Push, Pull and Falling out: Determinant Factors of Drop-out in Technical Training Institutes in Bhutan

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Abstract

This study determined the determinant pull, push and falling out factors that influenced students to drop out of Technical Training Institutes (TTIs). Institute was the agent for the push factor, while students themselves were agents for the pull factor. For the falling out factor, neither institute nor student was an agent, but the situations which are not in control of both. The study also further explored the dominant and the least prevalent factors that led the student to drop out from TTIs. The closed-ended dichotomous survey questionnaire was used for collecting data from drop-outs. Collected data were analyzed using the SPSS software package. The findings supported that pullout factors related to family played a prominent role in the complex sequence of events that factored into students' decision to drop out. In contrast, falling out that encapsulated more of peer-related factors remained the most negligible prevalent factor. The result also pointed out that the accumulation of more than three individual factors caused students to drop out of TTIs. Furthermore, it was also evident from the outcome that poverty, lack of education and low social status of parents increased odds for a student to drop out.

Keywords: drop-out, falling, pull, push, TTIs, TVET

Introduction

Dropping out of school is widely recognized as an unconstructive life event that is ensued by further problems. The drop-out has negative consequences at both the individual

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and social levels, and the problem of not completing school should be the concern of every member of society (Maton & Moore, 2010). The students who dropped out of school struggle to find good jobs to live a comfortable life. As the economy gears towards a high-skilled labour force, drop-outs will have much more challenging times surviving economically in the societies. And higher unemployment rates cost the nation with lost productivity and reduced revenues in income taxes. So, dropouts cost the nation money in many ways (Rumberger, 2001). Drop-out students are also found to engage in anti-social activities (Yadav & Mehta, 2018) and cause problems to individuals and societies. Drop-out is a common severe problem for all countries globally (Ergün & Demir, 2017). Dropping out has a considerable consequence on the individuals, societies, and building the country's economic prosperity and hampers the rate of developmental activities of a nation. School drop-out causes lots of problems to individual and the societies. So, some programmatic remedies are needed to prevent Drop-out (TAS, A. et al., 2013).

The constitution of Bhutan mandates the provision of free education to all children till the tenth standard to improve and increase knowledge, value and skills of individuals and bring development to the country. And yet poorer students find it challenging to carry on with their studies owing to additional costs their parents have to bear. Although the government provides free education to relieve some of the financial burdens on poor parents' shoulders by covering tuition fees, other expenses such as school uniforms. transportation. contributions to the school welfare fund, stationery, and boarding costs must be covered by the parents, which can add up to a sum that is out of reach for some poor parents (Dorji, 2005). About 5.52% of students from pre-primary level up to the tenth standard enrolled in the school system dropped out in 2003. Since then, Bhutan has seen an increased case of school drop-outs (J-F. et al., 2015). In the 2020 academic session, the drop-out rate at the tenth standard level year was recorded at 7.4% (Bhutan Broadcasting Services, December 9, 2020).

"Education is the key to effective development plans, and Technical and Vocational Education and Training (TVET) must be the master key that can alleviate poverty, promote peace. protect the environment, improve the quality of life for all, and contribute to long-term development" (Bonn Declaration, 2004). Many developing countries regard TVET as a critical element in economic growth and poverty reduction and make considerable investments to increase students' enrollment in TVET (Scott, R. et al., 2015). When Bhutan embarked on a modernization path in the early 1960s, the government established its first TVET school to teach technical and vocational skills to Bhutanese youths to lessen profound reliance on the foreign workforce to carry out its developmental activities. In recent years Bhutan, like elsewhere in the world, has seen an augmented need for technological and industrial skills, resulting in more TVET institutes being set up in the country, especially in the private sector, to help achieve sustainable development goals. However, increased TVET institutes in the country are not necessarily translated into a requisite pool of highly skilled and competent vocational human resources. The mismatch between the demand of skill set in the industry and the supply of trained human capital created a substantial gap (Ministry of Labour and Human Resources, 2020), wherein the kind of training and skills acquired by youth do not suit the labour market. Obviously TVET institutes have a lot of catch up to do to gain employers' confidence. Most institutes lack high-tech equipment. contemporary teaching materials and well-qualified teachers for quality yields. Over and above, there is a general perception in our country that TVET is reserve for those who failed to pursue general education. These public's unenthusiastic effects towards TVET programs in Bhutan, thus far, seem to have negatively affected on TVET system in the country.

