

# Family, individual, community and school profile analysis of learners at risk of dropping out in Cebu

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## ABSTRACT

Dropping out, an essential indicator to the schools' performance, is a serious educational problem all over the world. Thus, an investigation on the possible contribution of Family, Individual, Community and School (FICS) related factors to a Learner at Risk of Dropping out (LARDO) was done to aid identification and immediate remediation of Junior High School Learners in a Division in Cebu, Philippines for the School Year 2016-2017. Logistic regression analysis was performed to create a model to predict the probability of being a learner at risk. It showed increase of prediction power from 50% to 88% as the independent variables were entered. The following variables were found significant: (a) gender; (b) deceased father; (c) cyber situation; (d) broken family; (e) inferiority complex; (f) child labor; and (g) lack of community support. Disturbing gender equity issues were evident in the results with increased likelihood for male students of being a LARDO. An intervention plan was crafted to assist schools in the implementation of the Drop Out Reduction Program (DORP). Salient features of the intervention program included the establishment of official forms for tracking LARDOs, a LARDO tendency worksheet based on the model and the establishment of policies that will strengthen LARDO early warning systems. Level of identification was also found to be at minimal in some schools which indicated difficulty of identification needing pertinent training in the intervention program. The results have important implications in the multi-dimensional nature of the dropout problem. The scope of its complexity extends beyond the established school systems. Hence, a multi-dimensional approach should be adapted.

**Keywords:** Asia, education, factors in dropping out, LARDO, logistic regression analysis, management, Non-LARDO, Philippines

## I. INTRODUCTION

One of the most essential performance indicators among schools is the dropout rate. It has been considered as a serious educational problem all over the world. These students who failed to complete their education have to face their limitations in social and economic growth all throughout their lives.

Dropout rate in the Philippines has decreased from 2012 to 2014. In spite of the favorable trend, the

interest among educators, policymakers and researchers continues to increase. The Department of Education (DepEd) devotes more time and resources to measure the extent of the problem. DepEd has recently launched the Basic Education Sector Reform Agenda (BESRA) highlighting Dropout Rate as one of the focus of research in the field of education (DO No. 39, s. 2016). In addition, funds are also made available to conduct relevant research through DepEd Order No. 4, s. 2016 through the

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Basic Education Research Fund.

As the dropout rates in the Philippines have decreased from the period, there has been a great improvement because of the lower dropout rate but still far from the goal of Philippine Education for All (EFA) 2015 National Plan of Action No. 3 on the universal school participation and total elimination of dropouts and repetition in Grades 1 to 3. Despite the increasing trend there is also an increasing disparity between the performance of boys and girls in the current educational system as indicated by the Education for All report for 2015. The cohort survival rate for girls is 9.5% greater to that of the boys. In addition, the projected population of the Philippines will soon reach 103 million; therefore, there is a need for the government to account for the increase in provision of basic services. This includes the provision of basic learning needs and skills to survive in a very competitive environment. In addition, the Department of Education has a goal to increase its key result areas, namely: access, quality and governance. In order to increase its access, schools must include in its plan a zero percent drop out rate, 100% participation, completion and cohort survival rate which is also the DepEd's planning standard.

The government has been addressing the dropout problem through different strategies. One of this is through the Dropout Reduction Program (DORP) which outlines the steps in analyzing possible reasons for the students at risks for dropping out. Through these analyses, the school through the school head can identify the possible solutions for high rate of dropout. The results of Division Monitoring Evaluation Adjustment (DMEA) revealed that the dropout rate of the secondary level has reached 5.59%. The dropout rate among the boys (8.09%) is also higher than girls (3.43%). To address this, schools have been identifying Learners at Risk of Dropping Out through the Dropout Reduction Program (DORP). Unfortunately, the identification of the problem does not materialize to concrete the programs and projects that address the real issue. Reasons for such could be attributed to lack of overall framework that could guide and govern the school programs. Support from the Division Level is therefore needed. However, in the division level, there is a need for the identification and analysis of the current data in order to provide the needed support for the projects. By doing this, we best identify the most essential program to implement in order to address the problem. Furthermore, there is a lack of additional data analysis in the division level which will help us identify which among the factors determine the likelihood of a student to dropout. Since it is the goal of DepEd to lower the dropout rate, then it is essential to identify first the contribution of each factor to the

likelihood of them dropping out. Thus by analyzing the factors that contribute to the dropout rate, the researcher is addressing the gaps that directly or indirectly cause students to dropout among the secondary level.

