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Author(s)	Yohena, Agustina Lucía
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Designing to improve student completion rates:

Preliminary qualitative investigation into causes of drop-out

義務教育の修了率を向上させるには

Agustina Lucía Yohena

1st year Master student of Dept. Cognitive Psychology in Education, Grad. School of Education, Kyoto Univ.
6th generation student of Collaborative Graduate Program in Design



1. Introduction

1.1 Background to the problem: School drop-out rates in Latin America

Currently in Latin America, school drop-out is a very serious and concerning problem. Some of the reasons are related to the economic instability and social gap that make access to and remaining in education a continuous challengeⁱ. Recent studies in Argentina revealed that 24% of adults over 20 years of age finished secondary schoolⁱⁱ; for younger adults from 25 to 34 years of age, this percentage is a bit higher at 49%ⁱⁱⁱ but still low compared to developed countries around the world. When we consider access to tertiary education, the percentage is even lower, reaching only 19%^{iv}.

1.2 Why is this an important issue to address?

First of all, school drop-out is a problem of concern at the global level. Ensuring a minimum level of education is a state policy in most countries and considered a citizen's right that must be guaranteed^v. It is known that access to and the level of schooling is associated with the quality of life that a person may have. Some studies have shown how access to higher educational levels correlates with better physical and mental health rates^{vi}. One of the explanations for this observed phenomenon is that access to higher levels of education allows access to jobs with better working conditions and

ⁱ Espínola Hoffman, V., & Claro Stuardo, J. (2010). Estrategias de prevención de la deserción escolar en la educación secundaria: Perspectiva latinoamericana. *Revista de Educación*, 1, 257-280.

ⁱⁱ SITEAL. (2014). Retrieved from SITEAL (Information System of Educational Tendencies in Latin America): http://www.siteal.iipe.unesco.org/base_de_datos.

ⁱⁱⁱ OECD. (2017, May 23). Education at a glance 2017: OECD indicators. Retrieved from <http://gpseducation.oecd.org/Content/EAGCountryNotes/ARG.pdf>.

^{iv} OECD op. cit.

^v Jones, P. (1988). *International policies for third world education*. New York: Routledge.

^{vi} Kempen, G. I. J. M., Brilman, E. I., Ranchor, A. V., & Ormel, J. (1999). Morbidity and quality of life and the moderating effects of level of education in the elderly. *Social Science & Medicine*, 49(1), 143-149.

pay^{vii}.

Despite some increases in the rates of students' study completions over recent years^{viii}, school dropout remains a serious problem that needs to be addressed in most Latin American countries, including Argentina^{ix}. From this scenario, it is necessary to understand what factors are involved in school dropout and what kind of factors influence the continuity of students' educational trajectory.

1.3 Purpose of this study

In this preliminary study, we decided to qualitatively explore some of the factors related to the decision making of students regarding their studies. Unlike the more common quantitative and statistical methods that have been used in previous investigations into this issue, we decided to conduct semi-structured interviews to understand in greater depth how students decide to continue or not with their studies, the reasons behind such decisions, and the contextual and psychological factors that may be involved.

Some previous studies have shown that we do not always decide based on a rational analysis of the situation we face, and in many cases, there are other factors, heuristics, or biases that can be involved in our decisions, such as the perception of a person^x. In this research we wanted to gauge some of those reasons, beyond the usual statistics that continuation and drop-out reports usually portray. We hoped that using semi-structured interviews would allow us to address specific dimensions of our interest and give us the opportunity to reveal new meanings behind students' decision making because of this method's unique versatility^{xi}.

2. Method

2.1 What we did, with who, and how

Participants: Our 20 voluntary participants fell into two categories/groups:

^{vii} Ross, C. E., & Van Willigen, M. (1997). Education and subjective qualitative of life. *Journal of Health and Social Behavior*, 38, 275-297.

^{viii} SITEAL op. cit.

^{ix} OECD op. cit.

^x Tversky, A., & Kahneman, D. (1986). Rational choice and the framing of decisions. *Journal of Business*, 59(4), 251-278.

^{xi} Galletta, A. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication*. New York, NY: New York University Press.

10 participants who at some point during their academic path dropped-out (DO group; 3 females and 7 males), and 10 participants who finished a tertiary qualification (FS group; 6 females and 4 males). The groups consisted of Argentinian or other Latin American students who had lived in Argentina for many years.

