Ana Sofia Rodrigues [1]

João Ferreira

Pedro Sousa

Carla Quintas

Márcia Amorim

Arlete Carvalho

Filipe Carvalho

Mara Rocha

Linda Saraiva

ATTRACTIVENESS, LOYALTY AND STUDENT SATISFACTION IN POLYTECHNIC INSTITUTE OF VIANA DO CASTELO, PORTUGAL

Abstract: Attractiveness and student loyalty are determinant for the sustainability of Higher Education Institutions (HEIs) as it contributes to the number of students who seek and preserve their connection to the institution.

The main objective of this study is to analyse course attractiveness and student loyalty, in the last five years, in the Polytechnic Institute of Viana do Castelo (IPVC), Portugal.

The demand, student dropout rate and pursuance of studies and satisfaction with teaching and services were analysed, linking them to student profiles and organizational context.

Dropouts in Professional Higher Technical Courses (CTeSP) and Bachelor's Degree occur mainly within the masculine gender and in the first year; in Masters', this occurs mainly in the 2nd year and in the feminine gender. In 2013/14, dropouts reached their highest level and students' enrolment in National Call reached its lowest number of the last 8 years, coinciding with the peak of the economic crisis. 60% of CTeSP graduates go on to Bachelor's and 25% of graduates carry on to Master's.

Keywords: Demand; Student Profile; Dropout; Student Loyalty; Pursuance of Studies; IPVC.

1. Introduction

In the last few decades, the system of higher education in Portugal has undergone profound, structural changes with a substantial increase in the number of Higher Education Institutions (HEIs) (Rego & Caleiro, 2010). Public funding of HEIs has been reduced, being partially based on the number of students. Attractiveness and student loyalty are crucial to having key performance indicators (KPIs). By applying the appropriate strategy, offering resources to improve the quality of activities that are important to students, administrators can increase the value offered and contribute to student loyalty by ensuring the institution's sustainability (Helgesen & Nesset, 2007). Standifird (2005), refers that reputation management is also considered very important in attracting and retaining students.

Student loyalty is generated by overcoming expectations in relation to the received experience. Identifying the reasons for non-retention allows for the implementing of solutions to mitigate the causes and maintain the student-client (Kotler & Keller, 2007). Retention is the "ability of HEIs to successfully graduate students who enrol" (Berger & Lyon, 2005).

Abandonment is one of the major problems of HEIs, and it is fundamental that strategies be implemented in order to reduce it (Schwartzman, 2003; Pestana, 2003). Student

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[1] Corresponding author: Ana Sofia Rodrigues
Email: qualidade@ipvc.pt

loyalty is influenced by "psychological attachment" and a feeling of institutional pride (Bowden, 2011). Satisfaction and institutional reputation contribute strongly to loyalty (Helgesen, 2008; Thomas, 2011). According to Arnett et al. (2004), Helgesen (2008), Egan (2011) and Nunes et al. (2008) loyalty is maintained through the development of values between the institution and the individual, driven by personal relationships guided towards maintaining long-term relationships.

The relationship between HEIs and students is fundamental, as well as with candidates, graduates, parents, companies and partner schools, teachers and employees. The HEI must carefully manage these relationships, as each one is a potential multiplier in the dissemination of the institution (Dugaich, 2005). Parents are the ones who often choose the HEI (Trustrum & Wee, 2007). Future employers create close relationships with HEI through their immersion in student training and hiring of graduates.

Kotler and Fox (1994) state that "retaining enrolled students is as important as attracting them for registration." Satisfaction is defined by student experience at the institution and satisfied students are motivated in maintaining their relationship with and defending the name of the HEI, as well as in attracting new students by conveying positive information and even returning to the HEI to undertake other courses (Wiers-Jenssen et al., 2002; Dugaich, 2005; Smith, 2005; Minadeo, 2008).

It is imperative that strategies of loyalty be implemented and not simply those of prospecting; gaining new students is not enough, it is necessary that they be retained, by winning their loyalty in the short, medium and long terms. Student satisfaction must be sustained by the following four variables: course, services, people and environment, which should be evaluated in an integrated way for the continuous improvement of satisfaction, loyalty, recommendation and engagement. HEIs are confronted with increasingly competitive and commercial environments, with strategic planning and management focused on the quality of education and its services, the means to gain recognition and a more competitive advantage (Poole et al., 2000). Martensen et al. (2000) report that students have very high yet inexplicit expectations, which makes analyses more complex. The measurement of satisfaction is unreliable if it is based solely on one variable from the perspective of consumer behavior (Bruhn & Grund, 2000; Alves & Raposo, 2009).

