

# Student Attrition at Technical and Vocational Educational Training (TVET) Institutions: The Case of XCel Technical College in Malaysia

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## Abstract

Student attrition is a challenging issue for tertiary education institutions, especially Technical and Vocational Education Training (TVET) institutions. There are a lot of explanations why students withdraw from college level programmes and the causes may be unique for students who sign up in a course that suits their interest areas. Small student retention rates reflect negatively on the reputation of the institution and even more, its academic status. This would, in turn, influence institution enrolment, finances, and future plans for development. Thus, this research effort was designed to investigate the influences of students' withdrawal from these institutions before completion of their studies. As this research took the qualitative approach, data collection was performed through interviews and focus group discussions involving two groups of students (i.e., those who dropped out and those who continued with their studies) from XCel Technical College. The findings showed that the students' reasons for dropping out from the TVET institutions programme are varied, all which were classified into two categories, namely institutional factors (e.g., training facilities, learning materials, and scheduling) and student characteristics (e.g., parental/family influence and urgency of getting employment). This findings support the results of earlier studies which highlighted that student characteristics, institutional factor, educational and occupational goals and commitments, financial status and other personal factors, are important to their retention in higher education programs (Bafatoom, 2010; Bean, 1980; Braxton, 2005; Pascarella & Terenzini, 1983; Spady, 1970, 1971; Tinto, 1975, 1993).

**Keywords:** student attrition, drop out, Technical and Vocational Education Training (TVET), private higher institutions

## 1. Introduction

### 1.1 Background

This study focused on student attrition in private higher education institutions, specifically in private TVET institutions in Malaysia. High student attrition rates turns out to be the most crucial concern in education everywhere in the world, where the effects are apparent from the beginning of formal education in schools to the higher education institutions (Palmisano, 2012; O'Neal, 2012). Student attrition has become the highest reviewed issue in this field and becomes extremely challenging to tertiary education institutions (O'Neal, 2012; Grayson & Grayson, 2003; Fisher & Engemann, 2009). Even when there is good planning and an established system, most private higher institutions still struggle to deal with complex attrition issues that will affect scholars, college, university and community (Kim, 2014; Palmisano, 2012; Pascarella, 1980). Thus, this study was designed to look at the occurrence of student attrition in TVET institutions in Malaysia. It is hoped to contribute a deeper understanding to this phenomenon by examining influences on why and how students withdraw from institutions before completing their studies. Several terms have been used previously as names for these students. A "persister" student (meaning one who persists) is considered as a student who registers in an education institution and keeps on studying until graduating, whereas a non-persister student is a student who is involved in an attrition case and leaves the college without graduating or receiving certification (Hagedorn, 2005; Astin, 1975; Tinto, 1987).

### 1.2 Student Attrition Issues

The student attrition problem is considered as one of the major issues in higher education institutions all over the

globe and Malaysian higher education is not an exception (Sangodiah, Beleya, Muniady, Heng, & Spr, 2015). Most TVET institutions are still striving to achieve the best solution (Sangodiah et al., 2015). Some students do not successfully graduate due to academic issues in their study programmes, while others choose to voluntarily leave before completion of their study because of problems at home or decision made by parents. However this occurrence still has no possible optimal solution (Aljohani, 2014; Artze-Vega, 2012; Fisher & Engemann, 2009).

Hence, this poses a challenge for new researchers to uncover reasons behind the issue and relate them to the existing theory and practical methods which can thus be applied to the higher education institutions (Kim, 2014), specifically TVET, in order to resolve their problems.

Attrition cases cause so much negative impact as well as overall detrimental effects on institutions, including financial losses because of unremunerated enrolment, interruption of organisational management, exhausted operating expenses, wasted profits, unfortified business liabilities, and create negative image to the institution (O'Keefe, 2013). Inviting candidates and offering marketing campaigns to potential students for enrolment would absolutely be affected. There is the possibility that enrolment can decrease, because student attrition would likely spoil the good status of an institution and create continuing implications (O'Keefe, 2013). In addition to this, institutions would also waste budget on staffing, facilities, and programmes (Bailey, Leinbach, & Jenkins, 2006). In addition, attrition can also cause waste of institutional income, especially in institutions situated in a competitive environment equipped only with limited general and financial resources.