The interviews were conducted in a one-to-one format in Spanish and lasted approximately 60 minutes. We audio-recorded the interviews with the students' permission. As an introduction, we asked the participants about their academic path. After that, we asked the students the same basic questions relating to the following topics: 1. Decision making, 2. Value of education, 3. Cognitive flexibility, 4. Perception of self-efficacy, 5. Future time perspective, 6. Fear of failure, 7. Attribution beliefs, 8. Mindset, 9. Motivation, 10. Family support, 11. Financial support, 12. Peer support, and 13. Institutional support.

For the analysis, we transcribed and then thematically analyzed the audio-recordings to identify patterns of responses to each of the question topics, and to compare these patterns between the two groups.

3. Preliminary results

3.1 Why did the students decide to drop-out or to continue with their studies?

In the DO group, almost all the participants decided to work instead of continuing their studies because they highlighted the value of work in terms of the independence they could acquire, and the feeling of being more skilled in the work than in their studies. Also, many of them mentioned that they didn't know what they wanted to study or why they had to study. In contrast, overall, those who finished their studies explained that the reasons to continue their studies were parents' expectations, or an implicit social rule, in which continuing to study after high school was the path to follow. For these reasons, their future, access to better jobs and earnings, the value of the degree title to reach some status in society, and the desire to find their vocation were some of the reasons many of them mentioned for continuing and finishing their studies (see tab.1).

tab.1 Main reasons for dropping out or continuing studies

Group	Main reasons to continue or drop-out their studies	Interviews' quotes
Group who dropped out from High School or College (DO Group)	9/10 decided to work instead of continuing their studies	<p><i>"It was a matter of work I did not have time, I always think it was easier to work than study"</i></p> <p><i>"In the work I felt more independent and responsible"</i></p> <p><i>"I was in doubt on what to do, I did not know what to study so I decided to drop-out because I was more comfortable at work. It was not easy, I knew that study was important, but I did not know what study for"</i></p>
Group who finished their studies (FS group)	8/10 participants mentioned that one of the reasons to continue was parents' expectations or an implicit social rule	<p><i>"I think it's more because of social pressure, as an obligation, at least in my family if they said that I had to have a degree"</i></p> <p><i>"I think that without a degree it is more difficult to get a job and have a good salary"</i></p> <p><i>"It was a matter of status and to get better jobs, a title usually allows you to be seen in a different way"</i></p>

tab.2 Family support and financial problems

Group	Main reasons to continue or drop-out their studies
Group who dropped out from High School or College (DO Group)	<p>10/10 participants had the support of the family to study</p> <p>1/10 participant had a financial problem in his/her academic trajectory</p>
Group who finished their studies (FS group)	<p>10/10 participants had the support of the family to study</p> <p>1/10 participant had a financial problem in his/her academic trajectory</p>

One interesting finding we obtained was that financial and family support did not differ between the groups, so many of them decided to work of their own free will, not as a necessity (see tab. 2).

3.2 Expected and unexpected challenges

One of the aspects we wanted to explore in this study was how the students faced various contingencies they encountered on their academic path. For that purpose, we asked the participants about expected and unexpected challenges they had on their academic path and how they responded to those. An expected challenge is a difficulty that could be anticipated in some way, while an unexpected challenge is a problem that could not be anticipated.

Cognitive flexibility is related to the ability of a person to think of alternative ways to solve a problem and use his/her resources to accomplish that^{xii}. In both cases of unexpected and expected challenges, the rate of

^{xii} Martin, M. M., & Rubin, R. B. (1995). A new measure of cognitive flexibility. *Psychological Reports*, 76(2), 623-626.

tab.3 Rates of solved challenges between the groups

Group	Expected challenges	Unexpected challenges	Type of challenges
Group who dropped out from High School or College (DO Group)	3/9 participants solved the problem	3/10 participants solved the problem	Didn't put enough effort in the academic year and had to take many finals exams at the end of the year
	4/9 participants thought about alternative ways to solve the problem	4/10 participants thought about alternative ways to solve the problem	
Group who finished their studies (FS group)	9/10 participants solved the problem	9/10 participants solved the problem	The demand of time and effort from their university careers Vocational problems: doubt about whether the career they chose was what they really want to study/become
	8/10 participants thought about alternative ways to solve the problem	4/10 participants thought about alternative ways to solve the problem	

problem solving was higher in the FS group than the DO group (see tab. 3). However, when we asked them about their perception of alternative ways to solve the encountered problem, the groups only differed when they had to face expected challenges. The students in the FS group showed a higher ability to think of alternative solutions when they had to face an expected challenge. In conclusion, this may indicate some differences in how they use their resources and in finding alternative ways to overcome their difficulties. However, it remains unclear why, even though in both groups the perception of alternative ways to solve unexpected problems was similar, the rate of problem solving was higher in the FS group.