Teaching and course organization are the main determinants of student satisfaction and student loyalty among the more academic components of the educational service (Masserini et al., 2018). Shahsavar and Sudzina (2017) confirms the assertion that student satisfaction is the most effective factor that influences positively on students' loyalty, meaning the more satisfied students are, the more loyal they will become.

Only recently in Portugal has the interest in this phenomenon been shown in a systematic and consistent manner, and the knowledge about it (percentage of dropouts, characteristics of dropouts and reasons for dropout) is still residual.

The concept of student satisfaction has gained emphasis with increasing academic dropout and less satisfied students, resulting in student retention (Wiers-Jansen et al., 2002; Elliott & Shin, 2002). Thus, the HEI realized the importance of managing the loyalty process, since the student enters until the degree (Seymour, 1993). Mavondo and Zaman (2000) demonstrate that satisfied students recommend HEIs or course to future students. HEIs analyze student satisfaction data to understand the needs and improve the environment of their institution, developing their ability to respond to new scenarios (Beelyukova & Fox, 2002; Rowley, 2003). It is an indicator that enables you to assess and respond to your needs and is a measure of institutional effectiveness (Hallenbeck, 1978; Nichols, 1985; Upcraft & Schuh, 1996). It is

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critical to maintaining and increasing enrollment rates, managing dropout and student loyalty.

The IPVC agrees with the philosophy of Mavondo and Zaman (2000) and, every six months, evaluates the satisfaction of its students in order to meet their suggestions for improvement.

The aim of this study is to analyse the results obtained with the indicators of attractiveness, student loyalty and satisfaction, used in the IPVC Management System, within organizational and socioeconomic contexts and its impact on institutional performance.

2. Methods

This study was based on the courses of CET-Course of Technological Specialization (until 14/15), CTeSP since 15/16, degrees and masters, of the 6 schools of the IPVC (ESA-Agrarian School, ESCE-School of Business Sciences, ESDL-School of Sport and Leisure, ESE-School of Education, ESTG-School of Technology and Management, ESS-School of Health).

In order to study attractiveness, the demand for Bachelor's degrees between 2010/2011 and 2017/2018 were analysed, as well as potential and real occupation of vacancies, admissions (particularly the 1st phase and 1st option), actual registrations, and entry grades. In the CET / CTeSP and Master's degrees, only enrolments were taken into consideration.

In order to study student loyalty (indicators of belonging and engagement) data on dropout rates between 2013/2014 and 2017/2018 were analysed, as well as the rate of the pursuance of studies at the IPVC. Dropouts (withdrawals or non-renewal of enrolments) and the results of surveyed, dropout students were studied to assess the causes and verify the possibility of reversing this decision.

In relation to the pursuance of studies, CTeSP graduates who go on to do Bachelor's degrees in the IPVC were analysed as well as those

Bachelor's degrees that go on to do Master's Courses at the IPVC.

An analysis was also made of the survey results: student satisfaction with quality of teaching and support services; Bachelor's degree satisfaction with courses and contribution to employment.

3. IPVC Attractiveness and Student Loyalty

3.1. IPVC Characterization

The IPVC www.ipvc.pt is a higher education public institution serving the development of the individual and the society, which creates and shares knowledge, science, technology and culture. It promotes the integral lifelong formation of its students, combining teaching with research, in a proactive attitude of permanent innovation, cooperation and commitment, centered on the development of the region and the country, and in internationalization. IPVC promotes Values such as Ethics, Respect, Civility, Loyalty, Honesty, Solidarity, Transparency, Equity, Teamwork, Quality, Liberty and Justice.

The IPVC offers undergraduate and postgraduate degree courses, these last very often in collaboration with national and international polytechnics and universities. Also promotes Master courses and specialization courses.

3.2. IPVC Attractiveness: Candidates and enrolees

The period with the lowest number of National Call (CNA) candidates and enrolees, as well as Masters and CET / CTeSP enrolees occurred between 13/14 and 15/16, coinciding with the economic crisis (Table 1). Similar to the GDP's recovery, there was also an increase in the demand for courses, with 82% of vacant CNAs being occupied in 2017/18. In 2013/14, the % of students enrolled (CNA) reached its lowest value (61% occupancy). The percentage of

candidates for 1st option/1st phase increased, with emphasis on Tourism, Management and Nursing with higher rates of attractiveness.

