ORIGINAL PAPER



Premeditated, dismissed and disenchanted: higher education dropouts in Poland

Tomasz Zbigniew Zając¹ · Agata Komendant-Brodowska¹

Published online: 27 December 2018

© The Author(s) 2018

Abstract

Student attrition is a significant problem and a huge challenge from an institutional point of view. Although completion rates in Poland are lower than in most Organisation for Economic Cooperation and Development countries, the problem has not been studied thoroughly. In order to shed light on that problem the aim of this paper is to present the results of a mixed methods study on dropout behaviour at the University of Warsaw, Poland's largest higher education institution, combining administrative data analysis, survey research and individual in-depth interviews. The main results are: 1) students drop out mainly during the first year of studies, 2) there are three main types of dropouts – planned dropout, academic failure and those who are disappointed with their studies 3) one of the reasons for this lies in the process of choosing the study programme. Improving this decision process by providing more information and support to candidates should help reduce dropout rates.

Keywords Non-completion and progression · Student experience · Higher education policy/development · University dropout · Withdrawal reasons · Polish higher education

Introduction

Despite the success stories of some higher education dropouts such as Steve Jobs, Bill Gates or Mark Zuckerberg prevalent in public debate, student attrition is still a problem for many reasons. Education attainment is crucial for economic development and social mobility since higher education plays an especially important role in acquiring skills required in the modern knowledge-based economy. Reducing attrition is one of the key strategies for achieving higher educational attainment in the European Union (Vossensteyn et al. 2015). Moreover, it is agreed that early departures are a big challenge from an institutional point of view and an inefficient use of public funds (Schneider 2010; Yorke 1998).



Agata Komendant-Brodowska komendanta@is.uw.edu.pl

University of Warsaw, Warsaw, Poland

The research on student attrition has a decades-long history in the US. Studies of 'student mortality' first emerged in the 1930s (Berger and Lyon 2005). Since then, researchers have investigated the role of various characteristics of students in student retention and have developed numerous theoretical frameworks for the studies of mechanisms leading to student attrition (Braxton and Hirschy 2005; Braxton and Lee 2005; Kuh et al. 2006; Ulriksen et al. 2010). Various aspects of student persistence remain a current topic in the literature (e.g. Flores et al. 2017; Holden 2016; Trautwein and Bosse 2017).

Although studies on student attrition in other regions of the world are less numerous, there is a substantial body of research concerning student persistence in European countries, including Germany (Georg 2009; Heublein 2014), the United Kingdom (Yorke and Longden 2004), Norway (Hovdhaugen 2009), Italy (Belloc et al. 2010), Spain (Lassibille and Navarro Gómez 2008), France (Gury 2011) and Belgium (Arias Ortiz and Dehon 2013). Poland, however, is an exception. There has been very little research on student persistence in Poland. This could be attributed to the low selectivity in the Polish higher education system being seen as a more pressing issue (Smużewska et al. 2015).

The lack of serious studies of student attrition is even more surprising given that the completion rate in Poland is lower than in most Organisation for Economic Cooperation and Development countries (OECD 2013) and the size of the higher education sector. Over the last quarter of a century, i.e. since the end of communist rule, the higher education sector in Poland has expanded dramatically. At the beginning of the 1990s, the number of students in Polish universities was about 400,000. This means that only around 10% of youth completing upper secondary school were admitted to universities each year and Polish education institutions were considered elitist (Marciniak et al. 2014). By the mid 2000s, the number of students grew to 1,9 million and the net enrolment ratio reached the threshold of 40%. Since then, mostly due to demographic reasons the number of students has fallen to approximately 1,4 million, but the enrolment rate has declined only a little, to 37% (GUS 2015).

The aim of this paper is to shed light on the under-researched problem of student attrition in Poland. We combine an administrative data analysis with the results of a survey of applicants and a qualitative study of recent dropouts and first year students to investigate dropout patterns among first-cycle students (*licencjat* – a Polish equivalent of BA level studies) at the University of Warsaw (UW). This is the largest university in the country (with nearly 45,000 students as of 2017). We present statistics depicting the scale of student attrition at UW and identify the most vulnerable groups of students. Moreover, we create a typology of dropouts which includes classes such as dismissed (academic failure), premeditated (strategic or planned dropout), and disenchanted (unplanned voluntary withdrawal). The results serve as a basis for policy recommendations aiming at improving retention rates.

Conceptual framework

Student attrition has proved to be a complex research problem. Measuring it poses difficulties (Hagedorn 2005; Mortenson 2005; Thomas and Hovdhaugen 2014). Even determining who is a dropout is not simple, because dropouts may re-enrol and eventually graduate. As Astin put it, 'there seems to be no practical way out of the dilemma: a 'perfect' classification of dropout versus non-dropouts could be achieved only when all of the students had either died without ever finishing college or had finished college' (1971, p. 15), which is hardly a practical solution. Moreover, a student leaving his or her institution may not withdraw from higher



education entirely (Tinto 1993). Studies carried out in other countries have demonstrated that transfers between institutions play an important role (Hovdhaugen 2009; McCormick 1997; The Comptroller and Auditor General 2007). Among those who leave universities prematurely, some fail academically while others withdraw voluntarily (Tinto 1993). Numerous studies have identified individual student attributes (e.g. intentions, test results, socio-economic background) as well as institutional characteristics of their studies (e.g. selectivity, size, financial aid) that are related to the likelihood of early departure (Pascarella and Terenzini 2005). There is also a consensus among researchers that dropping out is not a result of a short-term spontaneous decision or a single factor. It is rather a process 'in which different influencing factors accumulate in a constellation of problems that makes leaving the higher education institution seem inevitable' (Heublein 2014, p. 503).

