004), using data on youth from several Latin American countries, indicates that different socioeconomic backgrounds interact with different levels of quality in universities, producing very inequitable results.

From this perspective, poverty and inequality in relation to educational opportunities seem to play a greater role in dropping out than the institutional factors that contribute to a good fit between the institution and students.

However, other Latin American studies have identified factors that match Tinto's model. Casillas et al. (2007) indicate that there are different types

of learners with varied social backgrounds and different trajectories. Their study shows that within this range there are successful students with low cultural capital, next to students with high capital that end up abandoning their studies. De Garay (2004) notes that the existence of cultural activities in universities influences dropout rates, implying that the organizational environment does matter.

However, a problem for the analysis of factors causing attrition is the lack of empirical studies. As noted by Casillas *et al.* (2007: 11) regarding Bourdieu postulates on the social reproduction role played by the university: "In Latin America and Mexico, these premises were ideologically adopted without empirical foundation and accepted as valid." Similarly, the current discussion on possible causes for attrition is characterized by views which claim that Latin America is different and, therefore, the factors leading to attrition should be different too, without much empirical foundation to support these positions.

A second problem is that empirical studies on attrition in Latin America and other countries analyze student trajectories without following up on dropouts. These studies review records of student populations comparing those who did finish with those who quit. In fact, these studies point to a milieu of possible factors, but lacking any contact with dropouts, they are unable to reveal what were the main reasons for attrition, according to the dropouts themselves.

Research Questions

From interviews with dropouts, we will seek to answer several questions:

- First, we want to know the magnitude of the phenomenon. Therefore we will review where are the dropouts and what do they do.
- Second, we will review the reasons dropouts themselves provide to indicate why they made their decision to quit.
- The third aspect we will explore is whether the reasons for abandoning their studies vary among the student population. Here we consider both: student characteristics and institutional factors, in analyzing the interaction between the individual and the institution.

Study context

OWe opted to follow up on dropouts in the areas of engineering and science at the Benemérita Universidad Autónoma de Puebla (BUAP), as these two areas seem particularly worrisome: most of the programs reported a graduation rate of less than 30% (apparent cohort) after five years (Table 1).

Table 1
The context of the BUAP

The context of the BUAP									
Area	Exact Sciences			Engineering and Technology			Total BUAP		
Year	1999-2000	2004-2005	2009-2010	1999-2000	2004-2005	2009-2010	1999-2000	2004-2005	2009-2010
First entry	243	226	258	1582	2687	3079	7794	9505	11383
Re-entry	490	447	613	7602	8589	10707	24270	29429	38380
Total	733	673	871	9184	11276	13786	32064	38934	49763
Graduates	79	36	59	1659	940	1311	10057	4030	6073
Certificates issued	32	10	36	727	373	740	4322	1749	3795
Titles 2004/Class of 1999	4.1%			23.6%			22.4%		
Graduation 2004/Class of 1999	14.8%			59.4%			51.7%		
Titles 2009/Class of 2004	15.9%			27.5%			39.9%		
Graduation 2009/Class of 2004	26.1%			48.8%			63.9%		

Source: BUAP, 2000, 2005, 2010.

Table 1 confirms that the BUAP data show the same fluctuations observed nationally and internationally: enrollment is rising, but the numbers of students who complete their program and graduate rises and falls. The completion rate for the apparent cohort, is around 50% and about 20% for graduation. A striking fact is that indicators may improve without changing the net results: in 2009-2010, the BUAP had a higher enrollment than in 1999-2000, yet reported fewer students who completed their programs and fewer graduates.

Study organization and methodology

The questionnaire was applied in 2010 to individuals belonging to the classes of 2004 and 2006. These classes make up a universe of 7,590 freshmen.

The criterion for selecting dropouts was that the student had not re-enrolled in two consecutive semesters. This approach means that, as time goes by, the dropout rates change for each class: the 2004 class recorded in 2010 a dropout rate of 45.6% and the 2006 class, 29.2%.