## II. CONCEPTUAL FRAMEWORK

One of the primary programs designed to increase participation rate among learners is the DORP. This program was institutionalize in DepEd through DepEd Order No. 74, s. of 2010 which mandates the schools and division offices to conduct an identification of learners who are most likely to drop out in order to design pertinent intervention programs. This program is anchored on laws, issuances and global movement supported by the DepEd. For instance, Article 14 of the 1987 Philippine Constitution mandates the DepEd to provide access to basic education to all citizens of the Philippines which in turn necessitates the implementation of the DORP. It is also anchored to a global Movement called EFA which is spearheaded by the United Nation Educational Scientific and Cultural Organization (UNESCO), which aims to meet the learning needs of all children, youth and adults by 2015. In DepEd, the process usually involves identification of Learners at Risk of Dropping Out (LARDO's) and profiling them base on Family, Individual, Community and School (FICS) related factors.

In this study, the researchers prompted to profile Non-LARDOs in addition to the profiling of LARDOs in order to utilize the data to create a model. This model was useful in crafting the future overall intervention program in order to address the needs of learners who are at risk of dropping out. The intervention program will be designed to achieve the following: (a) increase the retention rate; (b) raise achievement level of the LARDO; (c) retrieve learners who are out of the school, (d) increase capability of schools to manage the DORP; (e) design and continuously improve DORP practices and learning materials; and (f) benchmark the best DORP practices.

This study utilized the concept of DORP by DepEd (2010). Specifically, the FICS Analysis involves the psychological, emotional, economic, cultural and social dimensions of the risk factors for dropping out. The family factor involves the following sub-factors: (a) Parents attitude towards schooling; (b) Economic Status of Parents; (c) Early Marriage / Pregnancy of Parents; and (d) Number of Siblings needed to be cared of. The individual related factors are subdivided as follows: (a) Academic Performance; (b) Attendance; (c) Health Status; (d) Emotional/Personal Adjustment; and (e) Drug Abuse. School related factors are divided as: (a) Teacher

factor; (b) Physical Conditions of Classroom; and (c) Peer Influence. There are also other factors being considered in higher risk of dropping out such as Distance Problem and Child Labor.

Since the main goal of this research was to craft an intervention program the aspects of each variable was broken down to pinpoint the source of the problem. By identifying the components that contributed to the growing number of LARDOs, the intervention program can focus its attention to the most essential solutions to the problem. Hence, it was the main purpose of the study to analyze the Family, Individual, Community, and School (FICS) profile of Learners at Risk of Dropping Out (LARDO) and Non-LARDO in the secondary schools in a Division in Cebu, Philippines for School Year 2016-2017. It answered the following questions: (a) What is the proportion of LARDO and Non-LARDO in the secondary schools in the division; (b) What are the FICS profile of LARDO's and Non-LARDO's in terms of family related problems, individual related problems, community related problems and school related problems; (c) What is the probability of being a LARDO and Non-LARDO student based on the factors described in the FICS analysis; and (d) What model can be developed based on the findings of the study?

### III. METHODOLOGY

The study used descriptive-correlational design. This described the relationship among variables rather than to support inferences of causality. It provides the avenue to analyze the probability of a student to dropout if he/she possesses certain characteristics such as indicated in the FICS analysis. The results of the study provided the with probabilities to determine how likely a learner could dropout given certain characteristics.

LARDO and Non-LARDO Junior High School students between the ages of 11 to 18 years old were considered. In order to identify a representative sample, two stages for this research were performed.

The first stage involves a pre-identification of LARDO based on the inclusion and exclusion criteria. This covered the 21 national high schools in the whole division of a City in Cebu which included 6 secondary schools. The pre-identification was based on the identified LARDOs by the advisers as they filled up FICS Analysis as mandated by DepEd Order No. 74 s. 2010. Due to probabilistic nature of the identification, it included all the identified LARDOs of the advisers termed as complete enumeration at this stage. This was done since the elusiveness of the precursors of dropping out might not be that easy to identify. It was also important to consider that the number of learners per class and the

complexity of the processes involved may cause difficulties in the part of the teachers. In addition, it was important to note that the identified LARDOs of the advisers were considered a sample in itself of the possible of learners who were more likely to dropout given the difficulties mentioned.