When it comes to theoretical models of student persistence, Tinto's approach (Tinto 1975, 1988, 1993) is one of the most influential in the field, especially in the United States (Ulriksen et al. 2010). Tinto's interactionist theory enjoyed 'near paradigmatic stature in the study of college student departure' (Braxton 2000, p. 2). The theory stresses the importance of social and academic integration of students at higher education institutions and students' interaction with the institution and the new environment. Important components of Tinto's approach are the notion that student departure is a longitudinal process as well as the criticism of models focussing on traits of the individual which fallaciously 'see student departure as reflecting some shortcoming and/or weakness in the individual' (Tinto 1993, p. 85). Tinto applies Durkheim's theory of suicide to student attrition, because 'it highlights the ways in which the social intellectual communities that make up college come to influence the willingness of students to stay at that college' (1993, p. 104).

The economic perspective provides yet another lens to look at decisions regarding education. Human capital theory (Becker 1964; Mincer 1974) has been an important theoretical approach in educational research for decades and is still being applied in studies of student attrition (e.g. Flores et al. 2017). The theory brings into the assessment various costs, foregone income, as well as monetary and non-monetary benefits related to higher education, which is part of the decision whether to attend university. However, the conviction that an educational decision is a result of cost-benefit analysis is not limited to economists. The idea is present in work of sociologists too (Boudon 1974; Breen and Goldthorpe 1997; Raftery and Hout 1993).

This paper draws on these theoretical approaches. As in Tinto's work, this study models student departure or withdrawal as a longitudinal process which results from the interaction of the student with the institution. At the same time, similarly to economists and economically inspired sociologists, we rely on the simplifying assumption that students are rational actors, 'choosing among the different educational options available to them on the basis of evaluations of their costs and benefits and of the perceived probabilities of more or less successful outcomes' (Breen and Goldthorpe 1997, p. 275). In the sociological approach, the evaluations do not have to be based on economic criteria and they may also include a variety of factors in which financial ones can be of little importance. Despite its limits (Kahneman and Tversky 1979; Simon 1957; Thaler 1994), rationality is still a useful concept for analysing decision-making processes.

The decision to leave prematurely results from the change in the perception of either the cost or benefits of studying. In our model, it is assumed that students' personal value systems affecting their assessment are stable over time. Accordingly, we will look for the changes in the perceived costs and benefits. The assumption is that during the integration process, the students' interaction with the university environment influences the perception of various



costs and benefits. Students use newly acquired knowledge to update their evaluations of their chosen major. This in turn affects the willingness to invest in integration with academic and social domains of the university, which is an interactive process in which the student is an active participant. Therefore, in our study we look for factors that may cause changes in students' perception of the costs and benefits of studying.

Polish higher education system – Institutional context

Before we proceed with our presentation of the mechanism of attrition at UW, we shall discuss some of the characteristics of the Polish higher education system (MNiSW 2016; OECD 2016). We focus on the aspects of the educational systems that have been proven to affect student attrition in other countries: the organisation of academic programmes and their flexibility, the selectivity of the administrative process, the financial dimension of studying in Poland, as well as the composition of the student body.

Polish universities recruit students into specific programmes e.g. journalism, nuclear power engineering or social work. Every programme has its own applicant evaluation procedure, based on different criteria. In general, the system is based on a rule of successful academic year completion but institutions are free to set their own requirements for passing students to the next year. It can be the number of credits, a set of obligatory subjects, or a combination of both. The system is rather inflexible; i.e. it offers students very little possibility of transferring to a different academic programme. On the one hand, transfers to other institutions may be responsible for a substantial part of institutional dropout (Hovdhaugen 2009) while reducing dropout due to the wrong choice of study programme (Yorke and Longden 2004). On the other hand, they can delay the process of degree completion.

The evaluation of applicants to the university is usually based solely on the Matura (a standardized examination which is taken at the end of secondary education). The examination is not compulsory but is required to apply to universities. Secondary education students take three compulsory basic level examinations (in the Polish language, a modern foreign language and mathematics) and an advanced level examination in at least one of over 20 subjects (e.g. geography, biology, information technology, history). The rules regarding the choice of subjects as well as the set of subjects change slightly over time. The examination results do not expire. The universities' application fee is often negligible. That means that students can easily apply to multiple programmes and do so over many years.

Selectivity of educational institutions is widely believed to help improve completion rates. Alternatively, broadening access to higher education increases the chance of enrolling people lacking the preparation, skills and motivation necessary for higher education (Pascarella and Terenzini 2005). The Polish system, by and large, is not selective. Although there are no country-wide data on acceptance rates, the number of institutions running additional admissions and trying to reach the planned number of new enrolments is revealing. Even elite institutions like UW or the Jagiellonian University usually struggle with admitting enough students for certain programmes. However, it must be noted that study programmes may vary widely in terms of selectivity even within a single institution. The most popular programmes at UW have acceptance rates on a par with those of the top US public institutions (University of California 2016; Zając 2014). Moreover, in the case of UW, self-selection plays a vital role in shaping the student body. This results in substantial differences between programmes in terms of the Matura results of enrolled students (Zając 2011a).



The cost of college and financial aid are key elements of many cost and benefit analyses of higher education attainment (e.g. Manski and Wise 1983; Paulsen and St. John 2002). Monetary considerations may force out some students, more likely from disadvantaged backgrounds. US research indicates that financial aid reduces barriers to enrolment and improves the persistence of financially vulnerable students (Pascarella and Terenzini 2005). In Poland, tuition fees vary widely between types of programmes and higher education institutions. However, full-time students at public institutions who constitute the majority of the student body in Poland (MNiSW 2013) do not pay any tuition. Moreover, fees at private institutions and for part-time studies at public institutions vary between programmes but usually are moderate; for example the University of Warsaw charges between 2000 and 8000 PLN per year (appr. 500–2000 US dollars). Therefore, financial barriers to entry into tertiary education are relatively low. At the same time, financial support for students is rather limited (OECD 2014).

The rapid expansion of Polish higher education would not have been possible without the introduction of private institutions and paid part-time programmes at public universities (Kwiek 2009). The effect is that Poland has one of the highest proportions of part-time students among OECD countries. About half of students study part-time compared to the OECD average of 22% (OECD 2013). Moreover, Polish universities offer very little oncampus housing and the overwhelming majority of students commute. Evidence from other countries suggests these features might contribute to student attrition (Pascarella and Terenzini 2005; Tinto 1993).