For the students, they will suffer negative impact on their personal lives as they would fail to attain individual and financial success because of not completing their study. Psychologically, this would adversely affect their self-esteem. College dropout students are also known to have the bad experience of having to shoulder extra financial burden, such as their student fees, tuition fees, programme fees, and accommodation fees (O'Keefe, 2013). Students using loans to pay tuition fees would have to repay the loan, even if they failed to graduate. So, these students would only waste time studying in college if they chose to leave without getting a certificate. On top of that, it will affect their future income due to low qualifications, as well as less their undeveloped individual ability and talent (Aljohani, 2014). Involuntary withdrawal can be considered as students who are forced by their institution to stop their study. These involuntary students would probably have decreased self-esteem and self-confidence, which would likely have a negative impact economically in the long run. Some of these factors are because of failure academically or being unable to survive the burden and challenges of the educational system.

According to the data, almost 20% or specifically 17.5% students have dropped out from the total students who signed up in tertiary education in Malaysia. In 2012, attrition cases of above 14% were reported for private universities in Malaysia within the first six months (Sangodiah et al., 2015).

Meanwhile, Glogowska, Young, and Lockyer (2007) revealed that two most prominent reasons influencing student decision to exit the college are the experience of bad college incidents and lack of institutional support. Moreover, Schmitt and Duggan (2011) added that insufficient positive interactions between students and the institution's faculty and staff are usually also considered as reasons for non-persisters to withdraw from the institution. Tinto (1993) categorised reasons that commonly influence attrition rates. First are student variables, second are institutional variables, and third are student-institution interactional variables. Moreover, the critical factor to student dropout and the level of student engagement is a combination of social and academic factors, which is the influential factor in probability of student retention (Astin, 1984).

In Malaysia, institutional and financial issues such as lack of service, bad institutional experience, poor amenities provided by the institution, lecturer teaching styles, and high education fees are the most cited reasons for attritions (Sangodiah et al., 2015). Most students leave because they are not capable of carrying on or remaining in their study programmes due to lack of interest and being unsuccessful in their attempts in their studies (Sangodiah et al., 2015).

### *1.3 XCel Technical College*

As a Private Skills Training Institute under Department of Skills Development (DSD), Ministry of Human Resource (MOHR), XCel Technical College's vision is to provide the best possible TVET education to students by developing the knowledge, attitudes, and skills essential for life-long learning in automotive, electrical, welding fields, as well as the pastry industry. This college was established in 2011 and offers Malaysian Skills Certificate programmes from Level 2 to Malaysian Skills Diploma (Level 4). XCel managed to get a five star rating in 2015 from the Department of Skills Development. The college focuses on continuous improvement of the competencies and knowledge by providing skills education to those who are interested in developing a career in the industry. It is equipped with modern training tools, equipment, and current vehicle models to ensure that

the students are able to acquire skills relevant to industry needs. The college is run by 20 administrative and academic staff members who are committed in providing the best possible TVET education to students by developing the knowledge, attitudes, and skills essential for life-long learning.

At XCel Technical College, attrition has been the major problem faced both by the administration and board of directors. Attrition cases increase yearly, causing so many negative impacts on XCel Technical College since 2011. Although so much effort and planning were applied by the administration and board of directors, XCel Technical College has struggled to deal with attrition cases and this problem can destructively interrupt the college operations.

The greatest impact of this phenomenon on XCel Technical College is financial loss. XCel Technical College's revenue is derived directly from the tuition fees. The average tuition fee for one student at XCel Technical College is about Malaysian Ringgit (MYR) 10,000 yearly per scholar. XCel Technical College has lost about MYR1,060,000 for the recent five years because of student attrition (Table 1). Because of this, it has to cut down budget allocations for staff and administration, student activities, student facilities, and training. In addition, XCel Technical College cannot provide the best service to students. In contrast, the student retention rate needs to be increased for students transitioning from their first year of programme study to their second, if the institution desires to observe an overall enhancement of graduation rates (Levitz, Noel, & Richter, 1999).