Once the LARDOs per school were identified, the next stage included stratification and proportionate sampling. Taking into consideration possible lapses in the judgment of the advisers of the previous stage, the researcher identified certain characteristics or also known as stratum of learners who were less likely to dropout. According to Tyler and Lofstrom, (2009) students who are achievers or high performers are less likely to dropout. In line with this, we identified the rank of high performing learners in each class advisory and included learners who were high performing as sample. The numbers of Non-LARDOs were equated to the number of LARDOs in that section. Thus, the second sampling stage involved stratification and proportionate sampling.

LARDOs were learners who failed to attend 50 percent or less of the attendance and who came from financially challenged families. However, the researcher also took into consideration the consent of the participant and the parents for this matter in a form of informed consent.

The study utilized a revised version of the instrument mandated in DepEd Order 74, s. 2010. This includes the FICS analysis which stands for Family Related Problem, Individual Related Problem, Community Related Problem and School Related Problem. These identified possible reasons for dropping out are further subdivided to different dimensions. Family related problems are subdivided such as: (a) broken family; (b) orphan; (c) deceased father; (d) deceased mother; (e) living with parents; (f) big family; and (g) other which will give room to additional categories. Subcategories under Individual related problem are as follows: (a) identity complex; (b) inferiority complex; (c) subject to family abuse or child labor; and (d) other for additional categories. Community related problems are divided as: (a) cyber situation; (b) lack of social sciences/health; (c) lack of community support; and (d) "others" for other categories. Lastly, School related problem is divided as follows: (a) rigid school rules & regulation; (b) passive teaching-learning; and (c) others for other categories.

The participants were asked to check the situations which described their current situation. Checklist was utilized in order to make it more convenient for the participants to answer. In addition, the instrument was translated to Sinugbuanong Binisaya language, the mother tongue of the learners to ensure that learners understand the questionnaire. The questionnaire was

first be subjected to validity tests to determine if the questionnaire measured what it intended to measure through a panel of experts. The main goal was to ensure content, construct, criterion and face validity. Once approved by the panel of experts, it was then subjected to pilot test where 30 students. They were asked to fill up the questionnaire and the data they provide was used to determine the reliability value in terms of Cronbach's alpha. Once data on the reliability was greater than 0.75, the instrument was used to gather the needed data.

Once the research design was approved, the researcher submitted a letter to the office of the Graduate School dean, University of Visayas, Schools Division Superintendent and to the school heads of all secondary schools in the Division. In addition, an informed consent for the parents was given for the learners to seek approval for the involvement of their child. In the letter, the parents were informed of the purpose of the research and assured them that the data collected were treated confidential and were only used for the purpose stated in the letter.

As soon as all permissions were secured, the researchers presented themselves to the participants in a friendly and non-threatening way. They explained the rationale of the questions gathered as they were also written in the first part of the questionnaire. They were also reminded of their rights and the need to understand the verbal assent signed by them. The learners were then classified as LARDO or a Non-LARDO by checking the appropriate options in the questionnaire collected. This was an important step since the questionnaire did not contain the name of the learner for confidentiality sake. As soon as the data were gathered, the data were encoded in an excel sheet. The presence of checkmark would contain the nominal value of "1" and "0" for the absence of a checkmark. Once data were safely encoded the researcher burned the questionnaire in order to maintain anonymity of the data. This step was essential in order to protect the participants from the sensitive information that may be collected from the instrument. The data were then analyzed.

Logistic regression was used. Being a LARDO and a Non-LARDO was the dependent variable of the study. The independent variables in the study were the FICS factors. These variables are generally dichotomous (only two possible options). The contribution of each variable to being a LARDO or Non-LARDO was quantified through probability. Furthermore, an analysis of the null model was conducted through a comparison of a null model generated by the SPSS. The goodness of fit of the model was also be measured using the results of the SPSS.

This study complied with the ethical standards in the

conduct of research involving human subjects. Ethical approval was obtained from the University of the Visayas- Institutional Review Board.

#### IV. RESULTS AND DISCUSSIONS

**Proportion of LARDOs and Non-LARDOs.** The identification of LARDOs and Non-LARDOs provides an overview of the level of identification of LARDOs in the schools. In addition, the data provide us with the number of identified LARDOs in comparison to the Non-LARDOs in every secondary school of the Division. Of the 8,953 learners, there were about 295 LARDOs (3.0 %) and 8,658 (97.0 %) non- LARDOs. The study conducted by Appleton and colleagues (2006) considered dropping out as a cumulation of series of experiences that finally led to the consummation act which is the dropping out itself. Once this is done, there is little that the school could do to reverse the process. Hence, there is a need to establish early warning systems (Jerald, 2006). The early warning systems involves analysis of students characteristic, risk factors and possible impact of interventions. Thus, lack of early warning systems affects the level of identification of schools of possible LARDOs. The zero figures evident in the data could be attributed to this lack of identification skills and lack of early warning systems.