Data and methodology

This study had three stages, each with its distinct methodology. The first stage was an administrative data analysis aimed at identifying attrition patterns and student characteristics that correlate with early departure. This analysis let us determine which students should be included in the second stage of our research. Administrative registers give researchers access to detailed longitudinal records on the entire population (at a relatively low cost) (Jasiński et al. 2015; Wallgren and Wallgren 2007). We exported the administrative data coming from the Uniwersytecki System Obsługi Studiów (USOS), a student information management system. The dataset comprises records of all students who enrolled in 3-years first-cycle programmes in 2010 and 2011 and covers full academic years from 2010/11 to 2013/14. Therefore, for these groups the complete history of programme enrolment is available, including information on their status in academic programmes by year, grades, etc.

The total number of first-year students enrolled at UW was 10,710 in 2010 and 10,583 in 2011. The largest number of students entered tuition-free full-time programmes. They constituted 70% of all entrants. Paid part-time evening programmes and part-time weekend programmes are far less popular. Respectively 14% and 16% students enrolled in those programmes. Nearly two thirds of the population were women. 54% were aged 19 at the time of enrolment, which means that they had followed the standard educational path and applied to the university right after graduation from secondary school.

A student who has enrolled in a certain programme can have one out of three statuses in the USOS system: a student, a graduate and a dropout, meaning not a student, nor a graduate. We **define programme dropouts** as students who left the programme without graduation by the



time of the data export. Not everyone manages to obtain a diploma in 3 years. Some of the students were still studying after 3 years and we do not count them as dropouts.

The analysis includes another level measure of student attrition - the **institutional dropout**. An institutional dropout is a student who left the institution entirely by the time of the data export. This distinction is necessary as some of the programme dropouts transfer to or enrol in other programmes at UW and thus they remain UW students while being dropouts from a certain programme. Unfortunately, data on transfers between institutions are not yet available so it is not possible to estimate the system dropout rate.

In addition, administrative data shed light on the issue of voluntary departure. The possibility of the analysis finding the relationship between academic performance and non-completion was constrained by a large portion of dropouts leaving before getting any grades. Nevertheless, for those who got graded during the first year of studies, we calculated the ranks within their study groups. The individual rank of a student is defined by the share of other students that were graded worse than that student. During the rank calculation, it is assumed that a student is better than all students with a lower grade and half of the students with the same grade. We then computed the average of those ranks and used it as a measure of academic performance. We split the population into quintile groups by average rank and measured the share of dropouts in each group.

In the second step, we conducted a series of in-depth interviews in order to categorize dropouts at UW and identify mechanisms leading to early student departure. Although surveys dominate the field, qualitative techniques are more efficient in learning about attrition related to student experience (Quinn 2013). Having identified first-year students as the most prone to drop out based on administrative data, we decided to focus on the early student experience in the qualitative study. Focussing on the first year is standard in student attrition studies (Chen 2008; Nora et al. 2005). Previous studies of students transferring between majors in the US suggest that the main reasons for dropping out may be similar to the main problems of students who persisted (Seymour and Hewitt 1997). That led us to the decision to include both dropouts (28 interviews) and students who persisted to the second year (21 interviews). The sample includes students of all three broadly defined fields of studies offered at UW: mathematics and life sciences (15 interviews), social, political and economic studies (19 interviews), and humanities and language studies (15 interviews). The classification of programmes into disciplines is based on previous studies of student experience at UW. The reason for the purposeful sampling (Patton 2002) was to ensure the representation of various academic cultures.

The interviews were semi-structured and reflected the chronology of student decision making: i.e. the interview started from questions concerning the choice of studies. The next questions covered the entry into the university, the experience of studying and barriers to integration. In the case of dropouts the final part of the interview was related to the process of leaving. Interestingly, both dropouts and non-dropouts provided narratives on student departure and even those who persisted often talked about their experience in a broader perspective including that of their peers. In line with the principles of the critical incident technique (Butterfield et al. 2005; Flanagan 1954), the interviewees were asked to identify events that had had the greatest impact on their perception of studies and educational decisions. The interviews lasted between 43 and 70 min.

Among other things, the qualitative study pointed to the choice of study as one of the issues related to attrition. In the third stage, we aimed at validating some of the results which emerged from the qualitative study through a survey. A set of questions designed on the basis of the



qualitative study was added to a university-wide annual applicants' survey (2015 edition). The questions concerned other applicants' perception of UW as well as their intentions. The survey takes place every year between July and September. It is administered through the University's web application and is disseminated among all UW applicants via email. 2746 UW candidates completed the survey. The main socio-demographic characteristics of this sample were compared to those of the applicant population and no significant differences were found.

Findings

The dropout rate and timing

The overall departure rate from some programmes was as high as 57% in the case of students who started their first-cycle studies in 2010 and 60% among those who did so in 2011. About 60% of students who drop out do so within 12 months after enrolling and approximately one third leave before the end of the first semester. It is worth noting that those numbers may be underestimated: students have no incentive to report their intention to leave before the end of the academic term (a semester or an academic year depending on the programme). It may be beneficial to a student to delay officially dropping out, because it allows keeping various student privileges such as free healthcare insurance and discounted fares on public transport for longer.

At UW, dropping out of a study programme does not necessarily mean leaving the institution altogether. It is not exactly a formal transfer either. Rather, it is a change of programme within the same institution. After dropping out from one programme students enrol in the next programme in the following years. Their previous classwork and grades are not automatically recognised, which means that the students often must start from scratch - this is true even in the case of seemingly related majors (e.g. sociology and political sciences). More than a quarter of dropouts from the 2010 and 2011 cohorts enrolled in different programmes at UW after dropping out from their original studies. The total institutional dropout rate, i.e. the share of students who leave the institution, is respectively 41% and 36% for 2010 and 2011 cohorts.

The survey results support the claim that transfer, understood as a change of programme, plays an important role in observed dropout patterns. Respondents who graduated from secondary education earlier than just before university admissions (around 25% of the sample) were asked if they had studied before: 73% of them admitted having previous studying experience and nearly 40% dropped out from a study programme elsewhere before applying to UW.