Ever since the onset of the COVID-19 pandemic, the country has witnessed a shortage of skilled workforce in the labour market. The construction sector suffered an acute labour shortage when Indian workers left for their country and could not re-enter Bhutan due to COVID-19 related travel

restrictions imposed by the government. In contrast, many unemployed Bhutanese youths could not fill these vacancies due to a lack of relevant knowledge, practical skills and work attitudes. However, our youth have since realized the importance of skilling, and more and more youths are enrolling in the TVET institutes to get skilled. Recently the government has initiated the TVET reforms committing more resources to encourage unemployed youths to take up the TVET training programs. The government has also designed more diverse TVET curriculum and programs, including many short courses targeting unemployed youths. Irrefutably, enrollment in TVET programs in the future is set to increase substantially. With an increase in TVET enrollment, the number of drop-outs would also increase in proportion.

The international literature reveals high drop-out rates in TVET institutions, which cause concerns in societies worldwide. Many developing countries, where huge investments were made to upscale technical and vocational education, have experienced high drop-out rates (Scott, R. et al., 2015). Likewise, 85 drop-outs were recorded with the public TTIs in Bhutan in the last three years. However, no prior study was done on students' drop-out from TTIs to ascertain causal factors for their dropping out. This study thus focuses on identifying the determinants of drop-outs from TTIs during the last three consecutive academic years from 2018 to 2020. This study also examined the dominant and minor prevalent factors that cause drop-out in public TTIs.

Research questions

- 1. What were the factors for students to drop-out from TTIs?
- 2. Which factors were predominant causes towards student's drop-out from TTIs?
- 3. Which factors were least prevalent for student's dropout in TTIs?
- 4. What were the cumulative factors that had students to drop-out of TTIs?

Literature review

Drop-out can be defined as discontinuation of education from one school without re-enrolling into another school for an extended period (Göksen et al., 2006 as cited in Polat, 2014). The discontinuation of education happens due to a series of events rather than the consequences of one single event and, therefore, has more than one cause (Hunt, 2008). Researchers have found that drop-out is a complex, dynamic and cumulative process of disengagement from school life. Dropping out of school is merely the final stage of the process (Rumberger, 2004; Newmann, Wehlage, & Lamborn, 1992; Wehlage et al., 1989; Finn, 1989 as cited in Dore & Lüscher, 2010).

School drop-out is a complex process where several individual-related, school-related, family-related, economic-related, peer-related, and social-related factors cause school drop-out. Low intelligence (IQ), expulsion, employment, financial problems, teenage pregnancy, family problem, lack of desire to study, anti-social behaviour, and substance abuse are some of the factors that cause student disengagement from learning and schooling (Dorji, 2005; J-F. et al., 2015).

Varieties of reason demonstrate the complexity of the drop-out phenomenon. A student drops out because the school expelled them due to specific disciplinary issues. Getting suspended from school time and again makes a student delusional to completing school after failing to meet the required attendance to sit for the examinations. Some students cannot get along with their friends and teachers. Some cannot afford school fees and everyday transportation costs, and others need to work to earn money to support themselves and their families. Yet some do not like the school. So, they simply drop out. But all these reasons do not reveal the underlying causes as to why students quit school, for there are more factors that long ago may have contributed to students' drop-outs (Rumberger, 2001).