Table 1. IPVC admissions, placements and enrolment in degrees between 2010/11 and 2017/18

Total IPVC	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Bachelor Enrolees								
No. Vacancies CNA	936	941	991	956	932	956	956	973
No. Candidates 1st phase/1st option (CNA)	622	505	428	354	310	292	332	407
No. Candidates 1st phase (CNA)	3244	2725	2239	1768	1701	1949	1837	2404
No. Candidates (Total CNA)	4741	4409	3383	2687	2651	2835	2823	3717
No. Enrolees CNA	409	385	315	288	262	277	281	298
No. Enrolees in Special Contests	722	653	556	502	516	548	598	656
No. Enrolees CNA + Special Contests	985	921	874	739	776	796	882	973
Placements 1st phase CNA/CNA vacancies	77%	69%	56%	53%	55%	57%	63%	67%
Placements 1st op/1st phase CNA/CNA vacancies	44%	41%	32%	30%	28%	29%	29%	31%
Enrolees CNA/CNA Vacancies	83%	80%	64%	61%	63%	64%	70%	82%
Candidates 1st phase 1st op/CNA vacancies	66%	54%	43%	37%	33%	31%	35%	42%
Candidates 1st phase/CNA vacancies	347%	290%	226%	185%	183%	204%	192%	247%
Average entry grade 1st phase CNA	121.8	118.4	126.1	117.6	119.7	118.5	118.2	118.5
CET/ CTeSP Enrolees	-	-	413	330	305	300	403	389
Master's Enrolees	-	-	438	375	314	275	336	292

The % of candidates from the District of Viana do Castelo to Higher Education, which apply to the IPVC is circa 23% and is seen as an opportunity to attract more students from the district.

3.3. Student loyalty: Dropout rate

In the analysis carried out in relation to course dropout vs IPVC dropout rate, there is a significant reduction in the last 5 years (Figure 1). Only 1 to 2% of students who leave an IPVC course go to another IPVC course, meaning that students who leave the course leave the IPVC.
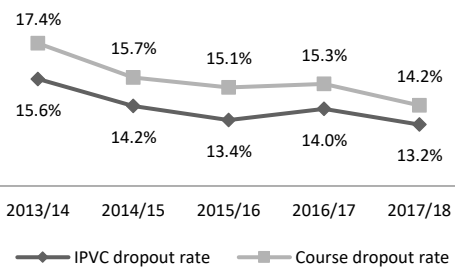

Figure 1. Evolution of dropout rate in the IPVC from 2013/14 to 2017/18

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Taking into consideration gender, the dropout % is higher among males (Figure 2), in accordance with Bourdages (1996). In the CET/ CTeSP and Bachelor's degrees male dropout rates are higher whereas in the Masters it is the female gender.

Dropouts occurred more in CET courses, followed by Masters and CTeSP (Figure 3). The CTeSP that replaced CET courses tend to have a lower dropout rate than the latter.
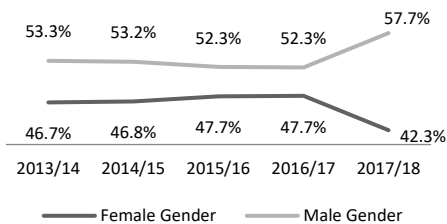

Figure 2. Evolution of IPVC dropout rate by gender
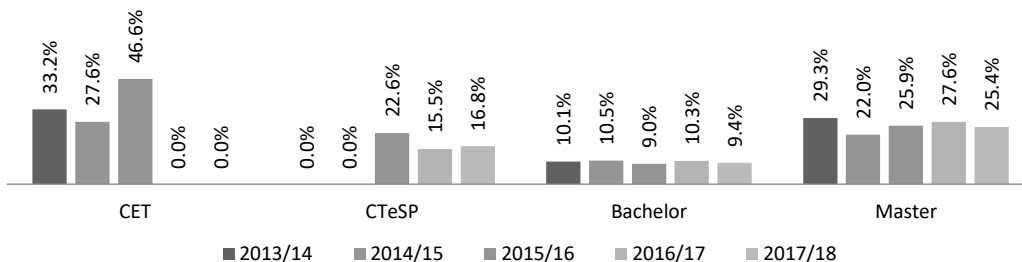

Figure 3. Evolution of IPVC dropouts by types of training (CET, CTeSP, Bachelor's Degree and Master)