The departure from programmes varies widely by the mode of studies (see Table 1). Part-time students are most likely to drop out. About 70% of students of either evening or weekend studies left their programmes without graduating. Full-time students, although more likely to persist than their peers, drop out in large numbers as well: half of them left without graduating.

Academic failure and voluntary withdrawal

The data clearly show that the risk of dropping out is inversely related to academic performance (see Table 2.). For example, the share of dropouts among students from the bottom quintile of those admitted in 2010 is 69%, compared to 23% among students from the top



Mode of studies	academic discipline	Programme dropout rate		Institutional dropout rate	
		2010	2011	2010	2011
Full-time	Mathematics and life sciences	61%	65%	48%	48%
	Social, political, and economic studies	42%	48%	31%	32%
	Humanities and language studies	54%	55%	39%	39%
	Total – full-time	50%	54%	37%	38%
Part-time evening	Social, political, and economic studies	69%	72%	51%	50%
	Humanities and language studies	72%	70%	50%	48%
	Total – part-time evening	70%	71%	51%	50%
Part-time weekend	Social, political, and economic studies	69%	72%	60%	62%
	Humanities and language studies	71%	79%	62%	65%
	Total – part-time weekend	69%	73%	60%	63%

Table 1 Programme and institutional dropout rates by the mode of studies, academic discipline, and the year of enrolment

quintile. At the same, it is evident that even the best students are not immune to attrition, which points to voluntary withdrawal. The qualitative study supports this result.

The relationship between the average rank and early departure is stronger in the case of mathematics and life sciences students than others. In case of the former, the point biserial correlation coefficient is -0.47, while this measure equals -0.32 for students of social, political and economic studies and -0.3 in the case of humanities and language studies. This result suggests that voluntary withdrawal occurs less often in the case of mathematics and life sciences students. The relationship described here was analysed for full-time students only because in the case of part-time students financial motives may influence decisions and departure patterns to a much larger extent.

Table 2 Dropout rates according to mode of studies, year of enrolment, and quintile group based 1-year academic performance

Mode of studies	Quintile group based on academic performance	Year of enrolment	
		2010	2011
Full-time	1 – bottom quintile	69%	77%
	2	40%	43%
	3	30%	36%
	4	27%	30%
	5 – top quintile	23%	23%
Part-time evening	1 – bottom quintile	89%	90%
_	2	68%	62%
	3	42%	56%
	4	45%	50%
	5 – top quintile	41%	39%
Part-time weekend	1 – bottom quintile	85%	90%
	2	71%	73%
	3	52%	60%
	4	41%	56%
	5 – top quintile	37%	39%



Academic failure

The qualitative research offers an insight into academic failure scenarios. In this case, critical incidents are usually easy to identify. Typically, a student finds courses too difficult and at some point, fails to pass one or more examinations. Usually, such pivotal events eventually lead to dropping out. While interviewees acknowledged a lack of skills or effort on their side, they also complained about not having sufficient information before choosing their studies. Students were surprised by the difficulty of some subjects. The courses requiring mathematical skills in social studies are just one example. Interviewees reach the conclusion that the difficult courses are hidden from prospective students in the university's information materials. They suggested that students should be 'warned' about such courses. Another problem is that some students find course descriptions too vague to be informative. A former astronomy student admitted that she had browsed the syllabi for different courses before choosing that programme but 'hadn't understood a thing' (dropout, enrolled in 2014/2015). Some mentioned that the admission criteria should be altered to better reflect the skills required to graduate, e.g. boosting the role of the Matura mathematics examination in the assessment of applicants to programmes that require taking statistics or similar subjects.

The narratives on student attrition vary according to the academic discipline. Students of science and mathematics programmes were most likely to complain about the complexity of course material in general and they usually talk about 'the studies' as such, without referring to particular subjects. A former mathematics student said "A lot of people had told me that it wouldn't be the same maths as in high school but I would say 'okay, okay, I can do it'. And so it turned out it wasn't the same as at school and I felt a little disheartened. When I opened the handbook, I felt exhausted by what was written there" (dropout, enrolled in 2014/2015). In turn, interviewees from social studies reportedly struggled mostly with courses requiring mathematical skills (e.g. statistics courses in sociology). Those students often claimed that while applying to UW, they did not expect they would have to take any such courses.

Scenarios of voluntary withdrawal

Planned dropout

Intentions constitute an important dimension differentiating voluntary withdrawal at UW. Some students enter university without the plan to graduate and some were not interested in studying at all. We called this subtype 'planned dropout'. This category can be further divided into two groups based on the underlying motives.

According to our interviewees, a small proportion enrol just to acquire the privileges of a student. Then they do not show up, fail to pass examinations, and eventually get dismissed from the university. However, in the meantime they are eligible for public healthcare, various discounts etc. The low selectivity of many programmes and the Matura examination results being in most cases the only criterion of the applicant's assessment means that becoming a student is not particularly difficult. People who choose such a path are sometimes dubbed 'plastic students' after the material student IDs are made of.

For the second group of 'planned' dropouts, studies at UW serve only as a temporary period before the actual educational career they want to pursue. For example, one of our interviewees was not admitted into a medical school due to her poor Matura results. She therefore decided to enrol in the chemistry programme at UW for a year and simultaneously prepare to retake the



Matura examination (dropout, enrolled in 2013/14). According to her, the acquired knowledge and skills would be useful both during studies at medical school as well as for improving future examination results. We call this type 'prep school students.' Another interviewee explained her choice to pursue Italian studies for a year as a means of staying busy – her desire was to study music but she claimed that the entrance examinations for the music academy take place on a biannual basis (dropout, enrolled in 2014/2015). This could be named the 'waiting room' strategy.

The survey among applicants may shed light on the scale of the phenomenon. More than one fifth of respondents declared changing their choice of programme due to poor Matura examination results. When asked about their intention to graduate from the programme they chose at UW, only 76% responded that they were going to pursue the degree; one fifth was not sure if they wanted to graduate but indicated they were going to try; and the remaining 4% openly expressed no intention of graduating. This means that even before the beginning of studies around 25% of applicants are not committed to graduating. Among the three broad disciplines, social sciences tend to have applicants with the highest level of intention to pursue a degree: 80% of them plan to graduate.