From a total population of 7,590 freshmen and women, 2,706 dropouts were identified, which represented 35.65%. From this group we surveyed

749 young people, which represent 27.7% of identified dropouts. Thus, the sample has a margin of error of $\pm 0.305\%$, considering $p = q$ and a confidence margin of 95%.

The questionnaire applied a total of 34 questions. Of these, 24 are Likert scale format and refer to the possible factors for attrition mentioned in the literature, looking at both personal and institutional factors. The rest of the questions enquire about student characteristics (father's education, average scores in high school, admission test result) and about his or her activities at the time of the interview, plus an open question about the main reason for abandoning their studies. Data were obtained through home visits and by telephone, with the support of students carrying out their social service.

The actual size of attrition

First, we explored the actual size of the phenomenon. When dropouts were asked what they were currently doing, the following data resulted (Table 2):

It stands out that in reality, there are few dropouts that can be considered failures, only 1.6% report doing nothing, while 0.8% are job seekers.

We can distinguish two main groups of dropouts, those who decided to work (51.4%) and those who opted for another degree program, sometimes at a different university (41.7%). Together they constitute 93.1% of dropouts. There is also a 2.8% that did not really quit, but temporarily interrupted their studies to later return to the same program. These are definitely not dropouts, the label also seems dubious for those who chose another program.

In addition, these data must be placed within the Mexican context. A study of higher education graduates in Mexico, where graduates from nine universities were interviewed five years after finishing their studies, showed that the gross rate of unemployment among Mexican graduates is 14% and the net rate is 7% (De Vries and Navarro, 2011). Moreover, according to the same study, the problem of unemployment is greater for those who graduated from science programs, where the net rate of unemployment is 12.8%. Other studies indicate that about a third of Mexican youth are unemployed or have found work in precarious conditions therefore, they still live below the poverty line (Márquez, 2008). One third of youth is characterized as "NINI" (NEITHER-NOR): those that neither study nor work. In this context, it is noteworthy that 96.0% of dropouts in our sample either study or work.

It is important to stress then that most dropouts should not be considered as such, much less as failures. Rather, they appear to have balanced the costs and benefits and acted as *homo economicus* (St. John *et al.*, 2000). The choices they made seem to make sense, since they did not end up as unemployed, nor do these choices appear to have resulted in financial costs to the system or to society.

Table 2
What do you do now?

What do you do now?			
Current Occupation	N	Valid Percent	Cumulative percentage
Work	382	51.4	51.4
Studying in the same program at the BUAP	21	2.8	54.2
Studying in another program at the BUAP	237	31.9	86.1
Study in another institution	73	9.8	96.0
Nothing, unemployed	12	1.6	97.6
Housewife, children	12	1.6	99.2
Job seeking	6	0.8	100
Total	743	100	
No answer	12		
Total	749		

Source: BUAP Questionnaire

Important reasons for dropping out

To explore dropout causes, respondents were asked 24 questions (Likert scale, ranging from 0 = not at all to 5 = a lot). The following (Table 3) are the reasons reported (from the greatest to the least importance) for dropouts:

Beginning with relatively minor factors, contrary to other studies, it was found that family support, pregnancy, home or the program's social environment had very little significance. Factors such as laboratories or infrastructure, learning abilities or economic status also appear to hold little weight in the decision.

The main factors are difficult schedules and work, vocation linked to the profile of the program; and academic performance, aspects such as the failing of subjects, dedication and discipline, the subject difficulty and teaching methods.

In the reliability test, the first seven factors were found to have eigenvalues greater than 1, explaining 61% of the variance. Other factors have less influence on the explanation. Thus, attrition appears to be primarily due to three factors: schedules, vocation and reprobation.