The average dropout rate in IPVC Bachelor's degrees (9.9%) is lower than the national average (29%) (DGEEC, 2018), with only 46% of students completing the course (3 years) in the next four years. In this scenario, HEIs need to be able to respond to the requirements, particularly in terms of reception and integration of new students, curriculum reorganization of courses, learning outcomes and teaching-learning and assessment methodologies and, in parallel, in an effort to prevent dropout with monitoring mechanisms, to address the differentiation of students in their difficulties and potentials and to promote academic success. In this context, the IPVC seeks to intervene with the academic community to promote the well-being and quality of life of the population, but also to prevent risky behavior and optimize

the personal and social development of students throughout their experience in higher education. It seeks to implement potential dropout preventive signaling mechanisms to act more effectively, and to continually and systematically monitor the success and dropout and to implement ways of mitigating, anchoring students to IPVC and, in the case of effective dropout, to seek with these students possibilities for return. It is worth highlighting low dropout rates in ESE's Master's degrees and ESS Bachelor's degree. Bourdages (1996) also refers to reduced dropout rates in health courses. Dropout occurs mainly in the 1st curricular year in CET and Bachelor's Degree Courses (Table 2), which coincides with studies by UTAD (2017) and Rego et al. (2017). The highest dropout in the first year may be due to

difficulties or problems in the transition and adaptation to HE or rejection of scholarships (Cabrera et al., 2006; Carini et al., 2006; Kuh et al., 2006; Reason et al., 2006, 2007). In the Master's degree, there is a trend towards greater dropout in the 2nd year. Bourdages (1996) states that in doctorates (the same can be applied to Master's degree thesis), the difficulties that arise around the drafting of the thesis are related not only to students'

choices, but also to their supervisors' commitment and the HEI's strategy in guidance management of theses and connection to lines of research. Sternberg (1981) explains that dropout during the thesis - Mah's Attrition Process Model occurs in students who are more distant from the course and whose obtaining a diploma no longer constitutes a priority in their life project.

Table 2. IPVC admissions, placements and enrolment in degrees between 2010/11 and 2017/18

Typology	2013/14			2014/15			2015/16			2016/17				2017/18			
	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4
CET	100,0%	-	-	100,0%	-	-	100,0%	-	-	-	-	-	-	-	-	-	-
CTeSP	-	-	-	-	-	-	100,0%	-	-	78,3%	21,7%	-	-	70,1%	29,9%	-	-
BACHELOR'S DEGREE	61,2%	15,2%	23,5%	65,4%	15,8%	18,8%	56,2%	22,2%	21,6%	51,0%	20,9%	27,6%	0,6%	68,4%	15,0%	16,3%	0,3%
MASTER	50,2%	49,8%	-	47,8%	52,2%	-	43,1%	56,9%	-	43,7%	56,3%	-	-	38,4%	62,3%	-	-
	65,7%	23,4%	10,9%	67,4%	22,2%	10,3%	60,4%	28,8%	10,8%	53,1%	32,6%	14,1%	0,3%	60,4%	31,5%	8,1%	0,2%

The number of scholarship holders (DGES-MCTES scholarships) increased (Table 3), representing 41% in 17/18 of IPVC students, which shows a student profile with needs in

terms of financial support applying for the institution. Out of the total number of scholarship holders, between 4.5% and 5.5% drop out.

Table 3. Evolution of dropout rate in IPVC scholarship students

Course Dropout with Scholarship	2013/14	2014/15	2015/16	2016/17	2017/18
% of scholarship holders at IPVC	34,8%	35,1%	37,7%	39,2%	41,0%
% DGES scholarship dropouts	5,3%	4,5%	5,5%	5,3%	5,0%

Students housed in IPVC residences are around 12%, with a low dropout rate and a tendency to decrease (from 6.5% to 2.7%) (Table 4).

Table 4. Evolution of dropout rate in students housed in IPVC residences

Student dropouts with Student Housing (%)	13/14	14/15	15/16	16/17	17/18
IPVC Students with housing	12,9%	6,8%	12%	12,5%	12,1%
Dropout with housing/ with housing	6,5%	3,1%	2,9%	4,1%	2,7%
Dropout without housing/ without housing	16,8%	14,9%	14,7%	15,3%	14,5%
Dropout with housing/ IPVC dropouts	4,7%	1,4%	2,3%	3,3%	2,2%
Dropout without housing/ IPVC dropouts	95,3%	98,6%	97,7%	96,7%	97,8%

The lowest dropout rate in scholarship holders and IPVC lodgers concurs with Lassibille & Gómez (2008), who report that students who are financially supported by scholarships have a lower risk of dropout, and with HEFCE (2007) and Abedi & Benkin (1987) who conclude that financial support for students is decisive for course completion and the time it takes to complete said course. There are less dropouts in students whose parents have a HE, in particular the mother (Table 5), in agreement with Lassibille and Gómez's (2008) results.