This has strong implications on the establishment of possible early warning system. In addition, this requires teachers who are keen in spotting early warning indicators. Thus, teachers should be trained in this aspect. The early warning system should also serve as a mechanism to make tracking easier and should benefit teachers as a whole. Perhaps a record form which serves as a record journal data for each learner identified as LARDOs will allow teachers to document their interventions. This is essential since this could serve as means of verification for the intervention performed. This is significant for most teachers since the Results-Based Performance Management Systems which serve as assessment of teacher's performance requires the presentation of these Means Of Verification (MOVs).

**FICS Profile of LARDOs and Non-LARDOs.** The FICS Profile of LARDOs and Non-LARDOs provide an insight on the characteristics of learners who are at risk and in contrast to the learners who are not considered to be at risk.

**Family related factors.** Family-related factors are factors that describes their current family profile. These factors are considered important since they have huge impact on the learner's performance.

As shown, the highest percentage of LARDOs came from the broken family and the big family. Interestingly,

non-LARDOs as well had a high percentage of learners coming from a big family. In contrast, a gap could be observed between the percentage of broken families of LARDOs and Non-LARDOs. It was essential to take note also that only two percent of the LARDOs were orphans and five percent of the total LARDOs were currently leaving with their employers. The large gap in the data between LARDO and Non-LARDOs could also be found in the data on learners living with their relatives. The wide gap was also evident under big family.

Table 1  
*Family Related Factors of LARDOs and Non-LARDOs*

Family Related Factors	LARDO		Non-LARDO	
	f	%	f	%
1.1 Broken Family	75	25%	19	6%
1.1 Orphan	7	2%	2	1%
1.2 Deceased Mother	9	3%	7	2%
1.3 Deceased Father	13	4%	17	6%
1.4 Living with Relatives	68	23%	28	9%
1.5 Big Family	103	35%	87	29%
1.6 Living with Employer	14	5%	2	1%
Σ	214	73%	143	48%

The high percentage of LARDOs coming from a big family could be affected by lack of resources and less monitoring from parents. Their parents may find it hard to give time to guide their children because of the need to work. It was important to note that non LARDOs also have high percentage of students coming from big families. However, the percentage among LARDOs was higher than that of the Non-LARDOs. LARDOs who were living with their relatives tend to differentiate greatly from Non-LARDOs. Student who were living with relatives could most likely be affected by parents conflict or geographical location of home, and they tend to transfer to a relative located near the school. However, circumstances in this situation may lead to less monitoring which could possibly lead them to become more vulnerable to temptations. Broken families were also more prevalent among LARDOs. These family problems could readily affect their ability to focus on their students and would tend to prefer leisure activities that possibly help them feel better from the emotional turmoil cause by the family problems.

Finally, family played an important factor on students adaptability and development. Poverty was also brought by lack of family planning and had proven to significantly lessen the percentage of students surviving school. In addition, monitoring by parents has been argued by Rumberger (2001) as a vital aspect of students level of engagement.

**Individual related factors.** Individual-related factors described the learners' current individual profile identified to have an affect on their level of engagement in school.

Table 2  
*Individual Related Factors of LARDOs and Non-LARDOs*

Individual Related Factors	LARDO		Non-LARDO	
	f	%	f	%
2.1 Illness	6	2%	0	0%
2.2 Identity Complex	46	16%	6	2%
2.3 Inferiority Complex	62	21%	13	4%
2.4 Child Abuse	11	4%	1	0%
2.5 Child Labor	37	13%	1	0%
Σ	162	55%	21	7%

The table showed highest gap of 17% between LARDOs and Non-LARDOs in terms of the inferiority complex factor. Only 2% of the LARDOs were affected by illness. Interestingly, 16% of the LARDOs had identity complex while only 2% of Non LARDOs had it. In terms of child labor, 13% of the LARDO's were working, but none of the Non-LARDO had experienced child labor. Notably, all indicators within individual related factors generally had greater values among LARDOs compared to Non-LARDOs.

Inferiority complex was expected to affect levels of performance of learners since this can greatly affect them emotionally. Feelings of inferiority affected the level of risk a child can take in order to learn and discover new talents and skills. This was important since the K to 12 curriculum provides much emphasis on performance tasks where their level of confidence had a great impact on their performance which can readily put them at risk of dropping out. Identity complex, on the other hand, was evident even in learners who were known to be achievers. In fact, they sometimes excelled because of their tenacity to be accepted socially.