Table 1. Financial loss due to attrition rates from 2011 to 2015 (XCel Technical College, 2015)

| Year  | Numbers of Attrition Cases | Financial loss (Malaysian Ringgit) |
|-------|----------------------------|------------------------------------|
| 2011  | 6                          | 6 x RM 10,000 = RM 60,000.00       |
| 2012  | 12                         | 12 x RM 10,000 = RM 120,000.00     |
| 2013  | 25                         | 25 x RM 10,000 = RM 250,000.00     |
| 2014  | 28                         | 28 x RM 10,000 = RM 280,000.00     |
| 2015  | 35                         | 35 x RM 10,000 = RM 350,000.00     |
| TOTAL | 106                        | RM 1,060, 000.00                   |

Source: XCel Technical College (2016)

Secondly, student attrition negatively influences the public perception of the college. Based on records, several students have cancelled their enrolment in XCel Technical College, once they knew that some previous students have withdrawn from this college before graduation. They were worried that there is something wrong with this college. Collectively, this directly affects XCel Technical College income. Therefore, attrition cases cause wasted budget to the XCel Technical College in terms of salaries for faculties.

In this vein, student retention becomes a pertinent matter of economic survival for XCel Technical College. It is mandatory that this college solve this attrition problem and thus retain students. Table 2 shows the numbers and percentage of student attrition rates at XCel Technical College in from 2011 to 2015.

Table 2. Student enrolment and dropout rates from 2011 to 2015 (XCel Technical, 2016)

| Year                | Enrolled | Drop Out | Attrition rate |
|---------------------|----------|----------|----------------|
| 2011                | 34       | 6        | 17.64%         |
| 2012                | 75       | 12       | 16.00%         |
| 2013                | 150      | 25       | 16.66%         |
| 2014                | 170      | 28       | 16.47%         |
| 2015                | 220      | 40       | 18.18%         |
| Total (2011-2015)   | 649      | 111      | 17.10%         |
| Average (2011-2015) | 129.8    | 22.2     | 17.10%         |

#### 1.4 Initial Research Framework

The purpose of initial research framework is to address some the key factors or variables being studied that affected student attrition and as direction to the research questions. XCel Technical College student's withdrawal

from pursuit their study is a phenomenon that requires more in-depth knowledge on what contributes to these students' decision to withdraw. Thus, initial research framework utilized for this study incorporated from few student attrition prominent model such as Bean and Metzner (1985), Pascarella (1980), Bean (1980, 1982), Tinto (1975, 1993) and Spady (1970).

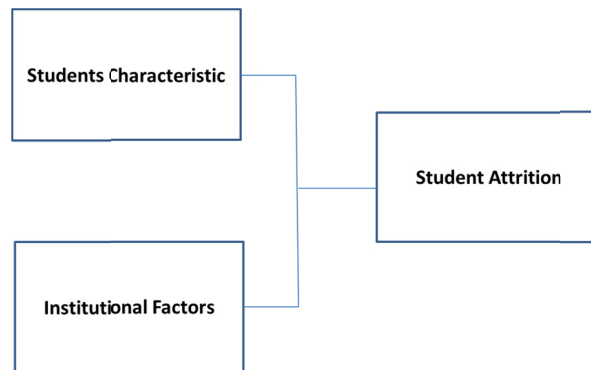


Figure 1. Initial research framework

## 2. Methodology

A case study was selected to address the established research questions for this research, which focused on student attrition in a private technical vocational education institution (TVET), namely XCel Technical College, and factors that influence non-persister students in their decision to withdraw from further pursuing their studies. Information about potential participants for this research was obtained directly from the college representatives, namely the principal and administrative staff. Two techniques were employed for data collection, namely focus group sessions and in depth semi-structured interviews.