Table 5. Evolution of dropout rate according to parents' schooling

Parents' Schooling	13/14		14/15		15/16		16/17		17/18	
	F	M	F	M	F	M	F	M	F	M
With Higher Education	7,2%	11,2%	7,0%	9,7%	7,5%	11,5%	7,4%	11,9%	9,1%	12,6%
Without Higher Education	92,8%	88,8%	93,0%	90,3%	92,5%	88,5%	92,6%	88,1%	90,9%	87,4%

The number of students enrolled with student worker status (SW) is around 11% and the number of SW who leave the IPVC has also been decreasing (Table 6), being 17/18 at 15.1%.

Table 6. Evolution of dropout rate in student workers

Dropout rate in student workers (%)	13/14	14/15	15/16	16/17	17/18
SW at the IPVC	11,4%	10,6%	11,2%	8,5%	11,2%
SW dropouts / dropouts total	12,6%	13,4%	14,9%	10,5%	12,0%
SW dropouts / total enrolled	2,2%	2,1%	2,3%	1,6%	1,7%
SW dropouts / SW enrolled	19,2%	19,8%	20,3%	19,0%	15,1%

In the Bachelor's degree courses, it was established that the dropout rate is significantly lower when the student enters the course as a first option in the CNA and increases (Figure 4).
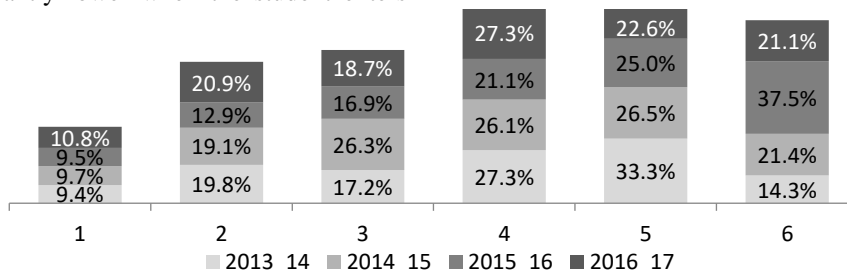

Figure 4. Evolution of dropout rate due to application options 2013/14 and 2016/17

Dropouts are also related to the admission phase and are lower in students of the first phase of the CNA. Those who enter by >23 years present a higher dropout rate (Table 7). Lassibille and Gómez (2008) verified that HE students coming from vocational schools leave more than those from regular schools. They also concluded, as in the IPVC study, those students who enter their 1st option and with parents with HE were also less likely to drop out.

Table 7. Students enrolled in the IPVC who left the courses in the year of admission

Admission Bachelor's Degree regime vs. dropouts 1st curricular yr	13/14	14/15	15/16	16/17	Average
% 1st phase CNA Enrolees who dropped out in 1st year	10,9%	11,9%	10,5%	14,0%	11,8%
% 2nd phase CNA Enrolees who dropped out in 1st year	17,7%	23,5%	19,4%	22,1%	20,7%
% 3rd phase CNA Enrolees who dropped out in 1st year	37,9%	28,6%	23,8%	20,0%	27,6%
% CNA Enrolees who dropped out in 1st year	14,1%	16,1%	13,2%	16,2%	14,9%
% CET Enrolees who dropped out in 1st year	18,5%	17,6%	8,9%	7,1%	13,0%
% >23 Enrolees who dropped out in 1st year	26,4%	32,1%	31,2%	20,8%	27,6%

Relating dropouts to the admission grade, we can ascertain that students who enter the Bachelor's Degree course with lower grades are more likely to drop out (Table 8).