The high levels of inferior LARDOs were supported by the study of Ayodele and Bada (2007) where inferiority complex was found to be one of the predictors of dropout. Cervantes (1969) had also found illness, child abuse and child labor as possible causes of students dropping out. However, these factors are readily outside the lotus of control of the school. Thus, there was a great need to coordinate with people with other workers in the government like the Department of Social Welfare and Development (DSWD). Perhaps a close coordination in terms of data sharing and provision of pertinent counseling can greatly help improve these problems.

**Community- related factors.** DORP also considered as community related factors essential in determining factors that influence dropout.

Table 3  
*Community Related Factors of LARDOs and Non-LARDOs*

Community Related Factors	LARDO		Non-LARDO	
	f	%	f	%
3.1 Cyber Situation	67	23%	1	0%
3.3 Lack of Social Services	64	22%	4	1%
3.4 Lack of Community Support	67	23%	24	8%
Σ	198	67%	29	10%

As shown, 23% of the LARDOs were in cyber situation

in contrast to the 0% for Non-LARDOs. On the other hand, the lack of social services and community support had more or less similar figures to cyber situation. However, the gap on the cyber situation was greater.

This can be explained that community had a great impact on a child's development. Social services and support in the community should propel the child to go to school. In the Philippines setting, social pressures on sending a child to school was not that strong compared to our Asian neighbors such as South Korea and Japan. The fear of stigma in these countries when a child was not properly educated seemed to be greater that it propelled students and parents to exhaust all means to send their child to school.

The study of Doll and Hess (2001) supported the idea that the community contributes much to lessen the dropout rate. The success of South Korea in terms of social stigma on the importance of education had been closely studied by Sorensen (1994) which led to positive effects in their level of education. However, this has caused rise on the students' rate of suicide. Suler (2004) described how cyber addiction has become a new of addiction nowadays which greatly causes a great number of students to dropout.

This has huge implications in the need to strengthen the resolve of our community to learner achievement. The society and the government itself seemed to be complacent on the implementation of the provisions in the Constitution which states that the child has the right to be educated. At the current scenario, laws that have detailed the consequences of a child being deprived of education were not evident. Even the argument of freedom of choice should be given emphasis under the harm and loss of resources our society would soon suffer.

**School-related factors.** School-related factors were essentially factors that were under the jurisdiction of school systems. These factors were foremost importance since these were the factors that the school can readily change if necessary.

Table 4  
*School Related Factors of LARDOs and Non-LARDOs*

School Related Factors	LARDO		Non-LARDO	
	<i>f</i>	%	<i>f</i>	%
4.1 Peer Influence	7	2%	0	0%
4.2 Impertinent School Rules and Regulations	101	34%	46	16%
4.3 Passive Teaching- Learning	48	16%	6	2%
$\Sigma$	156	53%	52	18%

In Table 4, a high percentage of LARDOs found to have impertinent school rules and regulations affecting them. Interestingly, only 16% of the Non-LARDOs complained that they experienced this. In addition, 16% of the LARDOs claimed to experience passive teaching-learning

in the classroom whereas only 2% of the Non-LARDOs experienced this. On the other hand, 2% of LARDOs were pressured by peers whereas none of the Non-LARDOs experienced it.

School rules for those who found school disengaging may find school rules to be too harsh. In the point of view of the students, these regulations were daunting for those who were still struggling with their studies. In addition, their manifestations of disengagement can led to actions that may go against the rules of the school. On the other hand, passive teaching learning experience was a pure struggle for students who liked to learn in an interactive way. However, these students tended to appreciate teachers who provided them with games where they could interact with the supervision of a teacher rather than providing them with the opportunity to interact with lesser supervision. This could be attributed to the timid nature of Filipino students where expressions of their ideas were usually limited by self-esteem issues and communication barriers.

Bridgeland, Dilulio and Morison (2006) supported the idea that dropout's perception to school rules can become negative. Filipino students learning style had also been a subject to the study conducted by Bernardo, Zhang and Callueng (2002) which found out that Filipinos preferred the executive style of learning where students were given clear set of goals to accomplish rather than giving them the freedom to make decisions on their learning.

These have huge implications on how instruction should be catered on the different needs of the learners. School rules and regulations should be designed in a way that could help LARDOs coped with the disengaging factors. It was also important that systems were in place for LARDOs to regain their composure and avoid the eventual consummation of the disengagement process.