3.3 When they decided to continue/drop out, did they think about how their decision could impact their future? What about now?

Another factor that showed a clear difference between the groups was their “future time perspective” (FTP). FTP is the level of awareness of the person about how his/her present or actual decisions or other behaviors can affect his/her future^{xiii}. Most of the participants in the DO group didn't think about how the decision of abandoning their studies could impact their future. On the other hand, almost all the participants in the FS group thought about

^{xiii} Simons J., Vansteenkiste M., Lens W., & Lacante M. (2004). Placing motivation and future time perspective theory in a temporal perspective. *Educational Psychology Review*, 16(2), 121-139.

tab.4 Family support and financial problems

Group	Future time perspective in their academic path	Future time perspective now
Group who dropped out from High School or College (DO Group)	2/10 participants thought about their future when they decided to drop-out	8/10 participants think about their future when they have an important decision to do
Group who finished their studies (FS group)	8/10 participants thought about their future when they decided to drop-out	7/10 participants think about their future when they have an important decision to do

their future when they continued their studies (tab. 4). An interesting result is that FTP seems to change over time. The awareness of how their actions can impact their future in the DO group changed showing no difference compared to the FS group in the present (at the time of the interviews). In other words, nowadays they generally think more about their future when they have important decisions to make.

3.4 What they think about the importance of education

Regarding their perceptions about the value of education, participants in both groups indicated that they considered education to be important. Many of the participants who dropped-out from college mentioned that university studies are not crucial to have a good job compared to the other group (see tab. 5). So in general, both groups considered education important, but maybe there were differences in their perceptions about this when we talked about higher levels of education.

tab.5 Perception about the value of education

Group	Value of Education	Quotes
Group who dropped out from High School or College (DO Group)	10/10 participants thought that education is important	"It is very important to be educated and if you are more specialized it is better"
	5/7 participants who dropped-out from college mentioned that university studies can be helpful but not essential to have a good job	"I think it is important to study but you don't always need a degree to get work or to have a good job"
Group who finished their studies (FS group)	10/10 participants thought that education is important	"It is important because the education gives you identity, a vocation, monetarily is a tool to get resources and also values, manners, the social consciousness"
	2/10 participants who finished their studies mentioned that university studies is not the only way to get a profession or enough to succeed	"if someone decides to go to college or take another path without making an 8-year career, for example being a shoemaker, it is still a profession"

tab.6 Attribution beliefs

Group	Internal reasons	External reasons	Both
Group who dropped out from High School or College (DO Group)	6/10 participants expressed that the principal reason/s for not be able to finish their studies were internal causes	3/10 participants expressed that the principal reason/s for not be able to finish their studies were external causes	3/10 participants expressed that the principal reason/s for not be able to finish their studies were internal and external causes
Group who finished their studies (FS group)	2/10 participants expressed that the principal reason/s to be able to finish their studies were internal causes	2/10 participants expressed that the principal reason/s to be able to finish their studies were external causes	6/10 participants expressed that the principal reason/s to be able to finish their studies were internal and external causes

3.5 Why they think they were able/not able to successfully continue with their studies?

We asked participants in both groups about their reasons for why they were able or not able to complete their studies. In general, in previous research, the feeling of lack of control has been found to correlate negatively with persistence^{xiv}. In this study, the DO group generally provided internal factors for their decisions to withdraw from their studies. In contrast, the participants in the FS group mentioned both internal and external factors for completing their studies. The DO group students mainly mentioned reasons related with their lack of interest or their personality. The FS group students pointed out that their effort and the support of their families and friends were crucial in enabling them to continue and finish their studies (see tab. 6).

3.6 Did they have support of their peers/friends/significant others when they were studying?

Many previous studies have shown that peer support is significantly related to academic persistence decisions^{xv}. In the case of the students in our study, even though the groups didn't report any differences in the presence of this kind of support, the use of this resource was higher in the FS group (see tab. 7).

^{xiv} Dweck, C. (1975). The role of expectations and attributions in the alleviation of learned helplessness. *Journal of Personality and Social Psychology*, 31, 674-685.