Table 8. Evolution of dropout rate in Bachelor's degrees by admission grade

Admission grade	13/14	14/15	15/16	16/17
$\geq 90,0 < 110,0$	17,6%	25,0%	32,0%	17,2%
$\geq 110,0 < 130,0$	15,2%	18,4%	15,5%	15,8%
$\geq 130,0 < 150,0$	13,5%	13,6%	9,0%	17,4%
$\geq 150,0 < 170,0$	9,7%	7,4%	2,9%	11,4%
$\geq 170,0 < 190,0$	0,0%	0,0%	66,7%	0,0%

3.4. Student loyalty: Pursuance of studies at the IPVC

The pursuance of studies is used by the IPVC as an indicator of student loyalty, in addition to "non-abandonment". There is a trend of increasing enrolment in Bachelor's degrees by CTeSP graduates (Figure 5).

On average, in the 5 years under analysis, 25% of IPVC graduates enrolled in IPVC Masters, 20% of those enrolled in IPVC Masters are IPVC graduates, the remaining 80% in other HEIs, and 17% in each year in IPVC Masters are IPVC graduates from the previous year. The year with the lowest level of pursuance of studies was 15/16 (Figure 6).

Most graduate students continue their MA studies in the same school, such as ESE, ESDL and ESTG (Table 9).
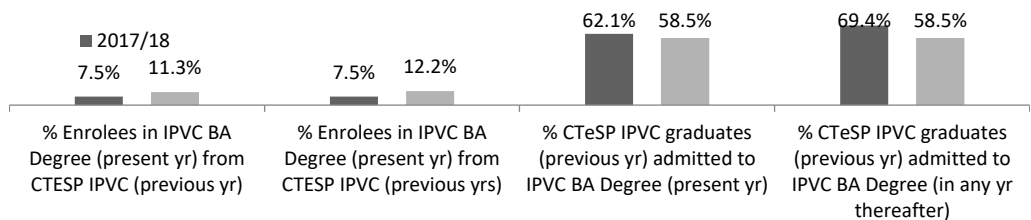

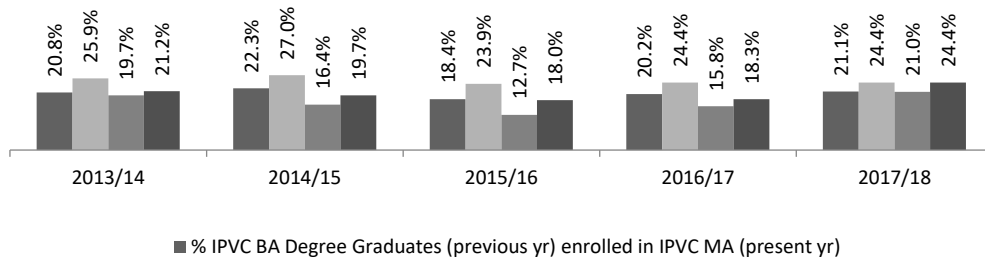**Figure 5.** Evolution of the pursuance of Bachelor's Degree studies to IPVC Masters

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Bar chart showing percentages for 2013/14, 2014/15, 2015/16, 2016/17, 2017/18:
- 2013/14: 20.8%, 25.9%, 19.7%, 21.2%
- 2014/15: 22.3%, 27.0%, 16.4%, 19.7%
- 2015/16: 18.4%, 23.9%, 12.7%, 18.0%
- 2016/17: 20.2%, 24.4%, 15.8%, 18.3%
- 2017/18: 21.1%, 24.4%, 21.0%, 24.4%

■ % IPVC BA Degree Graduates (previous yr) enrolled in IPVC MA (present yr)

Figure 6. Evolution of the pursuance of Bachelor's Degree studies to IPVC Master Courses

Table 9. Transition between schools in pursuance of Master's Degree

		MASTERS					
		ESA	**ESE**	**ESS**	**ESCE**	**ESDL**	**ESTG**
DEGREES	**ESA**	91%	0	0	0	0	1%
	ESE	0	99%	17%	11%	2%	5%
	ESS	0	0%	83%	0	2%	0
	ESCE	0	0%	0	64%	0	4%
	ESDL	0	0	0	0	91%	0
	ESTG	9%	1%	0	25%	5%	90%

In the survey carried out among graduates, the main reasons for the pursuance of studies in the IPVC were: proximity to home, satisfaction with training (quality of teaching staff, school organization, teacher-student relationship), complementary training offer. More than 83% of the 1st cycle graduates responded that they would recommend the course they undertook in the IPVC.

3.5. Student satisfaction

The average degree of course satisfaction of IPVC students is 3.02 (on a scale of 1 to 4), an average of the four academic years from 13/14 to 16/17, with the lowest average in Bachelor's degrees (2.89) and the highest in the CTeSP (3.11) (Table 10). Satisfaction with teaching staff has the highest rates.