Table 3
Reasons for abandoning studies, in order of importance

Reasons for abandoning studies				
Factor	N	Mean	Standard Deviation	% Who said "A lot"
1. Difficult schedule	743	2.24	1.834	16.4
2. It was not my vocation	744	2.10	1.973	19.9
3. Lack of dedication and discipline	744	2.06	1.574	5.8
4. I started failing subjects	743	2.05	1.626	7.9
5. Program profile	744	2.03	1.834	13.4
6. Difficult subjects	744	1.95	1.555	6.2
7. I was working	743	1.85	2.036	18.4
8. Teaching Methods	743	1.81	1.53	4.4
9. Teacher Attitudes	744	1.71	1.569	6.0
10. Difficult field of work	742	1.70	1.611	5.9
11. Difficult economic situation	744	1.64	1.808	11.3
12. Learning Skills	743	1.43	1.402	2.4
13. Not in the mood	744	1.33	1.465	3.8
14. Laboratories, equipment	743	1.33	1.487	3.1
15. Faced with difficult problems	743	1.28	1.758	8.9
16. Student Environment	739	1.05	1.375	3.8
17. Difficulty relating to peers	742	1.03	1.374	3.1
18. Not very useful program	742	0.91	1.248	1.7
19. Marital status:	744	0.78	1.421	4.2
20. I was not very convinced from the beginning	740	0.74	1.197	2.4
21. Place of residence	743	0.72	1.214	3.1
22. Pregnancy	744	0.48	1.298	5.2
23. My family did not agree	742	0.44	0.902	0.9
24. It was not important to my family	743	0.41	0.873	1.3

Source: BUAP Questionnaire

Students characteristics

It is worth wondering if these factors are correlated with student characteristics. To admit students into the programs, the BUAP takes into account their high school GPA (requires a minimum of 7 on a scale of 10) and the result of the College Board entrance examination (where the minimum is 550 on a scale of a 1000). The selection of candidates is based solely on these two factors, whether the student comes from a low income family, or if he or she works is not taken into consideration. Nevertheless, depending on the program, these two latter factors could influence the students academic trajectories. When analyzing the correlations between characteristics and factors the following results were obtained (Table 4):

The influence of family capital

We made a distinction between three groups according to family educational capital: those whose parents completed junior high school; those whose parents completed secondary education and those with undergraduate or graduate degrees.

Family educational capital influences attrition in two ways. First, the lesser the capital, there are often greater economic problems and it is more common for the student to work. This would confirm the Latin American hypothesis that dropping out is in part due to poverty.

However, we must stress that the main reason given by dropouts is having a difficult schedule, not the need to work. i.e. the main problem is that the curricular organization makes it difficult to combine work and study. According to dropouts interviewed, the complication is due to three obstacles: their hours are very sparse (with subjects from morning until night, with vacant hours in between), there are subjects that may only be taken at a single time (sometimes with a single teacher), and there are subjects they are not able to take due to saturation during their own shifts (morning-afternoon). In this sense, the university seems to pose a dilemma for its students: whether to study or to work. Most dropouts, 51% opted for working.

Something different happens to those students with higher family educational capital. This group tends to abandon their initial program to go onto another one or another institution. This is the case, as previously shown, for 45% of dropouts. On top of vocation, this group identifies factors such as the program's profile, the teachers' attitude and the teaching methods.

These groups are not mutually exclusive. Within the low capital group, 58% of respondents now work, yet 42% continued to study. In the medium capital group, the distribution is 59% against 41%. But within the group of higher capital, the division is 40% against 60%. Hence, complicated schedules have a greater impact on the low capital group, while the lack of vocation matters more in the high capital group.