^{xv} Gloria, A. M., & Robinson Kurpius, S. E. (2001). Influences of self-beliefs, social support, and comfort in the university environment on the academic nonpersistence decisions of American Indian undergraduates. *Cultural Diversity and Ethnic Minority Psychology*, 7(1), 88-102

tab.7 Peer support

Group	Peers support	Use of this support
Group who dropped out from High School or College (DO Group)	9/10 said that they had support of friends, peers or significant others in their academic trajectory	4/10 reported that they use this kind of support in some instance of their academic trajectory
Group who finished their studies (FS group)	9/10 said that they had support of friends, peers or significant others in their academic trajectory	9/10 reported that they use this kind of support in some instance of their academic trajectory

4. Conclusions

4.1 Initial conclusions

Even though there were many factors involved in the decision of the students to continue their studies or otherwise, through these interviews we could see that the value and beliefs about work and education, their problem-solving skills, and their awareness of and the importance they placed on their future are some of the most influential factors involved in the students' decision-making process. In summary we found indications that:

- Students who dropped out tended to prioritize work over studies, even if they didn't need to work. On the other hand, those who continued with their studies expressed feelings of responsibility to continue their studies.
- While education was important to all the participants, there were some differences with respect to the extent to which they valued university education. For example, in the DO group, many of the participant's didn't think that a degree was necessary to have a good job.
- There were some differences in the participants' ability to solve challenges they faced. To think about alternative ways to solve a problem when we face difficulties in our life is a useful skill because it gives us the flexibility to adapt to the situation. This quality seemed to differ between the DO and FS groups when they had to face expected challenges: the FS group tended to think more about alternative ways and showed a higher rate of solving their challenges. Although this skill didn't differ when they had to face unexpected challenges, the solving problem rate was nevertheless higher in the FS group. A possible explanation is that the DO group could have

remembered more negative situations compared to the FS group and vice versa.

- Future time perspective differed between the groups, but this difference changed over time. The FS group's awareness of the future consequences of their actions was present when they decided to continue their studies and this attribute was maintained over time. In the DO group, this connection between present actions to future consequences was absent when they decided to drop-out, but this changed. Now, when they have to make important decisions, almost all the participants mentioned that they consider the possible consequences for the future.
- Finally, students who completed their studies appear to be the ones who tended to make better use of the support of other people around them, such as their friends and family.

4.2 On the way to designing better interventions to reduce the school dropout rates

Although this was an initial exploratory study and our sample of participants was small, our findings indicate that it is important to better understand students' decisions about their future. Not many of the previous studies had focused on how students actively decide about their academic careers.

Better understanding of the kinds of factors that drive students' decision-making processes is very important to designing more appropriate and effective interventions for decreasing school drop-out rates. It is important to design and implement interventions that focus on empowering students' decision making, developing their competencies so that they can better manage the resources they have and make appropriate decisions in a more conscious way. We have a long way to solve the high rates of school drop-out especially in Latin American countries, but we hope that studies like the one we have conducted can make small incremental contributions toward successfully designing viable solutions to this problem in the foreseeable future.

5. Personal opinion and final comments

In this final part, I want to clarify some points that might be important to consider after re-reading the article. This study was an exploratory study to investigate some of the factors I wanted to investigate in depth to guide my next study. For this reason and because the time to conduct the interviews was limited, the sample was small and the cohort from which I took the data was not representative of the most vulnerable population groups in Argentina.

Another important point that I think is important to think about is why this research topic could be relevant for Japan. It is true that, compared to Argentina, Japan does not have problems related to dropping out, but I think there are some interesting points related to this topic. Japan has a very structured society; generally, the access to a higher level of education is related to the type of work you can obtain in the future. In fact, depending on the university you go to, the type of work you can get may vary (for example, students who attend the most prestigious universities can obtain better paid jobs). According to some studies, in Japan, 51% of the population decide to continue onto university studies. On the other hand, the average age of students who enter the university is 18 to 19 years. This means that if you decide not to continue your studies at university after finishing high school, it is likely that you will not return to the educational system. Considering these two points, it seems that the decision to continue after the conclusion of secondary school is a critical issue to examine. There are some questions that come to my mind: What happens to the other part of the population that decide not to continue with university studies? Why do they decide not to continue? Do some of them want to return and continue their studies at some point? In conclusion, I believe that understanding the process behind students' decisions, especially when it relates to their future, is a very important topic to investigate even in Japan.

Finally, I am grateful for the opportunity to share what I am doing. I hope that many of you can enjoy reading this article and be able to share ideas about this interesting topic with me in the future. Thank you!

Inquiry towards studies of design

- + Do you think this is an important issue? Should we do something about it?
- + How can we design an intervention that can deal with this issue?