Table 10. Student satisfaction with quality of education, obtained through survey (IASQE-IPVC)

Evaluation criteria for Teaching satisfaction	13/14	14/15	15/16	16/17	IPVC Avg. Overall	Average		
						CTeSP	BA degrees	Masters
School	2,9	2,7	2,8	2,9	**2,8**	2,9	2,6	2,9
Integration, services, communication	2,9	2,7	2,9	3,0	**2,9**	3,0	2,8	2,9
Course	3,0	3,1	3,0	3,0	**3,0**	3,1	2,9	2,9
UC's 1st semester	3,1	3,0	3,0	3,1	**3,0**	3,1	2,9	3,1
UC's 2nd semester	3,0	3,1	3,1	3,2	**3,1**	3,2	3,0	3,1
Teacher 1st semester	3,2	3,1	3,2	3,3	**3,2**	3,2	3,0	3,3
Teacher 2nd semester	3,1	3,0	3,2	3,3	**3,1**	3,3	3,0	3,2
Average	**3,0**	**3,0**	**3,0**	**3,1**	**3,0**	**3,1**	**2,9**	**3,1**

Satisfaction with services is, in general, very positive, especially the Health and Cultural Offices (Table 11). There has been a slight decrease in the last year, in relation to food and scholarships, and in this last item the main reason being the delay in allocation, which is unrelated to the IPVC.

Table 11. Satisfaction with Support Services, obtained through Surveys

Survey of Services (scale 1-5)	13/14	14/15	15/16	16/17	17/18	TOTAL
Housing	3,3	3,2	4,0	3,7	4,0	**3,6**
Food in Canteens	3,8	3,7	3,4	3,5	2,7	**3,4**
Food in Snack bars	–	3,6	3,6	3,1	2,9	**3,3**
Social support scholarship	–	4,2	3,7	3,8	3,4	**3,8**
Scholarship	3,9	3,6	3,7	3,8	3,1	**3,6**
Academic BUS	–	–	4,0	3,6	3,9	**3,9**
Sports' Centre	–	–	4,2	3,5	3,8	**3,8**
Health Office	–	–	–	3,9	4,2	**4,0**
Cultural Office	–	–	3,9	4,4	3,7	**4,0**
Employment support	–	–	3,3	3,4	3,5	**3,4**
Libraries	3,9	3,7	3,9	3,9	3,9	**3,9**
TOTAL	**3,7**	**3,7**	**3,8**	**3,7**	**3,5**	**3,7**

The satisfaction with teaching quality and support services has not Figureed the trends of demand and dropout rates, remaining stable and with a very positive average. In the CTeSP, although the dropout rate is higher than in the Bachelor degrees, the levels of satisfaction with the course are even higher. On the other hand, in 2017/18, service satisfaction fell slightly but dropout rates also continued to decline.

As reported by Arun Vijay (2013) precaution needs to be taken while generalizing the results of survey feedback from students must be used with caution in interpreting the results for facilitating continuous Quality Improvement measures.

4. Conclusions

During the period from 2013/2014 to 2015/2016, coinciding with the country's greatest economic impact, there was a sharp fall in the main indices that measure the attractiveness of IPVC courses and pursuance of studies; a situation which led to a sharp fall for demand in 2013, below the 49000 candidates, when in 2008 there were more than 61,000 candidates for HE (DGES, 2018). The crisis began to take effect in 2009 but hit its lowest GDP in 2013, of capital stock, consumption and investment per capita, and the highest unemployment rate (16.6%) (Banco de Portugal, 2007) was reached. In that year, the IPVC dropout rate was 17.4% (19% in the SW) and has since dropped to 14.2% (15% in the SW) in 17/18. The main causes mentioned in the survey for dropout were financial problems /personal conditions, followed by proximity from home and academic failure. Studies that identify factors from the students' perception enable HEIs to attract more students and make them highly satisfied as well as loyal (Shahsavar & Sudzina, 2017). This integrated information allows the IPVC to identify unfavourable contexts, unmet needs and expectations of students, signal situations of risk, as well as opportunities that trigger corrective actions or improvement in institutional marketing processes, communication plans, and review of training offers and integration of students, particularly those who are at higher risk of abandonment.

As proposed by Terenzini and Reason (2005) and Kuh et al. (2006), student permanence in higher education depends on aspects of the formal dimension (personal and institutional characteristics) and the informal dimension (relational climate, extracurricular activities).