Table 4
Correlations between student characteristics and attrition factors

Correlations between student characteristics and attrition factors									
Factor		Family Capital	HSGPA	Admission Test	Difficult schedule	It was not my vocation	Dedication and discipline	I started failing subjects	Program profile
Family Capital	Pearson Correlation	1	-.024	.073	-.121**	.111**	-.061	.028	.088*
	Sig. (bilateral)		.509	.058	.001	.002	.095	.447	.016
	No.	745	734	683	742	743	743	742	743
HSGPA	Pearson Correlation	-.024	1	.340**	-.071	.022	-.113**	-.172**	.003
	Sig. (bilateral)	.509		.000	.056	.555	.002	.000	.939
	No.	734	736	675	732	733	733	732	733
Admission Test	Pearson Correlation	.073	.340**	1	-.010	.016	-.017	-.021	.066
	Sig. (bilateral)	.058	.000		.790	.682	.660	.590	.085
	No.	683	675	687	682	683	683	682	683
Difficult schedule	Pearson Correlation	-.121**	-.071	-.010	1	-.192**	.153**	.126**	-.090*
	Sig. (bilateral)	.001	.056	.790		.000	.000	.001	.014
	No.	742	732	682	744	744	744	743	744
It was not my vocation	Pearson Correlation	.111**	.022	.016	-.192**	1	.256**	.243**	.745**
	Sig. (bilateral)	.002	.555	.682	.000		.000	.000	.000
	No.	743	733	683	744	745	745	744	745
Dedication and discipline	Pearson Correlation	-.061	-.113**	-.017	.153**	.256**	1	.439**	.256**
	Sig. (bilateral)	.095	.002	.660	.000	.000		.000	.000
	No.	743	733	683	744	745	745	744	745
I started failing subjects	Pearson Correlation	.028	-.172**	-.021	.126**	.243**	.439**	1	.241**
	Sig. (bilateral)	.447	.000	.590	.001	.000	.000		.000
	No.	742	732	682	743	744	744	744	744
Program profile	Pearson Correlation	.088*	.003	.066	-.090*	.745**	.256**	.241**	1
	Sig. (bilateral)	.016	.939	.085	.014	.000	.000	.000	
	No.	743	733	683	744	745	745	744	745

* Significant correlation at level 0.05 (2-tailed)

** Significant correlation at level 0.01 (2-tailed)

Source: BUAP Questionnaire.

Family educational capital is not correlated with other factors such as high school GPA, the admission test, failing of subjects, or dedication and discipline. That is, the three groups showed no significant differences in relation to academic background issues. One possible explanation is that the BUAP admission process leads to a very homogeneous group in terms of academic levels or knowledge.

This leads us to two other factors of possible explanation: the high school GPA and the entrance examination. What stands out in this case is that the high school GPA itself is correlated with reprobation and dedication, yet the admission test is not. Those with 7 to 8 HSGPAs show failing grades as a 2.34 factor, whereas those with a 9 and 10 HSGPA only show a 1.50 factor. In regard to dedication, the first group had a 2.23 factor, the second 1.69. HSGPA is then an indicator of future academic performance: the higher the GPA, the lower the importance of failure and dedication.

In contrast, the entrance examination is correlated with the HSGPA, but with no other factor. Dropouts obtained different grades on this test, but these differences were not significant and unrelated to other attrition factors. As such, the entrance examination seems to have no explanatory or predictive value.

Both complicated schedules and vocation are directly related to dedication, discipline and reprobation issues. But, it seems the causal relationship is that the lack of vocation or complicated schedules lead to failure and abandonment, not vice versa.

Types of dropouts

The factor correlation suggests there are four types of dropouts. The first type are the ones who abandon their studies mainly due to personal reasons, which can vary, from pregnancy to problems fitting in the student environment. This is a small group: less than 5% of dropouts mention such factors as very important. In addition, only 4% said they were neither working nor studying.

A second type is comprised of those who begin to fail subjects and for this reason decide to abandon the program. They mention course difficulties as a reason, and usually have a lower high school GPA. However, this is also a small group, as only 7.9% indicated that failing subjects was very important in deciding to quit.