Unplanned dropout

The unplanned voluntary withdrawal results from disappointing interaction with the institution. According to our interviewees, departure rarely results from a single incident or experience which is itself not surprising given tha student satisfaction depends on a number of factors (e.g. Borghi et al. 2016). The narratives regarding dropping out point to mounting difficulties and obstacles resulting in dissatisfaction with the university experience coalescing in the decision to leave.

The interviewed first-year students aired many grievances related to adapting to the new institutional environment. These revolved around difficulties with grasping the inner-workings of the university, which appears chaotic to newly matriculated students. The difficulties in navigating through various layers of administrative procedures, including the USOS Student Management System and enrolling in courses are seen as overwhelming. Moreover, administrative personnel were presented as not always helpful and reportedly sometimes even hostile. The teaching staff were criticised for their attitude towards students, a low level of commitment to teaching, little eagerness to engage with students, and a lack of teaching skills. These translated into reportedly boring classes and factored in student dissatisfaction with courses. Moreover, some of the interviewees complained about some members of the faculty being unnecessarily harsh on students. Two former students explained the problem in such words: "There were people who concentrated more on criticising than on teaching" (dropout, Italian studies, enrolled in 2014/2015); "I can't imagine how somebody who wants to teach can be so surly and critical all the time" (dropout, environmental studies, enrolled in 2014/15). Importantly, such complaints were very similar and equally frequent among both dropouts and students who persisted and were not given as a direct cause of departure.

Interaction with peers is another issue which was cited by some students as a reason for leaving. Some of the interviewees reported difficulties with blending into new social groups. They did not feel accepted or that they belonged. Other interviewees blamed liberal admissions policies for a considerable gap in academic aptitude between the best and worst students which hampers social integration. Ambitious students resented worse performing peers for slowing the pace of teaching. "It troubles me a bit that so many people are admitted to legal studies and



that so many of those people are... well, not very good students, and they slow down everybody else, they lower the bar" said a student of law, enrolled in 2014/2015. A former student of management studies spoke about the same problem: "The university should not grind us down but it should establish a level of expectations that would require some work on our part and it shouldn't be possible to fool around for 6 months, then sit and learn for 2 days and pass the whole exam session" (dropout, enrolled in 2013/14).

By far the most important factor in student attrition according to the interviewees were unmet expectations and general dissatisfaction with academic programmes. It is impossible to trace a single cause of disappointment. It is rather a combination of courses' content and complexity along with teachers' skills and/or attitude. The latter, however, is not the core issue: according to the interviewees, the content of the courses is ultimately much more important than how it is delivered. Uninspiring, harsh or unpleasant teachers were usually not enough to discourage students, but they only add to the problem of the lack of satisfaction with the programme. A recurrent pattern in the collected dropouts' narratives was that at some point they ceased to find their studies inspiring. Some of them saw arriving at this decisive moment as a gradual process, whereas many of the interviewed drop-outs realised soon after the inauguration of the academic year. These narratives lack turning points or critical incidents that lead to their disappointment with the studies.

In the voluntary withdrawal narratives, the information available in the process of study choice also plays a significant role. Many dropouts expected studies to be something else. For example, students who chose language studies (e.g. French, German, Italian studies) anticipated them to be similar to a language school. They were caught by surprise by the presence of courses of a more theoretical nature that is usual for philological inquiry. "Expectations versus reality? Two completely different worlds and the only thing they have in common is the name: French Studies" (dropout, enrolled in 2013/2014). Students of social sciences complain about the number of mathematicised courses, which they find uninteresting and hard. Students of mathematics and science again differ from others. They are less likely to be surprised by the content of the studies. If there is an element of surprise, it concerns rather the overall difficulty of the programme and the amount of effort required.

The applicant survey confirms the importance of interests in educational decision making to stay or go. When asked to rate their agreement with a series of statements describing their first-choice programmes, respondents agreed mostly with two statements: 1) that they have been interested in the subject for a long time, and 2) that the studies they chose will lead to an interesting job. At the same time, most of them do not expect their diploma to grant them frictionless transition into the labour market nor high salaries. Applicants to mathematical programmes are a notable exception, the overwhelming majority of whom are convinced of bright employment prospects.

Moreover, the results in the applicants' survey demonstrate that there is a problem with prospective students' knowledge of the exact content of the programmes at UW. In one of the questions, we asked the respondents to assess to what extent they agreed with the statement 'I am familiar with the subjects taught in the first year of my most preferred programme'. Less than half (43%) of the respondents claimed they were familiar (i.e. answered 4 or higher on a 7-point scale from 1 meaning 'strongly disagree' to 7 meaning 'strongly agree'). This result demonstrates that prospective students often lack sufficient information on their future studies.

Previous literature (e.g. Tinto 1993; Yorke and Longden 2004) would suggest that there is one type of unplanned dropout that seems to be missing from the interviewees' narratives, namely those who drop out due to life events such as illness or family issues etc. These are



reasons for early departure that would definitely fit into the category of unplanned dropout. Their absence in our study may result from the interviews being early in their academic studies and said events had not had the chance to happen.

Conclusion

This paper summarises the research on student attrition at the University of Warsaw which combined population-wide administrative data, a series of qualitative interviews, and a survey conducted between July and September 2015. Both the programme and institutional dropout rates are staggeringly high for an elite institution. Dropouts can be divided into three major types: 1) the disenchanted dropout or unplanned voluntary withdrawal, when a student drops out due to disappointment with the programme; 2) academic failure (which is, by definition, unplanned), when students are not able to meet the programme's requirements and are dismissed; and 3) premeditated or planned dropout, when students do not intend to graduate from the beginning.