Drop-out happens not just because of a single event but due to the culmination of a series of events inside and outside the school environment that began long before the student discontinues attending the school (Doll, J.J. et al., 2013). A student drops out of school due to internal and external disciplinary issues, financial such as circumstances. difficulties and family-related problems (Irissappan Ramganesh, 2016). Adverse reasons within the school atmosphere, such as tests, attendance and discipline policies, and behavioural issues, lead to students' drop-out. Students can also be apathetic and even delusional to completing school due to factors, such as financial worries, part-time employment, marriage, family matters, and pregnancy, and then drop out of school. The dropped-out students fetch poorer grades than their successful peers (Eegdeman et al., 2020). Some studies have found that most drop-outs occurred while living with their parents, which showed that the type of guidance with which students live matter more (Tilahun, 2009). Some drop-outs are related to family-based problems such as socioeconomic status and low income (TAS, A. et al. 2013).

Both family and school play essential roles in adolescents' leaving school. Factors in the family such as economic pressures, marriages, sickness and educational background of parents, and factors in school such as the discipline, behavioural problems of students, and peer influence are among the main reasons for dropping out (Ergün & Demir, 2017). Dorji (2005) mentioned that multiple factors such as socioeconomic factors, school-related factors, demographic factors, admission pressure, job, family problems, cultural influences, substance abuse and peer pressures are among the significant determinants causing drop-out. Some students drop out because they need to work to earn money. They may need money to buy clothes or electronics, pay for house rents or finance unhealthy addictions. Drop-outs looking for shortterm financial gain may see employment as the best way to maintain their lifestyle (Tucker, 2021). Research efforts have also found that younger and poorer students drop out frequently than their older peers. The significant factors influencing drop-outs are students' financial status, lack of parental support, low family education, family mobility, student absenteeism, lack of interest in education, pregnancy, family needs, delinquent behaviour, substance abuse, poor in tests, lack of teacher's guidance and school policies (Yadav & Mehta, 2018). The high school graduation rates are significantly lower among low socioeconomic status students (Career and Technical Education's Role in Dropout Prevention and Recovery, 2007).

Several theories explain the specific phenomenon of dropping out, identifying a range of factors. This study focuses on a framework - *push*, *pull and falling out* framework - developed by educational researchers (Jordan et al., 1994; Watt & Roessingh, 1994 as cited in Doll, J.J., et al., 2013). According to this framework, students can be pushed, pulled or fall out of school. Students are pushed out due to hostile situations within the school environment, such as low grades, poor attendance, disciplinary actions, delinquency and behavioural issues. These factors cause sure at-risk students to view school as an unwelcoming place to them. They feel alienated from the school system and feel discouraged from staying in school. Consequently, students put less and less academic effort, eventually dropping out of school (Bradley & Renzulli, 2011).

Students are pulled out due to factors inside of students that divert them from completing school. Financial worries, employment, family needs, marriages, and pregnancies pull students away from school. After assessing gains and losses, these pull factors lure individuals to leave school and put a more excellent value on something outside of school (Bradley & Renzulli, 2011). A third factor, called falling out, added by Watt and Roessingh (1994), occurs when a student lag in academic progress and become disillusioned in completing school and fall out of the system.

With push factors, the school or the institute is the agent removing the students from the school. In the case of pull factors, students are the agent where their attractions or distractions keep them away from the school. With falling out elements, neither school nor student is the agent. Instead, circumstances beyond the control of students and the school environment led the student to drop out of the school system (Doll, J.J. et al., 2013).

Research methodology

Research design and instrument

The study was conducted using descriptive dichotomous survey questionnaires, a quantitative method. The quantitative approach was adopted as it provides the breadth of coverage.

The questionnaires were developed based on the literature reviews and reliability tested with Cronbach's alpha score of 0.744. The first part of the questionnaire required respondents to fill in demographic data. The second part of the questionnaire intended to collect data on the factors causing drop-out. It contained 28 closed-ended dichotomous questions asking drop-outs to identify elements as perceived by them. Out of which 11 questions were on push factors and 11 questions for pull factors, and 6 for falling out factors. The factors were grouped into seven related types: institute-related, financial-related, peer-related, family-related, health-related, employment-related and social-related.