**Odds of LARDO Tendencies in the Division.** The odds of LARDO tendencies were expressed as Exp (B) in logistic regression. The significant variables of the logistic regression analysis provided valuable insights in determining the probability of a child to become LARDO.

An odd is a numerical expression in mathematics that expresses the likelihood of an event to take place. These results were provided with a mathematical estimate of how likely a child may become a LARDO given his/her situation. In addition, the odds in this study expressed the likelihood in the context of the interplay of the different variables. This was essential since in reality these variables interacted and were expressed as interplay of different factors that affected the phenomena being studied. For instance, given a learner is male makes him 89 times more likely to become a

LARDO given all other variables are held constant. This could be caused by the current temptations boys are facing. This included computer addiction, drug addiction and other vices. This has been supported by Sax (2007) in which he argued that boys are becoming more and more disinterested in going to school.

and Orthner (2006) has showed the good relationship with the father has huge impact on the behavior of the child.

The feeling of inferiority of a child increased that odd of a student to become LARDO three times more likely. Inferiority has long been a hindrance in the child's ability to take risk. This has been supported by the study of Ayodele and Bada (2007).

Working students also increased the odds that the child will become a LARDO 29 times. These working students tended to be affected by the fact that they were currently earning their own money. This led them to possibly quit school in order to provide food for themselves and their family (Cervantes, 1969). This had important implications on the ability of Filipino students to withhold instant gratification for better opportunities in the future.

Learners who have been experiencing the cyber situation were 50 times more likely to become a LARDO. Computer games have been known to be a big distracter among students level of achievement in the classroom (Suler, 2004). Being addicted to computer games fulfilled the great desire to achieve something in life. However, this may lead to lesser accomplishments in the real world.

Community support was also considered as a significant variable. Given that a learner lacked community support, the child was four times more likely to become a LARDO. Community support has been known to have a huge impact on molding a learner (Doll & Hess, 2001). When a child is given enough support that child will be able to keep himself/herself in school.

**Model for LARDO tendencies.** This subsection provided a comprehensive presentation of the derived model based on the input independent variables. This model allowed the formulation of predicted probabilities that would serve as a scientific way to predict the likelihood of being a LARDO.

**Goodness of fit of the model.** In this section, the model based on the data gathered was presented. The predictive power of the model was also presented using the two tables below where the increase of predictive power in the model is shown.

Table 5  
Odds, Significance and Beta values for LARDOs Variables in the Equation

Step		B	S.E.	Wald	df	Sig.	Exp(B)
1 <sup>a</sup>	Gender	4.499	.523	73.942	1	.000*	89.946
	Broken Family	1.258	.468	7.231	1	.007*	3.520
	Orphan	.916	1.266	.524	1	.469	2.500
	Deceased Mother	-1.139	1.289	.781	1	.377	.320
	Deceased Father	-1.909	.858	4.949	1	.026*	.148
	Living with relatives	-.227	.475	.227	1	.634	.797
	Big family	-.290	.339	.734	1	.391	.748
	Living with Employer	1.022	1.523	.450	1	.502	2.779
	Illness	18.153	14728.496	.000	1	.999	76550011.270
	Identity Complex	.681	.735	.859	1	.354	1.976
	Inferiority Complex	1.147	.494	5.397	1	.020*	3.148
	Child Abuse	2.077	1.368	2.304	1	.129	7.980
	Child Labor	3.356	1.129	8.834	1	.003*	28.688
	Cyber Situation	3.908	1.074	13.234	1	.000*	49.791
	Lack of Social Services	1.495	.788	3.597	1	.058	4.460
	Lack of Community Support	1.257	.449	7.849	1	.005*	3.514
	Peer influence	21.488	11856.253	.000	1	.999	2148932748.314
	Right School Rules Regulation	.482	.401	1.443	1	.230	1.619
	Passive Teaching Learning	1.131	.668	2.870	1	.090	3.099
	Constant	-1.981	.213	86.156	1	.000	.138

\*Significant Variables

If a learner comes from a broken family, the child is also 3.520 more likely to become a LARDO given all other variables are held constant. The emotional scars that triggered from this experience can affect the child's emotional stability and well-being. The study conducted by Randolph, Fraser and Orthner (2006) has shown how parent's relationship can affect student's development.