In order to delve deeper into factors underlying the attrition phenomenon at this college, in depth interviews were performed using an interview protocol that was developed for this research on 15 randomly selected students who terminated their studies before completion of their first semester (non-persister students), from a population of 106 attrition cases recorded at the college from 2011 to 2016. The selection criteria for non-persister students were 1) previously full-time enrolment, 2) studied at the college for at least a month, and 3) withdrew voluntarily from their studies before the completion of the first semester. For each interview session, the researcher recorded the dialogue using a micro-audio recorder (MP3) after obtaining permission from the participant. After completing all the interviews, the recorded audio was then transcribed by the researcher.

Next, two focus group sessions were carried out with students who completed their first semester studies, where the first group involved seven students and the second group consisted of eight students (persister students). These persister students were randomly selected from the existing 255 currently registered students, but were chosen based on the following criteria, 1) the student is registered full-time, and 2) the student has successfully completed at least the first semester of study. All participants were chosen across different study majors and programmes.

Next, the transcription is then analysed by reviewing and coding the data using NVIVO 8, a software application for qualitative data analysis. From this analysis, the categories of themes and sub-themes were then revealed, as described in the next section.

## 3. Findings and Discussion

The results uncovered a considerable number of themes. Table 3 shows the main themes, themes, and sub-themes. The analysis of the non-persister student interviews resulted in the emergence of 15 sub-themes that were regrouped under 10 themes and subsequently two main themes. The 15 subcategories resembled the most frequent issues and factors affecting student experiences and consequently their retention in the college, as perceived by the 15 non-persister students. These common issues and factors were grouped under the sub-themes of learning materials, training facilities, timetabling, lack of extracurricular activities, student goals, and external influences. The 15 participants discussed issues related to the above nine categories and explained how they had negatively affected their persistence to remain enrolled in the college. The final step in the thematic analysis of the non-persister student data was to classify these nine categories according to their similarities under bigger

themes. These seven categories were classified under the following two main themes: institutional factors and student characteristics. Meanwhile, the data analysis from the persister student focus groups resulted in the emergence of 14 sub-themes, regrouped under nine themes and subsequently under two main themes. The 14 sub-themes represented the most frequent issues and factors affecting students' experiences at XCel Technical College and their subsequent retention. These common issues and factors were grouped under the following 10 themes, namely learning materials and training facilities, lecturers, class environment, timetabling, lack of extracurricular activities, staff attitude, hostel problems, external influences, and student goals. The 15 participants of the two focus groups talked about issues related to the above nine themes and how they negatively affected persistence of students to remain studying in the college.

Table 3. Main themes, themes and sub-themes for non-persister and persister students

| Data Collection Technique: In Depth Semi-Structured Interviews |                         |  |  |
|--|-------------------------|--|--|
| Participants   | Main Themes             | Themes   | Sub-Themes   |
| Non-persister  | Institutional Factor    | Learning materials   | Learning materials always exhausted  |
|  |                         | Training facilities  | Lack of facilities and training equipment  |
|  |                         | Timetabling  | Lecturer does not have proper class and workshop schedules   |
|  |                         | Class environment  | Poor classroom conditions and not comfortable  |
|  |                         | Staff attitude   | Negative lecturer attitude   |
|  |                         | Lecturer   | Do not care about students   |
|  | Student Characteristics | Hostel problem   | The number of lecturers<br>Do not have maintenance service   |
|  |                         | Lack of extracurricular activities                                 | Do not have extracurricular activities   |
|  |                         | Student goals  | Forced to study by parents<br>Cannot wait for graduation and want to get job quickly<br>Lose interest to study |
|  |                         | External Influences  | Family problem<br>Family economic status<br>Parents force student to find a job                                |
| Data Collection Technique: Focus Group                         |                         |  |  |
| Participants   | Main Themes             | Themes   | Sub-Themes   |
| Persister  | Institutional Factor    | Learning Materials   | Learning materials exhausted   |
|  |                         | Training Facilities  | Lack of facilities and training equipment  |
|  |                         | Class environment  | Equipment not updated  |
|  |                         | Timetabling  | Poor classroom conditions and not comfortable<br>Class schedule  |
|  | Student Characteristics | Lack of extracurricular activities                                 | Extracurricular activities are important   |
|  |                         | Staff attitude   | Too strict and have temper<br>Disrespecting students<br>Do not care about students                             |
|  |                         | Hostel problem   | Poor service and facilities  |
|  |                         | External influences  | Family problems and economic status  |
|  | Student goals           | Looking for other institutions<br>Forced to study<br>Getting a job |  |