Particular attention is needed for first year students, because taking into account our results, the first year of formation can be a critical period or window of opportunity. In this context, it is important to develop measures of academic integration, namely in the promotion of learning support programs, academic and non-academic advice, peer mentoring, induction practices, orientation and basic skills enhancement (leveling). As

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noted by Felten et al. (2016), social relationships, student-teacher, student-contributor, and student-student relationships are essential as vibrant and inclusive communities emerge from the quality of relationships between members of the academic community. In this context, strong HEIs value strong relationships, so these relationships must be cultivated and nurtured intentionally at all levels of higher education. On the other hand, it is also essential that the HEIs promote the articulation between higher education and secondary education through dissemination and support in preparing for access to higher education (vocational guidance actions, academic interventions), liaison activities for secondary school students to higher education and recognition of prior learning. The moment students arrive at HEIs should not be their first contact with higher education. It is essential that the first year student already has some knowledge about the institution, the course, its operation, the formal and informal dynamics, the resources, so that they can quickly and easily activate resources and strategies in the face of the needs and demands felt.

Another relevant aspect seems to be the need for differentiation in intervention according to the level of education of students (CTeSP, undergraduate, master's degree), since dropout is higher in master's degrees. It will be useful to develop curricular practices for reducing drop-out, such as making study plans more flexible, implementing methodologies that promote active learning (problem/project based learning, service learning, etc.) and also implementing alternative assessment methodologies (problem/project based learning, service learning, etc.) and also implement alternative assessment methodologies (eg projects, transdisciplinary work). Particular attention is given to students of the 2nd year of the master's degree, the dissertation's elaboration phase, namely in terms of the master-advisor relationship and the consequent management of the orientation, as well as the interaction of the student's research work in lines of

institutional research.

It is important to develop merit programs, programs to encourage access to higher education, provide quality institutional structures and services, train human resources (teachers and non-teachers), and develop formal spaces (classrooms, laboratories) and informal (social spaces) ecologically facilitating spaces. HEIs are responsible for adapting their programs, courses, infrastructures and human resources to meet the demands of society, the characteristics and needs of their students in order to reduce dropout rates.

The above leads us to consider that the existing measures, supports and services are not always directed to the greatest needs and difficulties that students face along their path in higher education.

Students' satisfaction results, it is important for managers in HEIs to improve the quality of services provided to their students, emphasizing the relevant service quality dimensions and related attributes on which HEIs should concentrate their efforts. HEI' managers must prioritize these dimensions and attributes, and thus concentrate their efforts in order to improve the quality of services provided, and avoid wasting valuable resources in services that could be referred to as peripheral. Thus, administrative efforts should be directed at improving the teaching environment, including selecting the appropriate teaching staff or providing the necessary resources (Pedro et al., 2018).

In summary, focusing this work on a specific case - the IPVC, the results obtained refer to a very specific reality, however we can consider that they can contribute to the understanding of other realities in other HEIs, and that already demonstrate that some of the initiatives taken by the IPVC in the meantime, such as complementary social support grants, the BUS-Scholar for aid for the transport of displaced persons, the institutional fractional payment plan, the reinforcement of study and leisure space and laboratories, improvements in cantinas, the on.ipvc.pt platform that

facilitates information management, the reinforcement of tutorials for students with difficulties in specific areas, seems to give some signs of improvement in dropout rates. In addition, it is expected to have contributed to foster reflection processes that promote the adoption of measures to prevent dropout in higher education and, more specifically, in the IPVC.

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A. S. Rodrigues, J. Ferreira, P. Sousa, C. Quintas, M. Amorim, A. Carvalho,
F. Carvalho, M. Rocha, L. Saraiva

Ana Sofia Rodrigues
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
qualidade@ipvc.pt

Carla Quintas
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
carlaquintas@ipvc.pt

Filipe Carvalho
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
filipecarvalho@esce.ipvc.pt

João Ferreira
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
jmferreira@ipvc.pt

Márcia Amorim
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
marciam@ipvc.pt

Mara Rocha
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
mararocha@ess.ipvc.pt

Pedro Sousa
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
psousa@ipvc.pt

Arlete Carvalho
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
acarvalho@estg.ipvc.pt

Linda Saraiva
Instituto Politécnico de
Viana do Castelo,
Viana do Castelo,
Portugal
lindasaraiva@ese.ipvc.pt