Population and sample

The targeted population of the study was 85 students who dropped out from the training program of public TTIs from 2018 to 2020 academic years. There are six public TTIs under the administration of MoLHR. They are TTI Chumey, TTI Khuruthang, TTI Rangjung, TTI Samthang, TTI Thimphu and Jigme Wangchuk Power Training Institute at Sarpang. However, only 46 drop-outs were traced out for responses.

Data collection

The researcher gathered the cellular phone numbers of all the drop-outs from six sampled TTIs. Some of the cell phone numbers provided by TTIs were nonexistent, and some cell phone numbers belonged to different owners. Eventually, researchers connected with 46 drop-outs who filled in the survey questionnaires via telephonic calls. The telephonic strategy was adopted due to numerous motives such as dropouts lack of email accounts to collect through mail or google sheets and movement restriction due to the COVID19 pandemic.

The respondents were asked to fill in demographic data and dichotomous (yes/no) responses to all the questions contained in the questionnaire. This gave the respondents more manageable tasks on identifying their drop-out factors. Each question was read out clearly to prevent mistakes that the respondents probably made due to misapprehension.

Data analysis

Collected data were analyzed using the SPSS software package with descriptive statistics like frequency and percentage. The study was then displayed and interpreted in line with the framework of pull, push and falling out factors that enclosed related factors (family, institute, employment, financial, health, social and peer) of drop-out with the complexity and interconnectedness of these factors' causing students in deciding to drop.

Results

Demographic information of participants

The analysis output confirmed that 71.7% of participants were male and 28.3% female. The mean age of these participants was 23. The oldest participant was age 32 and the youngest 20-year-old.

Table 1. Parent's education of participants

Parents education	Frequency	Percentage
Non	39	84.8%
Primary school	4	8.7%
Middle-high school	2	4.32%
College	1	2.2%
Total	46	100%

Table 1 portrays that 84.8% of the parents of respondents lacked any education. Only one (2.2%) parent had a college education. 8.7% of parents had primary education while 4.32% had middle-high school qualifications.

Table 2. Parents profession of participants

Parents profession	Frequency	Percentage
Farmer	27	58.7%
Private employee	4	8.7%
Daily wage earner	4	8.7%
Business	2	4.3%
Armed force personnel	2	4.3%
Civil servant	1	2.2%
Others-house wife and jobless	6	13.1%
Total	46	100%

Table 2 displays that more than half (58.7%) of the participants' parents were farmers, and 8.7% were daily wage earners or private employees. Similarly, 4.3% of parents were either into business or in the armed force. Only one parent (2.2%) was a civil servant. And 13.1% were either house wives or did not have job.

Table 3. Drop-out by region

Region	Frequency	Percentage
East	29	63.0%
west	11	23.9%
South	6	13.0%
Total	46	100%

The highest drop-out rate was from the eastern region with 63%, followed by the western region with 23.9%. The least drop-out was from southern Bhutan with 13%.

Factors for student drop-outs from TTIs

Table 4. Push, pull and falling out factors for drop-outs

Туре	Factors	Frequency	Percentage
	I was expelled	6	2.34%
	I was suspended	4	1.57%
	I did not have the required attendance	12	4.69%
	I was failing in the institute.	19	7.42%
	I couldn't keep up with the studies	13	5.08%
	I did not feel safe at the institute.	2	0.78%
	I couldn't get along with instructor/s	1	0.39%
	I could not afford transportation costs	14	5.47%
	I couldn't get along with other		
	students	2	0.78%
	I was detained	1	0.39%
Push	I was a drug and alcohol addict	3	1.17%
out		77	30.08%
	I had financial difficulty at home	19	7.42%
	I was pregnant. (For females only)	5	1.95%
	I became the father/mother	12	4.69%
	I had to support my family.	29	11.33%
	I had to care for a sick family		11.0070
	member.	18	7.03%
	I got married or planned to get		
	married.	12	4.69%
	I was sick	16	6.25%
	I am disable	1	0.39%
	I got a job	9	3.52%
	I couldn't work and go to the institute		
	at the same time.	10	3.91%
	I had to work to earn money	30	11.72%
Pull out		161	62.9%
	I didn't like the institute	3	1.17%
	Did not get into desired		
	program/trade	5	1.95%
	I felt I didn't belong at the institute.	7	2.73%
	My friends dropped out, So, did I	1	0.39%
	My parents were not interested in my		
	training	1	0.39%
Falling	My parents move to another place	1	0.39%
out		18	7.03%
	Total	256	100%

