

Teachnology: Drop-out Prevention by Increasing Parent Involvement through Text Messaging

Mary Ann F. Bajar, MAEd
Asst. Principal, Polomolok National High School
maryannbajar1925@yahoo.com

Jayson Troy F. Bajar, MPA
Central Philippine University
jaysontroy46@gmail.com

Abstract: High drop-out rate is one of the most serious problems in the Philippines. Many local researches have been written and assessed how present interventions are delivered. However, little efforts were made to devise low- cost yet sustainable interventions particularly for rural educators. Researchers conducted this study aimed at preventing the learners from dropping-out by increasing parent involvement through text messaging. This is a single group pretest-posttest study conducted among Grade 10 learners, identified as at risk of dropping- out, at a rural school in southern Philippines. Intervention included constant updating of the parents on the attendance, performance, and progress of the learners through text messaging. Wilcoxon signed rank test was used to determine the effect of the intervention which was found to be significant at $z=-238$, $p=0.017$. It is believed that the findings of this paper are relevant and useful to school administrators, parents, and most especially rural teachers.

Keywords: Drop-out Prevention, Rural Education, Philippines

Introduction

High drop-out rate, along with low academic achievement, is the most serious problem that the Philippine education is facing (Deped Enhanced DORP Handbook, 2013). Latest reports from the Department of Education revealed a rising trend in the dropout rate of the country since 2011 (Cervantes, 2018).

Recent figures are even more alarming. The 2017 Annual Poverty Indicators Survey (APIS), conducted by Philippine Statistics Authority, revealed that 3.6 million or 9% of Filipinos aged 6 to 24 years old are out of school youth (Bersales, 2018). The survey further revealed that the top reasons for not attending school were marriage or family matters, lack of personal interest, and high cost of education or financial concern (Bersales, 2018).

This problem is tragically serious because it undermines the learners' fundamental right to quality education (Sec. 1, Art. 14, 1987 Philippine Constitution).

Moreover, it deprives them of many future employment opportunities that may require increased literacy and higher level of education

Furthermore, in the societal level, high dropout rate is potentially dangerous as studies have shown that engagement in high-risk behaviors such as premature sexual activity, delinquency, crime, violence, alcohol and drug abuse, and suicide are significantly higher among dropouts (Suarez et al., 2016; Esch et al., 2014; Weerman, 2010; Bradshaw et al., 2008).

According to scholars, dropping out is a complex phenomenon which is a result of series and combination of factors related to the learner, family, school, and community settings (Rotermund, 2007; Chirtes, 2010). There is no single reason, however, on why learners drop out of school. Nonetheless, researchers identified that low academic performance is the strongest predictor of dropping-out; learners who are struggling academically and receiving low grades are

most vulnerable to being discouraged, losing motivation, and ultimately giving up school (Rumberger & Lim, 2008).

Dropping out is not a sudden decision on the part of the learners. Bridgeland et al., (2006) observed that dropping-out rather involves waning engagement both in terms of their academic participation and in their social involvement. They further noted that it is often influenced by how the learner perceives his or her school experiences and the expectations of the people around him or her. Dropping out, for most number of cases, is preceded by instances of waning enthusiasm, being tardy, skipping classes, and/or missing school altogether until the learner finally quits the school with or without explicit permission (Rumberger & Lim, 2008; Brigeland et al., 2006). As such, attendance pattern can be considered a crucial indicator of possible drop out cases (Bridgeland et al., 2006).

As a complex phenomenon, dropping out cannot be solved by a single isolated solution. With this in mind, the researchers believe that collaboration with parents in supporting and following up the needs and performance of learners are very vital to somehow lessen, if not totally eliminate, the possibility of dropping out of learners with problematic records. This belief is supported by Bridgeland et al., (2006) who noted that constant communication between parents and school, subsequently increasing parental involvement, keeps learners from dropping-out of school (Bridgeland et al., 2006).

Parental involvement really matters. Stone (2006) supports that parental involvement which includes home communication about school, monitoring, and direct parent interaction with the school significantly decreases the chances of dropping out. As such, learners are less likely to drop-out when parents become more involved with them such as when monitoring and regulating their activities, talking with

them about their problems, and being more involved in the school by attending school activities, to name a few (Pomerantz & Eaton, 2001; Rumberger, 1995). It is therefore part of the duty of the school to make a way to encourage greater parental involvement. Teachers must mediate among the parents to establish strong teacher-parent communication link that will ensure effective monitoring and exchange of information about learners' performance and problems.