Interestingly, students with deceased fathers have higher tendencies to become a LARDO. According to the findings, this increased the odds of 14 times given that variables were held constant. This could be baffling at first however, possibilities could be that the father in the situation could be unemployed and has vices that greatly affect the child's focus to learning. Interestingly, Furstenberg, Morgan and Allison (1987) showed that the support of the father had no impact on the student achievement. However, the study of Randolph, Fraser

Table 6  
Null Model predictive power when variables were not entered

Observed	LARDO	Predicted LARDO		Percentage Correct
		0	Non-LARDO	
Step 0	LARDO	0	295	0.0
	Non-LARDO	0	295	100.0
Overall Percentage				50.0

a. Constant is included in the model.

It showed that the overall predictive power of the model which was at 50%. Since this was the null model, the predictive power given that no variables were being entered in the logistic regression was measured. For instance, the data were composed of 295 LARDOs and Non-LARDOs since they were of equal number; the null model predicted that all 590 of the samples were Non-LARDOs. Nonetheless, it showed that with the given information, the model could predict with 50% accuracy.

Table 7 showed the improvement of the predictive power to 88% using the independent variables in the study. It should be noted that among the predicted LARDOs, only 277 were predicted to be correct whereas 18 of which were not properly predicted by the model. For the Non-LARDOs, 242 were properly predicted while

Table 7  
Logistic Model and its predictive power when variables were entered  
Classification Table<sup>(a)</sup>

Step	Observed	Predicted			Percentage Correct
		LARDO	Non-LARDO	Percentage	
1	LARDO	0	277	18	94.0
	Non-LARDO	53		242	82.0
Overall Percentage					88.0

the 53 samples were predicted to be LARDOs when in fact they should be Non-LARDOs. This gave the model an overall percentage of 88% predictive power. It was important to note that using the null model we can compare the increase of predictive power from 50% to 88%. This was an indication of a good model fit.

Table 8  
Model for Predicting LARDO tendencies

	B	S.E.	Wald	df	Sig.
Gender	4.499	.523	73.942	1	.000
Broken Family	1.258	.468	7.231	1	.007
Orphan	.916	1.266	.524	1	.469
Deceased Mother	-1.139	1.289	.781	1	.377
Deceased Father	-1.909	.858	4.949	1	.026
Living with Relatives	-.227	.475	.227	1	.634
Big Family	-.290	.339	.734	1	.391
Living with Employer	1.022	1.523	.450	1	.502
Illness	18.153	14728	.000	1	.999
Identity Inferiority	.681	.735	.859	1	.354
Complex Complex	1.147	.494	5.397	1	.020
Child Abuse	2.077	1.368	2.304	1	.129
Child Labor	3.356	1.129	8.834	1	.003
Cyber Situation	3.908	1.074	13.234	1	.000
Lack of Social Support	1.495	.788	3.597	1	.058
Lack of Community Support	1.257	.449	7.849	1	.005
Peer influence	21.488	11856	.000	1	.999
Impertinent School Regulations	.482	.401	1.443	1	.230
Passive Teaching Learning	1.131	.668	2.870	1	.090
Constant	-1.981	.213	86.156	1	.000
*Significant Variables					
Homer & Lemeshow Test	Sig = 0.926				
Pseudo R <sup>2</sup>	0.724				
N	590				

In addition, Homer and Lemeshow's test, a test of model fit also showed positive indications of the model. The insignificant result was an indication of not significant difference between the predicted values and the actual values. This indicated that the prediction of the model was more or less similar with that of the actual scenario. Another important measure of goodness of fit was the Nagellkerie R2. This specified the amount of variation in the independent variable determined by the values in the independent variable. In this case R2is equal to 0.724. This indicated that 72.4% of the variation in the dependent variable was caused by the variation found in the dependent variable. This provided a positive indication of the significance of certain variables in the independent variables. The next table showed the different variables and its possible beta values that would help create a predicted probability for tendencies of learners to become LARDOs.

**Beta values of the model.** The beta values of the logistic regression model were essential building blocks of the model that helped us determine the predicted logit which in turn helped us determine the predicted probability.

The variables chosen in the model were mainly based on DepEd Order 74, s. 2010 were certain variables mainly classified as FICS. These variables have strong correlations and have been observed as a characteristic of most learners who showed signs of disengagement. For instance, under Family Related Indicators were broken family, being an orphan, having a deceased mother or deceased father, living with relatives, having abig family and living with employer. Each of these variables are not mutually exclusive but could describe a different scenario and different context. For instance, having a broken family means the parents were separated because of conflict that arise between their parents, but it did not suggest that the child was an orphan. An orphan is a child that has been with no mother and father since his/her birth and could have been adopted or not adopted by another family. Having a deceased mother or father means the child loss her mother or father because of certain circumstances. This may cause the child to live together with his/her relatives. As mentioned, these factors were not mutually exclusive and could be experienced by the child at same time. Having a big family means the child has more than three siblings and could still be described in the context of other variables. Living with employer was described as under family related variables since the child could be triggered to find work and thus is staying away from his/her family in which the effect of this situation is being considered.