The first two types of dropout dovetail with those discussed by researchers from other countries. Numerous studies point out that attrition is highest before the second year of studies (Braxton et al. 2004; Levitz et al. 1999; Reason et al. 2006) and that transfers between academic programmes or institutions play an important role in student departure from institutions (Hovdhaugen 2009; McCormick 1997; The Comptroller and Auditor General 2007). Moreover, the mechanisms observed in other countries contribute to the explanation of differences in persistence between groups of students at UW. Part-time students in Poland are more likely to come from disadvantaged backgrounds than full-time students (Herbst and Rok 2014; Kwiek 2009), and more often combine studies and paid work (Bożykowski et al. 2014a, 2014b). Due to selection and self-selection, they have lower Matura examination scores than full-time students (Zając 2010, 2011b). Each of these characteristics increases the likelihood of dropping out (Chen and DesJardins 2008; Kuh et al. 2006; Pascarella and Terenzini 2005).

Students' narratives concerning unplanned dropout brings results which are coherent with earlier studies of the causes of student attrition in other countries: e.g. wrong choice of studies (e.g. Davies and Elias 2003; Levitz et al. 1999; Ozga and Sukhnandan 1998; Yorke 1998). However, in certain aspects student attrition at UW differs from what has been described in previous studies. First, dropouts at UW only sporadically mention financial issues, whereas finances were cited among primary reasons for leaving in the UK (Yorke 1998) or USA (Levitz et al. 1999). It should be remembered though that in the qualitative part of the project we only interviewed those at the beginning of their studies. We cannot rule out that those issues may be more important later on. However, the absence of financial difficulties in student narratives could be explained by low costs of studying (even in the case of paid part-time studies) and by students tending to continue to live with their families (Herbst and Sobotka 2014).

The third type – premeditated dropout – falls outside of the conceptual framework of Tinto's model. The model sees dropout as failure in the longitudinal process of students' integration with the university. Planned or strategic dropout results from a decision taken before the enrolment and is not affected by student experience. This type of dropout is discussed relatively little in the literature but can be modelled as a rational behaviour if the definition of benefits is altered. It seems that the design of the Polish system, especially the



lack of tuition fees in the case of full-time studies at public institutions and the ease of applying to other programmes, does little to prevent this kind of behaviour.

The study has its limitations. It covers one elite institution which is not representative for the entire system. It relies on a combination of research methods yet does not include a survey of dropouts typical for research of this sort, and its qualitative component focuses only on first-year students. Nevertheless, the results should alarm policy makers at various levels. The sheer size of the University of Warsaw should draw attention to the outcomes presented. Moreover, one could reasonably expect that some of the problems may be even more acute at less selective and prestigious institutions. Additionally, it is justifiable to claim that due to the homogeneity of higher education institutions in terms of the organisation of studies, the phenomena described in this paper are present at other major public universities in Poland as well. More research is needed. First, the administrative data analysis should cover the entire country, which could be possible if the national database on science and higher education in Poland (POL-on) was made available to researchers. Second, future opinion surveys should also include a survey of recent dropouts and cover not only first-year students. Third, a broader study of prospective students is needed to better understand the process of choosing a university programme.

Despite its scope being limited to one institution, the study can already offer ideas for increasing completion rates. Changes such as improving selectivity or flexibility of tertiary education in Poland would require an overhaul of the entire system and may not be desirable for other reasons. However, there is one issue that could be addressed without dismantling the current system, namely the lack of sufficient information at the time of choosing a college and a programme. This is not the first study to make a similar argument (Herbst and Sobotka 2014). To put it simply, instead of introducing changes at the university level, which is difficult, there is a lot to be done before the enrolment. Higher education institutions intending to raise retention rates should improve their communication strategies. They should focus less on promotion and more on easily accessible and detailed information regarding study programmes, so that students can make better informed choices. Websites of higher education institutions, as the most important source of information for many prospective students, are the obvious point of departure. Last but not least, before any changes are introduced, there is a need for a shift in the discourse on student attrition in Poland. It should not be seen as an additional selection process and something beneficial for the university but as an efficiency problem that should be properly monitored and addressed.

OpenAccess This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

Arias Ortiz, E., & Dehon, C. (2013). Roads to success in the Belgian French Community's higher education system: Predictors of dropout and degree completion at the Université Libre de Bruxelles. Research in Higher Education, 54(6), 693–723. https://doi.org/10.1007/s11162-013-9290-y.

Astin, A. W. (1971). Predicting academic performance in college: Selectivity data for 2300 American colleges. New York: The Free Press.



- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis*. New York: Columbia University Press.
- Belloc, F., Maruotti, A., & Petrella, L. (2010). University drop-out: An Italian experience. Higher Education, 60(2), 127–138. https://doi.org/10.1007/s10734-009-9290-1.
- Berger, J. B., & Lyon, S. C. (2005). Past to present: A historical look at retention. In A. Seidman (Ed.), College student retention: Formula for student success (pp. 1–30). Westport: American Council on Education/ Praeger.
- Borghi, S., Mainardes, E., & Silva, E. (2016). Expectations of higher education students: A comparison between the perception of student and teachers. *Tertiary Education and Management, 22*(2), 171–188. https://doi.org/10.1080/13583883.2016.1188326.
- Boudon, R. (1974). Education, Opportunity and Social Inequality: Changing Prospects in Western Society. John Wiley & Sons Canada.
- Bożykowski, M., Dwórznik, M., Giermanowska, E., Izdebski, A., Jasiński, M., Konieczna-sałamatin, J., ... Zając, T. (2014a). Monitorowanie losów absolwentów uczelni wyższych z wykorzystaniem danych administracyjnych Zakładu Ubezpieczeń Społecznych. Raport końcowy. [Higher education graduates' tracer study with the use of Social Insurance Institution's (ZUS) administrative data. Final report] Warszawa: Instytut Badań Edukacyjnych (IBE).
- Bożykowski, M., Izdebski, A., Jasiński, M., Konieczna-sałamatin, J., Styczeń, M., & Zając, T. (2014b). Educational and occupational progression – Following graduates from the University of Warsaw. Edukacja, 6(131), 23–38.
- Braxton, J. M. (2000). Reworking the Student Departure Puzzle. Nashville: Vanderbilt University Press.
- Braxton, J. M., & Hirschy, A. S. (2005). Theoretical developments in the study of college student departure. In A. Seidman (Ed.), College student retention: Formula for student success (pp. 61–88). Westport: American Council on Education/Praeger.
- Braxton, J. M., & Lee, S. D. (2005). Toward reliable knowledge about college student departure. In A. Seidman (Ed.), College student retention: Formula for student success (pp. 107–129). Westport: American Council on Education/Praeger.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). Understanding and reducing college student departure. San Francisco: Jossey-Bass.
- Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society*, *9*(3), 275–305. https://doi.org/10.1177/104346397009003002.
- Butterfield, L., Borgen, W., Amundson, N., & Maglio, a. (2005). Fifty years of the critical incident technique: 1954-2004 and beyond. Qualitative Research, 5(4), 475-497. https://doi.org/10.1177/1468794105056924.
- Chen, R. (2008). Financial aid and student dropout in higher education: A heterogeneous research approach. In J. C. Smart (Ed.), Higher Education: Handbook of Theory and Research, vol 23. Dordrech, Springer
- Chen, R., & DesJardins, S. L. (2008). Exploring the effects of financial aid on the gap in student dropout risks by income level. *Research in Higher Education*, 49(1), 1–18. https://doi.org/10.1007/s11162-007-9060-9.
- Davies, R., & Elias, P. (2003). *Dropping out: A study of early leavers from higher education*. London: Department for Education and Skills.
- Flanagan, J. J. (1954). The critical incident technique. *Psychological Bulletin*, 51(4), 327–358.
- Flores, S. M., Park, T. J., & Baker, D. J. (2017). The racial college completion gap: Evidence from Texas. *The Journal of Higher Education*, 88(6), 894–921. https://doi.org/10.1080/00221546.2017.1291259.
- Georg, W. (2009). Individual and institutional factors in the tendency to drop out of higher education: A multilevel analysis using data from the Konstanz student survey. Studies in Higher Education, 34(6), 647–661. https://doi.org/10.1080/03075070802592730.
- Gury, N. (2011). Dropping out of higher education in France: A micro-economic approach using survival analysis. Education Economics, 19(1), 51–64. https://doi.org/10.1080/09645290902796357.
- GUS. (2015). Higher education institutions and their finances in 2014. Warsaw: GUS.
- Hagedorn, L. S. (2005). How to define retention: A new look at an old problem. In A. Seidman (Ed.), College student retention: Formula for student success (pp. 89–106). Westport: American Council on Education/ Praeger.
- Herbst, M., & Rok, J. (2014). Equity in an educational boom: Lessons from the expansion and marketisation of tertiary schooling in Poland. European Journal of Education, 49(3), 435–450. https://doi.org/10.1111/ejed.12068.
- Herbst, M., & Sobotka, A. (2014). Mobilność społeczna i przestrzenna w kontekście wyborów edukacyjnych. [Social and spatial mobility in the contex of educational choices]. Warszawa: Instytut Badań Edukacyjnych.
- Heublein, U. (2014). Student drop-out from German higher education institutions. European Journal of Education, 49(4), 497–513. https://doi.org/10.1111/ejed.12097.



- Holden, C. (2016). Adapting Tinto's framework: A model of success and failure in a middle eastern transnational setting. Studies in Higher Education, 5079, 1–18. https://doi.org/10.1080/03075079.2016.1212004.
- Hovdhaugen, E. (2009). Transfer and dropout: Different forms of student departure in Norway. *Studies in Higher Education*, 34(1), 1–17. https://doi.org/10.1080/03075070802457009.
- Jasiński, M., Bożykowski, M., Zając, T., Styczeń, M., & Izdebski, A. (2015). Dokładniej, rzetelniej, taniej. Badania oparte na rejestrach publicznych jako szansa dla badań społecznych w Polsce [accurate, reliable, and cheap. Register-based analysis as an opportunity for social research in Poland]. Studia Socjologiczne, 1(216).
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–292.
- Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). What matters to student success: A review of the literature. Commissioned report for the National Symposium on postsecondary student success: Spearheading a dialog on student success. Washington, D.C.: National Postsecondary Education Cooperative.
- Kwiek, M. (2009). The two decades of privatization in polish higher education. Cost-sharing, equity, and access. In J. Knight (Ed.), Financing Access and Equity in Higher Education (pp. 149–168). Rotterdam: Sense Publishers.
- Lassibille, G., & Navarro Gómez, L. (2008). Why do higher education students drop out? Evidence from Spain. *Education Economics*, 16(1), 89–105. https://doi.org/10.1080/09645290701523267.
- Levitz, R. S., Noel, L., & Richter, B. J. (1999). Strategic moves for retention success. In G. H. Gaither (Ed.), Promising practices in recruitment, remediation, and retention (pp. 31–50). San Francisco: Jossey-Bass.
- Manski, C. F., & Wise, D. A. (1983). College Choice in America. Cambridge: Harvard University Press.
- Marciniak, Z., Chmielecka, E., Kraśniewski, A., & Saryusz-Wolski, T. (2014). In Z. Marciniak (Ed.), Self-certification Report of the National Qualifications Framework for Higher Education. Warsaw: Instytut Badań Edukacyjnych.
- McCormick, A. C. (1997). Transfer behavior among beginning postsecondary students: 1989–1994 (statistical analysis report no. NCES 97–266). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics Data.
- Mincer, J. (1974). Schooling, experience, and earnings. New York: Columbia University Press.
- MNiSW [Ministry of Science and Higher Education] (2013). Szkolnictwo wyższe w Polsce 2013 [higher education in Poland in 2013]. Retrieved from: http://www.nauka.gov.pl/g2/oryginal/2013_07/0695136d37 bd577c8ab03acc5c59a1f6.pdf. Accessed 1 May 2017.
- MNiSW [Ministry of Science and Higher Education] (2016). Higher Education System. Retrieved from: http://www.nauka.gov.pl/en/higher-education-system/. Accessed 7 Dec 2016.
- Mortenson, T. G. (2005). Measurements of persistence. In A. Seidman (Ed.), College student retention: Formula for student success (pp. 31–60). Westport: American Council on Education/Praeger.
- Nora, A., Barlow, E., & Crisp, G. (2005). Student persistence and degree attainment beyond the first year in college: The need for research. In A. Seidman (Ed.), *College student retention: Formula for student success* (pp. 129–154). Westport: American Council on Education/Praeger.
- OECD. (2013). Education at a glance 2013. OECD Indicators. OECD Publishing. https://doi.org/10.1787/eag-2013-en.
 OECD. (2014). Education at a glance 2014: OECD indicators. OECD Publishing. https://doi.org/10.1787/eag-2013-en.
 OECD. (2016). Education GPS Poland. Retrieved December 30, 2016, from http://gpseducation.oecd.org/CountryProfile?primaryCountry=POL
- Ozga, J., & Sukhnandan, L. (1998). Undergraduate non- completion: Developing an explanatory model. Higher Education Quarterly, 52(3), 316–333.
- Pascarella, E. T., & Terenzini, P. T. (2005). How college affects students. Volume 2: A third decade of research. San Francisco: Jossey-Bass.
- Patton, M. Q. (2002). Qualitative research and evaluation methods (3rd ed.). Thousand Oaks: Sage Publications.Paulsen, M. B., & St. John, E. P. (2002). Social class and college costs: Examining the financial Nexus between college choice and persistence. The Journal of Higher Education, 73(2), 189–236.
- Quinn, J. (2013). Drop-out and completion in higher education in Europe. European Union. Retrieved from: http://nesetweb.eu/wp-content/uploads/2015/09/2013-Drop-out-and-Completion-in-Higher-Education-in-Europe-among-students-from-under-represented-groups.pdf. Accessed 15 Nov 2017.
- Raftery, A. E., & Hout, M. (1993). Maximally maintained inequality: Expansion, reform, and opportunity in Irish education, 1921-75. *Sociology of Education*, 66(1), 41–62. https://doi.org/10.2307/2112784.
- Reason, R. D., Terenzini, P. T., & Domingo, R. J. (2006). First things first: Developing academic competence in the first year of college. Research in Higher Education, 47(2), 149–175. https://doi.org/10.1007/s11162-005-8884-4.
- Schneider, M. (2010). Finishing the first lap: The cost of first year student attrition in America's four year colleges and universities. American Institutes for Research. Retrieved from: https://www.air.org/resource/finishing-first-lap-costfirst-year-student-attrition-america-s-four-year-colleges-and. Accessed 2 May 2017.