Robinson et al. (2018) have proven that increased teacher-parent communication reduces absence tendency among learners. The researchers sent home messages to 6,500 households in California aimed at making parents realize the consequences of missing schools. Results showed a significant change thereafter in the attendance records of these learners and are now less likely to be absent for up to 15 per cent.

The same findings were generated from the study of Rogers and Feller (2017) to more than 28,000 households in Philadelphia. Parents under study were sent personalized mailings that reminded them the importance of attendance, their child's total absences, and the cross-comparison record of their child's absences records with their classmates'. Results showed that learners whose parents receive these mailings have lesser absent records than those who do not.

To further add depth in understanding the case of the present problem, it is noteworthy to point out how expectancy-value theory can be meaningfully applied. According to this theory, emphasizing the utility value of the task drives individuals to be more motivated and engaged in performing it (Robinson et al., 2018). Founded in the basic tenet that people are goal-oriented beings, proponents of this theory argue that people perform tasks anchored on their beliefs and values and consequently the intensification thereof leads to greater efficiency and effectiveness

(Wigfield et al., 2016). Previous researches have proven that defining the value of a certain topic can increase its perceived utility value (Shechter, et al., 2011, Harackiewicz et al., 2012). If taken in the context of the present study, learners, when motivated by the value of earning their high school diploma and the benefits corollary to it, will eventually be motivated to pursue such goal.

In the Philippines, the Department of Education has long been adamant in combating the issue on high drop-out rate in the country. In fact, it has already implemented various intervention programs, the most significant of which is the Dropout Reduction Program (DORP). The program stresses four strategic components: a) open high school program (OHSP); b) effective alternative secondary education (EASE); c) school initiated interventions (SII); d) other interventions (OI) (DepEd D.O. 74, s. 2010).

Many local researchers have already explored in discussing the issue of the drop-out prevalence in the country. However, these studies dealt more in understanding the underlying phenomena and how present interventions are carried out such as the alternative learning system and school initiated programs to name a few (Benedicto et al., 2012; Albert et al., 2012; Orion et al., 2014; Irinco, & Sioco, 2014).

In consideration of above findings, the researchers prompted to conduct this study aimed at emphasizing the need of devising a teacher-initiated intervention. The researchers dwelt on the idea of imploring the perks of modern technology to increase parent involvement and thus eventually prevent them from dropping out. Absences records were used to test whether the intervention is successful or otherwise. It may be affected with many factors, but in this study, parent involvement is considered as dominant factor that influence a learner's engagement through attendance records of the learners.

Moreover, it is the aim of this study to contribute in the growing literature of researches directed towards drop-out prevention. This research also proves to be beneficial for teachers as the means employed in this study are very replicable and plausible in wherever setting. In fact, this study was carried out in a far-flung rural community where technology usage is generally perceived to be low.

Objectives

The primary objective of this study is to prevent learners from dropping-out by increasing parent involvement through text messaging. Specifically, this study aims to:

1. describe the attendance records of learners before the intervention;
2. describe the attendance records of learners after the intervention; and
3. determine the effect of the intervention in the attendance records of learners.

Hypothesis

In this study, it is believed that intensifying the aspirations of parents to see their children graduating from junior high school will motivate them in following up on the education of their children. Emphasizing the value of obtaining high school diploma among parents will encourage them to involve in their child's performance at school. With this, a teacher-initiated intervention is conducted by using text messaging as means to attain such goal and eventually prevent them from dropping out.

To determine the effect of the said intervention, the change in the attendance records of the learners will be used to test the following hypothesis:

Ho: There is no significant difference in the attendance records of the learners before and after the intervention.

Methodology

This study employed single group pretest-posttest design. Participants are pre-identified and absences records were used.

Participants

This study was performed to seven (7) Grade 10 learners in S.Y. 2017-2018. They are referred here in pseudonyms as John, Martin, Alex, Mark, Jason, Paul and Ryan. They were considered as in danger of dropping-out based on the definition of chronic absenteeism which entails missing more than 10% of school days (Robinson et al., 2018).