Table 4 shows that the respondents perceived a total of 256 factors accountable for their dropping out from TTIs. The highest responsible factor for dropping out was pull-out factor with 62.9%, followed by the push-out factor with 30.08%. The most negligible drop-out factor was fall out with only 7.03%.

Table 5. Related factors for drop-outs

Туре	Factors	Frequency	Percentage
	I was pregnant (For females		
	only)	5	1.95%
	I became the father/mother	12	4.69%
	I had to support my family.	29	11.33%
	My parents were not		
	interested in my training	1	0.39%
	I had to care for a sick family		
	member.	18	7.03%
	My parents move to another		
	place	1	0.39%
	I got married or planned to		
Family-	get married.	12	4.69%
related		78	30.47%
	I was expelled	6	2.34%
	I was suspended	4	1.57%
	I did not have the required		
	attendance	12	4.69%
	I was failing in the institute.	19	7.42%
	I couldn't keep up with the		
	studies	13	5.08%
	I did not feel safe at the		
	institute.	2	0.78%
	I couldn't get along with		
	instructor/s	1	0.39%
	I didn't like the institute	3	1.17%
	I did not get into desired		
	program/trade	5	1.95%
	I felt I didn't belong at the		
Institute -	institute.	7	2.73%
related		72	28.12%
	I got a job	9	3.52%
	I couldn't work and go to the		
	institute at the same time.	10	3.91%
Employment-	I had to work to earn money	30	11.72%
related		49	19.14%
Financial-	I could not afford		
related	transportation costs	14	5.47%

	I had financial difficulty at		
	home	19	7.42%
		33	12.89%
Health-	I was sick	16	6.25%
related	I am disable	1	0.39%
		17	6.64%
	I was detained	1	0.39%
	Had a drug or alcohol		
	problem	3	1.17%
Social-			
related		4	1.56%
	My friends dropped out, So,		
	did I	1	0.39%
	I couldn't get along with		
	other trainees	2	0.78%
Peer- related		3	1.17%
	Total	256	100%

Table 5 indicates that most TTI drop-outs occurred due to consequences of family-related issues with a score of 30.47%. With 28.12%, a family-related problem was closely followed by an institute-related difficulty. Students' drop-out rates were 19.14% and 12.89%, respectively, due to employment and financial issues. Health and social issues caused 6.64% and 1.56% of students to drop out of the institute. Peer-related problems had the most negligible influence on student dropouts with only 1.17%.

Amongst the individual factors, "I had to work to earn money" received the highest ranking with 11.72%. Several factors, such as "My friends dropped out, so did I," "I am disabled," "I was detained," and "I couldn't get along with instructor/s," were the least popular reasons for respondents to drop out of the institute, with 0.39% choosing each.

Table 6. Cumulative factors that contributed to student drop-out

Factors	No. of drop-outs	Percentage
1 factor	4	8.70%
2 factors	2	4.35%
3 factors	9	19.57%
4 factors	9	19.57%
5 factors	5	10.87%

6 factors	3	6.52%
7 factors	4	8.70%
8 factors	4	8.70%
10 factors	2	4.35%
11 factors	2	4.35%
12 factors	1	2.17%
14 factors	1	2.17%
	46	100%

Four drop-outs mentioned that only one factor caused their drop-out, while two respondents felt two factors forced their drop-out. Nine respondents perceived that their drop-out resulted from 3 factors, and another nine said their drop-out was caused due to culmination of 4 factors. Unbelievably, one trainee perceived to the extent of 14 cumulating factors that caused him/her to drop out of the institute ultimately.