From the data of the non-persisters and persisters, each group shared two common main influences, namely institutional factors and student characteristics. Issues under both of these were raised by the participants in the groups. All of these participants talked about similar issues in relation to the institutional factor of XCel

Technical College. These included issues related to the learning materials, training facilities, training equipment, classroom, as well as the practices of the lecturer. The most commonly raised issues across two groups were related to exhausted learning materials, lack of facilities and training equipment, lack of proper class and workshop schedules, poor classrooms conditions, attitude of the lecturer, the way staff dealt with students, the lack of extracurricular activities, poor service and facilities at the hostel, as well as timetabling. The second influence was related to student characteristics. Issues under student characteristics were raised by the participants from both groups, which included all student-related issues that might affect student persistence but were not related to the college. These included students' educational background, family problems and economic status, their goals, their commitment toward education, as well as students' family problems.

After uncovering these influential factors that were prevailing in this college, several practical and policy recommendations can be made. From the practical viewpoint, XCel Technical College needs to improve and upgrade the shortcomings classified under institutional factors. Firstly, it must improve and upgrade the training equipment and facilities, increase and enhance the quality and quantity of learning materials, renovate the hostel, and improve soft skills of the academic and administrative staff in dealing with students and their problems. Secondly, in order to assist in handling problems related to student characteristics, the college could establish better consultation and support programmes to help students to become more motivated and be able to prioritise their studies. It is also recommended that the faculty members could improve the learning experience by improving the level of student engagement, such as through mentor-mentee programmes. All of these efforts can then be established under a formal retention plan in order to alleviate the problems faced by this college, and if successful, provide an example for other colleges to follow.

This findings support the results of earlier studies which highlighted that student characteristics, institutional factor, educational and occupational goals and commitments, financial status and other personal factors, are important to their retention in higher education programs (Bafatoom, 2010; Bean, 1980; Braxton, 2005; Pascarella & Terenzini, 1983; Spady, 1970, 1971; Tinto, 1975, 1993).

#### **4. Conclusion**

This research attempted to investigate factors affecting attrition, specifically in the context of TVET institutions in Malaysia. Based on the results of the current study, including the discussions of these findings, the answers to the research questions, and in the light of the relevant local and international literature published related to student attrition in higher education.

The findings of this study have added to the body of knowledge that can contribute to solve the TVET students attrition phenomenon by emphasizing various government policy and practice on skills education authorities in Malaysia, skills education players especially TVET institutions and specifically XCel Technical College, skills accredited centres, institutions of similar systems, and the new researchers in this field.

This research had establish qualitative case study method which can be a reference and the guideline for the future researcher in student attrition field to apply full qualitative method in their study. In addition, it will enrich the style and methodology about student attrition study. Compared to the previous and early study in this field, most of them apply quantitative method or mix method. It is hoped that the findings of this study can valuably add nuance to research in the field of student attrition in higher education, particularly in the local context of Malaysian TVET and skills training institutions.

Thus, initial research framework which proposed in this study can be implemented for TVET student attrition studies as well as for academic student attrition studies. It is flexible during the analysis process and allows to collect all the data and then analyse it or do data analysis during the collection process. In the analysis stage the gathered data is sifted, charted and sorted in accordance with key issues and themes.

Moreover, it will provide a platform for Malaysia TVET institutions, particularly XCel Technical College, to design and conduct the best student attrition research, action, and planning that could potentially assist in identifying issues that influence student experience and persistence.

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