Research Setting

This research was conducted at a rural school in southern Philippines. School population ranges 600 to 700 with 30 to 40 regular faculty members. Learner-teacher ratio is one is to forty (1:40).

Just like other schools, this school is challenged by high drop-out rate. In fact, the previously school year listed at least 10 learners who actually dropped out of school.

Data Gathering

By the end of 2nd Quarter, i.e. October, the primary researcher gathered the parents of learners identified as at risk of dropping out and discussed their attendance records with their class performance. The researcher then offered to conduct an intervention which was to send text messages whenever learners are absent. They all agreed to the said intervention.

After a day of being absent, the learner was counselled by the teacher-researcher. Parent conference was also observed at least once a month. However, if the absences declined, this was not anymore conducted and instead talked with them during the card giving day.

Changes in the school attendance records of the learners were monitored during the duration of the intervention or until the end of the school year.

Text messages were sent in vernacular. Parents were informed that the learner is absent thereby reminding them to encourage their children to attend school. They were also advised to visit the school on their vacant time. A text message template is shown below:

| <i>Original Text</i> | <i>Translation</i> |
|---|---|
| Maayong aga. Gusto ko ipabalo nga si ___ wala nasulo . Palihog sya ambali nga magsulod. Kung may bakante ka na tiempo, agi ka di sa eskwelahan para makaistorya ta. | Good morning. I would like to inform you that ___ is absent. Please inform him to attend school. And if you have spare time, may you drop by at school so that we can talk. |

Data Analysis

Descriptive statistics, i.e. mean, simple frequency and percentage counts were used. Wilcoxon signed rank test is used to determine the effect of the intervention. It is a non-parametric test widely used for small-sized data in a single group pretest-posttest design. Boxplot was used to determine that the data are indeed symmetric and thus permit the use of the said statistical tool. All other required assumptions to conduct this test were also met.

Within-pair differences (delta value) were also used to compute for the percentage decrease. The computation was adopted from Gertsman (2016). This is done by dividing the mean delta value with the mean of pretest values.

Results

Absences before the Intervention

Table 1 presents the number of absences before the intervention (June, July, August, September, and October). The

highest number of absences committed was 22 days (23.2%) while the lowest was 13 days (13.7%) within the 95 school days. The average days of absences were at 18.4 days or nearly one-fifth (19.4%) of the total school days of the first half of the school year.

Table 1. Absences before intervention

| Learner | Absent days | Percentage |
|--------------|---------------------|------------|
| John | 22 | 23.2 |
| Alex | 22 | 23.2 |
| Martin | 21 | 22.1 |
| Mark | 21 | 22.1 |
| Ryan | 16 | 16.8 |
| Paul | 14 | 14.7 |
| Jason | 13 | 13.7 |
| Total | 129 | |
| Mean: | 18.4 (19.4%) | |

Absences after the Intervention

Table 2 shows absences after the intervention (November, December, January, February, and March). The highest number of absences was 15 days (15.8%) while the lowest was 5 (5.3%) within the 95 school days. Learners were absent on average of 11.3 days or 11.9% of the total school days in the second half of the school year.

Table 2. Absences after intervention

| Participants | Absent days | Percentage |
|--------------|---------------------|------------|
| John | 15 | 15.8 |
| Mark | 13 | 13.7 |
| Martin | 13 | 13.7 |
| Alex | 12 | 12.6 |
| Ryan | 12 | 12.6 |
| Paul | 9 | 9.5 |
| Jason | 5 | 5.3 |
| Total | 79 | |
| Mean: | 11.3 (11.9%) | |

Effect of the Intervention

Table 3 presents the tabulated number of absences before and after the intervention with their respective differences.

It was found out that the intervention decreased the number of absences on average

of 7.1 days. This is equivalent to almost 38.6 per cent decrease ($7.1/18.4=0.386$).