The third type of dropouts choose to abandon their studies because they believe it is not their vocation. An important associated factor is the program's profile. A distinctive feature of this group is that they usually have a relatively higher educational family capital as well as good HSGPAs and higher scores on the admission test. For this group, the schedules are less important. This is a larger group: 41.7% indicated that they chose to study another program.

The fourth group mentioned difficult schedules as their main reason for dropping out. This is the largest group, for 51.4% of dropouts indicated they were working. The main characteristics of this group are that they come from families with lower educational capital (which suggests they also have less financial resources) and that they were working at the time of deciding to abandon their studies. Vocation is less important for this group.

Additional explanatory aspects

Additionally we may wonder why aspects such as the institutional environment, coupling, or social integration play a less important role than in the case of several US or EU studies.

One factor to consider is that according to studies from other countries, the transition from high school to college involves a "rite of passage": there is a strong rupture between being a high school student and becoming a university student. The break is that, typically, students leave their parents house, home town and even in some cases their country. They start living independently, venturing into the labor market to achieve some economic independence, and are even initiated into relationships (Dubet, 2005). This rupture may explain why factors such as the institutional environment, group integration, or even financial difficulties affect dropout rates.

But compared to the EU and the US, in the case of the BUAP we observed a student population and a group of dropouts that are markedly different: 91.6% of dropouts indicated to be from the City of Puebla, and 6.1% from the state interior. Only 2.3% come from other localities. Similarly, 86.5% were still living with their parents during their studies and 89.5% were single at the time of dropping out. 54.8% were working at the time of quitting. It is worth comparing the situation of BUAP dropouts with students from other countries (Table 5):

In the case of the BUAP's dropouts there seems to be no rite of passage taking place, for students and dropouts continued to live with their parents and attended college at their birthplace. As such, it is likely that everyone has known most of the people in their class since high school. Although it is remarkable that the proportion of students who reported to be working is not very different in comparison with other countries.

Positive and negative actions to reduce dropout rates

Based on the factors observed, what actions could improve program retention and which other actions could prove negative?

The most important action would be to offer more flexible schedules so that students may combine their studies with work. Currently, BUAP's curriculum design is based on the assumption that students must be devoted to

Table 5
Comparative characteristics of students

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Characteristics	Germany	France	Netherlands	Canada	Dropouts BUAP
Living with parents/relatives	24	46	45	51	88.9
Dorm	15	15	34		
Living independently	61	39	21	49	11.1
Working	66	48	77	45	54.8

Sources: Usher and Cervena (2005) and BUAP survey data.

their studies full time, and attend classes at the times that the program, or rather, the teachers set. BUAP's curriculum also contemplates a large number of subjects, there are over 50 courses, to be preferably covered within five years.

Another way to address this problem would be through scholarships for low-income students. But the question remains whether in any case, it would be more appropriate to have flexible schedules for students to be able to work, regardless of income level. Additionally it may be considered, especially in the case of vocational programs, to design curricula which recognizes work experience.

For those who drop out because the program proved not to be their vocation it is more complex. A logical institutional response, at first sight, would be to propose better career planning starting in high school. However, a notable feature of the dropout group due to lack of vocation is that the educational capital at home tends to be higher as is their high school GPA. Therefore this group would qualify as being the better prepared and informed students.

Another proposal has been to increase the admission requirements such as: higher HSGPA, higher scores in the admission test or even to introduce additional testing specific to each area. However, as was previously noted, both the HSGPA and the test result have little influence on the decision to quit.

At the same time, it is considered that better vocational guidance and higher admission requirements may produce undesired effects, since both actions would lead to basically restrict the first entry. As the dropout rates are calculated by comparing first enrollment in a given year with graduation five years later, reducing first enrollment may effectively improve this indicator. However, in concrete terms, it may lead, over time, not only to decreases in the number of enrolled students, but also in the number of graduates.