- Seymour, E., & Hewitt, N. (1997). Talking about leaving: Why undergraduates leave the sciences. Boulder: Westview.
- Simon, H. A. (1957). Models of man: Social and rational. New York: John Wiley and Sons, Inc..
- Smużewska, M., Wasielewski, K., & Antonowicz, D. (2015). Niepowodzenia w studiowaniu z perspektywy uczelni i studentów [educational failure in polish higher education Internal stakeholders' perspectives]. Edukacja, 4(135), 130–146.
- Thaler, R. H. (1994). Quasi Rational Economics. New York: Russell Sage Foundation.
- The Comptroller and Auditor General. (2007). Staying the course: The retention of students in higher education. A Report by the Comptroller and Auditor General. London. Retrieved from: https://www.nao.org.uk/report/staying-the-course-the-retention-of-students-in-higher-education/. Accessed 15 Nov 2017.
- Thomas, L., & Hovdhaugen, E. (2014). Complexities and challenges of researching student completion and non-completion of higher education Programmes in Europe: A comparative analysis between England and Norway. European Journal of Education, 49(4), 457–470. https://doi.org/10.1111/ejed.12093.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125.
- Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student leaving. The Journal of Higher Education, 59(4), 438–455. https://doi.org/10.2307/1981920.
- Tinto, V. (1993). Leaving college. Rethinking the Causes and Cures of Student Attrition. Chicago: University of Chicago Press.
- Trautwein, C., & Bosse, E. (2017). The first year in higher education—Critical requirements from the student perspective. *Higher Education*, 73, 371–387. https://doi.org/10.1007/s10734-016-0098-5.
- Ulriksen, L., Madsen, L. M., & Holmegaard, H. T. (2010). What do we know about explanations for drop out/opt out among young people from STM higher education programmes? *Studies in Science Education*, 46(2), 209–244. https://doi.org/10.1080/03057267.2010.504549.
- University of California. (2016). Annual Accountability Report 2016. Retrieved from: https://accountability. universityofcalifornia.edu/2016/report.html. Accessed 30 Apr 2017.
- Vossensteyn, H., Kottmann, A., Jongbloed, B., Kaiser, F., Cremonini, L., Stensaker, B., ... Wollscheid, S. (2015). Drop-out and completion in higher education in Europe. https://doi.org/10.2766/826962.
- Wallgren, A., & Wallgren, B. (2007). Register-based statistics. Administrative data for statistical purposes. Chichester: John Wiley & Sons.
- Yorke, M. (1998). Undergraduate non-completion in England: Some implications for the higher education system and its institutions. Tertiary Education and Management, 4(1), 59–70. https://doi.org/10.1007/BF02679397.
- Yorke, M., & Longden, B. (2004). Retention and student success in higher education. Maidenhead: Open University Press.
- Zając, T. (2010). Raport dotyczący przebiegu rekrutacji na Uniwersytecie Warszawskim w 2010 roku [Report: Admissions at the University of Warsaw in 2010]. Warszawa: Uniwersytet Warszawski.
- Zając, T. (2011a). Jak kandydaci starają dostać się na studia? Analiza strategii kandydatów na wybrane kierunki studiów na Uniwersytecie Warszawskim [How applicants try to get accepted? Analysis of applicants' admissions strategies at selected faculties of the University of Warsaw]. Decyzje, 16, 73–104.
- Zając, T. (2011b). Raport na temat przebiegu rekrutacji na studia na Uniwersytecie Warszawskim w roku 2011 [Report: Admissions at the University of Warsaw in 2011]. Warszawa: Uniwersytet Warszawski.
- Zając, T. (2014). Raport na temat przebiegu rekrutacji na studia na Uniwersytecie Warszawskim w roku 2014 [Report: Admissions at the University of Warsaw in 2014]. Warszawa: Uniwersytet Warszawski.