Table 3. Effect of the intervention

| Learner | Before | After | Difference |
|---|-------------|-------------|------------|
| John | 22 | 15 | 7 |
| Alex | 22 | 12 | 10 |
| Martin | 21 | 13 | 8 |
| Mark | 21 | 13 | 8 |
| Ryan | 16 | 12 | 4 |
| Paul | 14 | 9 | 5 |
| Jason | 13 | 5 | 8 |
| Total | 129 | 79 | 50 |
| Mean | 18.4 | 11.3 | 7.1 |
| <i>Difference: 38.6% z=-2.38, p=0.017 Significant</i> | | | |

A Wilcoxon matched pairs signed rank test was conducted to determine whether there was a difference in the absences records after the intervention. Results of that analysis indicated that there was a significant difference in the absences records, $z=-2.38$, $p=0.17$. The results indicate that the intervention had a significant influence in the absences records of the participants.

Discussion

Dropping out continues to be a persistent issue in the Philippine educational system (Deped Enhanced DORP Handbook, 2013). Its effects can take on multiple forms and levels.

In micro perspective, dropping-out deprives a child of many future employment opportunities that may require increased literacy and even higher level of education. This may eventually lead to “intergenerational transmission of poverty against them” (Orbeta, 2010, p. 1.). Meanwhile, in macro level, it can mean loss of potential productivity for the economy, which subsequently affects the country’s economic growth (Orbeta, 2010). It is a social epidemic that terrifyingly haunts the Philippine society.

Twenty-first century educators are challenged to take action in this persisting issue in ways that available resources are maximized. The perks of modern technology particularly of information communication technologies (ICT) offers great potential in such pursuit. Streamlining technology along with education gives multiple opportunities in the mission to help every child attain his right to quality education.

The present study investigated how technology can help improve the educational conditions or what the authors call as “teachnology” or the integrative use of technology in teaching not only in instruction but to the holistic aspect of the teaching profession. Although there are massive efforts implemented by the government, it must be paired with micro level initiatives that will make sure both ends meet.

To deliver the lessons in class is not what being an educator is all about, but also keeping learners on track. It is always adjacent in the teaching profession.

This study identified sending text messages as one of practicable and sustaining intervention. It was hypothesized that increasing parent involvement eventually prevents them from dropping out.

Furthermore, this study supports the findings of Robinson et al. (2018) and Rogers & Feller (2017). It is indeed essential that parents are involved in the pursuit of educational success. Parents are the primary stakeholders of educational systems. Thus, parental support must be recognized as the foundation of the educational paradigm. Educators must remember that the learning of the child is affected by various factors; the fundamental one is his home environment.

As to how parents consider receiving messages from the teachers through phone text messaging, it was revealed that learners were admonished by their parents primarily because they are concerned, too, in the perception of the teacher towards the family

and how parents discipline their children. One statement from a child says that his mother told him: “*Sulod ka sa klase kay kahuluya kay ma’am kung patawagong niya naman ko sa eskwelahan ninyo*” (You should enter to your class because it is embarrassing towards your teacher if she calls me again to your school).

Such attitude is associated in the findings of Chao & Tseng (2002) and Ho (1993) who argued that Filipino families put high value on how individual behaviors reflect the family as a whole. This further relates to the contention of Enriquez (1994) that parent admonitions to child’s undesirable behavior roots from family’s sense of *hiya*.

In this study, parents motivated their children to go to school not only because the teacher intensified the aspirations of parents to see their children graduating from junior high school. It is also partly because of the Filipino trait *hiya* that compelled parents to closely monitor their child’s attendance.

Teachers may consider this additional effort to be burdensome. In fact, the duties of the teacher are already voluminous enough and having this kind of intervention may even more exhaust him. However, it is throughout the process that educators take the toll of satisfaction and be numb from tiredness knowing that a difference is made in the life of a learner. Educators eventually realize that the true measure of being an effective teacher comes not in the number of learners who were given a passing or failing mark but on how many lives are touched.

In conclusion, the results of this study found out that increasing parent involvement through text messaging had a significant bearing in preventing a learner’s tendency to drop out of school. Though a relatively old theory, this study supports value expectancy theory which believes that the value of something is increased when it is emphasized. Furthermore, the findings of this study highlighted the contextualized

understanding of the problems of the Filipino society. It is indeed pressing for educators in this digitized era to adopt with the change of times and be able to grapple the perks of modern technology working with it towards their advantage thus streamlining educational efforts along with technology – teachnology.

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