Another possibility is to introduce remedial courses, especially in the first semester. To our knowledge, subject failure is indeed an important factor in attrition. But it should be noted again, that in fact both HSGPA and the entrance exam have little to do with subject failure, as such, it seems to be due more to lack of motivation or complicated schedules than to a lack of academic preparation. There is a real danger that remedial courses in fact become yet another selection filter, in addition to HSGPA or the admission tests. They also tend to increase the number of courses, which would in turn make schedules even more complicated. Perhaps, rather than thinking of remedial courses, introductory activities that serve to engage the student with the program should be devised.

Finally, changing the requirements for obtaining the diploma, as has been done in other programs, does not seem to help much: the vast majority of dropouts leave school before completing their credits.

Conclusions

A first observation that arises from the monitoring of dropouts is that the problem may not be as severe as it is generally thought to be. In recent years, official documents, particularly the Comprehensive Capacity Building Program (Programa Integral de Fortalecimiento Institucional, PIFI), have suggested a 70% program completion efficiency goal and have invited programs and universities to submit proposals in this regard (SEP 2011). But perhaps this goal is unrealistic and a fixation with this indicator could lead to wrong measures.

According to our data, almost half of dropouts report having moved to another program or institution. They left their initial program, but not the system. If these youth are not considered deserters (dropouts), data may dramatically change: if there is a 50% dropout rate recorded, by program, but half of these students are still in the system, the real rate would be closer to 25%.

A second observation is that the problem is not as complex as it is sometimes presented. In the case of our study, the dropout rate is largely due to the incompatibility of work and study, and the lack of vocation. Both factors are associated with subject failure. In times of increasing massification, with a greater diversity of students, other factors play a role, but these are of lesser importance. It would be dangerous in the policy field, to assume that attrition is due to a large number of factors, which should be tackled by multiple retention policies. Another danger is to speculate, with little evidence, that the problem is basically due to a single factor, such as a lack of prior preparation of the student, which would introduce additional courses. In reality, these types of policies would have little impact.

A third observation is that the completion rate has remained at around 50% worldwide, with little improvement over time. Certain fields, such as engineering and science in our study, are traditionally more demanding than

others, and show lower graduation rates. This does not mean dropout rates should be accepted as inevitable, and that universities may not take actions to improve caring for and retaining students. Rather, it would require recognizing that there is a diversity of students, who may differ from the perspective of academics, administrators, or policy makers. For the latter, completion or graduation rates are a concern, as they influence prestige, accreditation and funding. Yet students enter the system as "scouts" to see if they like the program, if they don't, they feel free to choose something different. They seem not to worry about indicators. Perhaps more than emphasizing the completion efficiency of each program, it would be better to think about curriculum flexibility and mobility within the system, hence looking at the broader picture in terms of the number of graduates.

Fourth, the reasons for attrition vary according to the institutional and national contexts. Our data indicate that the situation in the BUAP is different compared to what us and EU literature record. Socio-economic conditions play a more important role than the organizational environment or the coupling between student and university. However, our data also points to a certain contradiction in the policies of a public university that on the one hand, claims to support low-income youth with low tuition and scholarships, but on the other, selects the most qualified and virtually requires full time students. This leads to low-income students being expelled (or quitting) not because of poverty, but because it is impossible for them to combine working and studying.

What is worrisome in this regard is that as a result of curriculum changes in recent decades, schedules have become ever more heavy and inflexible. However, this is a matter of curricular administration, an issue that directly corresponds to the institution to address.

In conclusion, attrition is not as complicated or as serious of an issue as is often presented. At the same time, the analysis of the reasons that dropouts indicate suggests that there are simple measures available for the university to improve the services it provides for students. The main problem seems to be the disappointment felt by the student with the program in which he or she was enrolled. To address this problem, perhaps we should begin by ending the labeling of those who change their minds as deserters (dropouts). Rather, they are disappointed and it would be better to focus on actions that improve the services that are supposed to be tailored for them.

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