Discussion

The findings of this research have disclosed that drop-out can rarely be put down to one determinant factor. Accumulation of two or more push, pull or falling out factors ultimately prompted students to drop out of the institute. This finding is consistent with Yadav and Mehta (2018), who found that all push, pull and falling out factors had eventually led to students' drop-out. Drop-out was also influenced by a range of inter-relating factors such as family, institute, employment, financial, health, social and peer-related, specific to individual contexts.

The pull factors played a prominent role in students drop-out. The study's finding mirrored the results of Doll, J.J. et al. (2013), whose research indicated that whether being pushed, pulled or fallen out, the pull factor was the leading (dominant) cause for drop-outs. The pull factor related to family issues such as care and support to family, marriages and pregnancies pulled students away from the institute thus, exerting a powerful influence on students to drop out. This finding is in line with Keen & Zimmerman (2007), who cited in (Irissappan & Ramganesh, 2016) that family factors contribute to the

likelihood of dropping out. The study conducted by Chirtes (2010), Witte et al. (2013) and Pierrakeas et al. (2004) also saw the causes for drop-out as family-related factors. Generally bad influences of friends elicit drop-outs. Friends influence were found to have crucial repercussion that provoked students to drop out from school (Polat, 2014). Conversely and surprisingly, the current investigation resulted in peer-related encapsulated in falling out as the most minor attributed factors on students' drop-outs.

The study revealed that more than 85% of students dropped out due to 3 or more cumulative factors. One of them had as many as fourteen factors that led them to drop out. This finding supports Doll, J.J. et al. (2013) that drop-out happens not because of a single event but due to the culmination of a series of events inside and outside of the school environment that began long before the student discontinued attending the school. This study had outlined to a great extent of 256 factors that influenced students dropping out from TTIs.

Almost two-thirds of drop-outs in this study were from eastern Bhutan. Nearly all the parents (84.8%) never had schooling, and more than half (58.7%) parents of sampled drop-outs were farmers. The result meant high numbers of drop-outs from eastern Bhutan occurred amongst the farmers' children and those parents who had no education. Education and income remain a persistent issue amongst the farmers, particularly in the rural eastern parts of Bhutan. The low parental education and parent's Socio-Economic Status (SES) were individual factors that contributed to drop-out. Renzulli & Park (2002) reported in their study that the students who dropped out of school were from low SES families. The likeliness for children to stay in school is higher with the parents who are well to do (Kainuwa & Yusuf, 2013). Since most Bhutanese farmers are poor and illiterate, the researchers find that the low or no income and drop-outs were inextricably connected here, forcing students to drop out from institutes. Low income and parents' abilities are related to the high rate of student dropout revealed by Chirtes (2010). J-F. et al. (2015) also found that

18.4% of the drop-out in Bhutan is caused due to incomerelated factors.

Conclusion and recommendation

This study's findings affirmed that all related factors-family, institute, employment, financial, health, social, and peer enclosed within the push, pull and falling out, were the determining factors for students to drop-out of TTIs. Though family issues seem to have pulled students out of TTIs the most, other variables should not be ignored. Students also leave institutions without completing the training program due to various accumulated factors. Family problems and financial issues at home have prompted students for frequent consequently compelling absenteeism, the administration to take disciplinary actions by barring a student from appearing in the final examinations due to lack of required attendance, thus coercing the student to drop out of the TTI.

Drop out is a common problem in all TTIs. Nonetheless, there are no agencies and organizations that keep track of drop-outs. There are no trained and certified counsellors in the six sampled TTIs to help at-risk students from dropping out. The counsellors could identify at-risk students in the early stages, provide positive social and academic support, and address students' needs to mitigate drop-out rates in the institutes.

The researchers thus, recommend tracing and monitoring programs for TVET drop-outs and vital counselling programs to be initiated in the TTIs. Since this study covers only six public TTIs and incorporated only a quantitative approach, future researchers are suggested to cover all public and private TVET institutes in the country and carry out an in-depth study on drop-outs for more insightful outcomes in the future.

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