Individual Related Factors were variables that described a situation or experience of a child as an unique person. These include illness, identity complex, inferiority complex, child abuse and child labor. These factors were already described as possible precursors of dropping out. For instance, illness could trigger a series of absences especially during medication. The body also had to respond to the pressures induced by school pressures and thus could not be pleasing environment for those whose health was compromised. Identity complex was defined as a situation where the child experiences confusion in his/her identity, more specifically on his/her gender. Inferiority complex pertained to the perceptions the child upholds on his/her idea of self. This had huge implications on his ability to take risk and gain confidence in learning new things. The Community Related Factors were composed of variables that pertained to the situations and scenarios induced by the community where the child lives. These include temptations to be in a cyber-situation, lack of social services and lack of community support. Cyber situations have been a known competition to focus in school work. Lack of social services has been pointed out as one of the reasons for learners to dropout. Lack of community support could pertain to the inadequacy of the emotional support the community could provide in helping a child succeed in school. Lastly, school related factors were described as factors that were under the school lotus of control and systems. For example, peer influence among students, school rules and regulations and the teaching-learning environment could be directly influenced by the school itself. Although peer influence could be under the community, this variable has been included under the community factors by the DepEd Order because the learners who were enrolled in the school have spent more time within the school premises than their respective communities. Learners' culture can also be influenced by school regulations and rules which was considered as one of the sub factors. On the other hand, the teaching learning environment was directly on the hands of the teacher and the school administrator.

**Predicted Logit.** The previous sub-sections discussed the possible effect of each variable to the possibility of being a Learner at Risk of Dropping out (LARDO); however, these variables in reality tended to act on an interplay which finally led to a certain level of disengagement. This in turn led students to being at risk. Thus, this model was an attempt to model the interplay of these factors to the possibility of being a LARDO or Non-LARDO. The model created was a product of logistic regression modelling where an identified logit score was identified in order to create a predicted probability

which mathematically quantifies the possibilities of being at risk. The predicted logit was a product of the formula below derived from the logistic regression analysis.

$$\text{PREDICTED LOGIT} = -1.981 + (4.499 * \text{Gender}) + (1.258 * \text{Broken Family}) + (0.916 * \text{Orphan}) + (-1.139 * \text{Deceased Mother}) + (-1.909 * \text{Deceased Father}) + (-0.290 * \text{Big Family}) + (1.022 * \text{Living with Employer}) + (18.153 * \text{illness}) + (0.681 * \text{Identity Complex}) + (1.147 * \text{Inferiority Complex}) + (2.077 * \text{Child Abuse}) + (3.356 * \text{Child Labor}) + (3.908 * \text{Cyber Situation}) + (1.495 * \text{Lack of Social Support}) + (21.488 * \text{Peer Influence}) + (0.482 * \text{Impertinent School Rules}) + (1.131 * \text{Passive teaching learning})$$

**Predicted probability.** This predicted logit was not yet the final predicted probability. This logit score was entered in the final logistic regression that will turn the logit score in to the predicted probability.

$$P = \frac{e^{a+bx}}{1 + e^{a+bx}}$$

Where P was the predicted probability, e was the euler's number equivalent to 2.718281828, and (a-bx) was the predicted logit solved using the equation described in the previous page. An Excel worksheet was created in order to provide advisers with a possible way to compute the probability of their learners to be LARDOs or Non-LARDOs. This worksheet can be downloaded using the link <https://drive.google.com/open?id=0ByCKDFb4BxcYdE9CcUlybDJDZVU>.

**V. CONCLUSION**

Dropout has been a problem in the educational sector that has dire consequences in the society. However, the effort in dropout reduction given its complexity requires collaboration among family members, individual learners, the community and school. Meanwhile, gender inequity has strong implications on how related issues are dealt with in the classroom. In addition, the need for a paradigm shift is also essential in managing education. The tendency to augment performance indicators has lead most schools to be indecisive in identifying learners who may dropout. LARDOs are usually taken in the negative light and so the identification affected by fear of stigma. There should be greater focus in augmenting and saving learners who are in dire need and a real focus on the end itself.

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