

## **The Influence of Parental Educational Levels on Internal Efficiency (Repetition and Dropout Rates) of Public Primary Schools in Western Province of Rwanda**

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### **Abstract**

#### **Background**

The children are greatly influenced by what they saw their parents doing and the observation; interaction; imitation and collaboration have a powerful influence on wholistic development of the offspring (Bandura, 1969). The purpose of this study was to investigate the influence of parental educational levels on internal efficiency (dropout and repetition rates) of public primary schools in Western province of Rwanda. The study tested the hypothesis that there is no significant relationship between parental education levels on internal efficiency of public primary schools in Western Province of Rwanda.

#### **Materials and Methods**

Mixed method research design was employed. The target population was 9127 people including 8640 students; 384 teachers, 96 headteachers and 7 District Directors Education (DDE) In Western Province of Rwanda. The Slovene sampling formula, stratified sampling technique, purposive sampling and simple random sampling techniques were used to select the sample of 384 pupils, 115 teachers, 28 headteachers and 2 DDE. The questionnaires, interview guide and document analysis schedules were used to collect the data. Descriptive statistics was used to compute demographics, correlation was established with Karl Pearson Correlational Coefficient while Regression Analysis helps to establish the influences of dependent variable to the dependent variable, Tables, Graphs and Textual Model were used to present the findings.

#### **Results**

Throughout the findings. It was revealed that majority of parents in Western province of Rwanda has primary Level of education (45.9% & 44.8%) fathers and mothers respectively. Majority of parents have never involved in pupils' education (40% & 32.9%) fathers and mothers, Surprisingly, 59.02% of pupils who dropped out the schools and 44.80% of pupils who repeated the class in 2019-2020 academic year, their parents have only primary level of education. Furthermore, the study found high negative degree of relationship between parental educational levels and dropout rate ( $r = -0.759$ ,  $P = .000$ ); and Repetition rate ( $r = -0.701$ ,  $P = .000$ ), and that parental education levels explain 40.3% on the variation of internal efficiency in Western province of Rwanda. Last not the least, mother education shows significant effects in explaining internal efficiency (Beta: 0.223  $P = .000$ ).

#### **Conclusion**

The study concluded that there is a significant relationship between parental education Levels and internal efficiency (dropout out and repetition rates) of public primary schools in Western Province of Rwanda.

The researcher advocate mobilization for parental involvement in education and improvement of adults' education in country

**Key Works:** Parental Educational Level; Internal Efficiency Repetition Rate; Dropout rate

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## **I. INTRODUCTION**

Social learning theorists assert that parents are primary and permanent role models to their children. The children are greatly influenced by what they saw their parents doing and the observation, interaction, imitation and collaboration has a powerful influence on wholistic development of the children (Bandura, 1969). Parental roles and supports to the children's academic achievements, change with the change in educational level of the parent. Parental education level is conceptualized as the highest-grade level of education completed

by the parent in the given educational system of a particular country where education received (UNESCO, 2015). UNESCO Institute for statistics (UIS, 2016) defined internal efficiency of schools as the comparison of non-monetary outcome of education to the cost of educational inputs. Dropout rates and repetition rates are among the key indicators of internal efficiency of schools. Making the point a case, repetition was defined as the proportion of pupils from a cohort enrolled in a given grade at a given school year of primary or secondary education who study in the same grade in the following school year (UIS, 2016); while primary drop out refers to the pupils who withdraw from primary school before doing primary level examination (MINEDUC, 2019). Different studies worldwide have reportedly showed mixed findings on the impacts of parental education level on internal efficiency.

Referring to the study carried out Farooq, Chaudhry, Shafiq and Berhane (2011) to examine the impacts of parental education level on students' academic performance in secondary schools in metropolitan city of Pakistan, indicated that students whose parents had higher level of education performed better in standardized test than their counterparts whose parents had not attended any formal schooling. This is true because educated parents can better communicate with their children in school works and make follow up on the children's progress more effectively than less educated or illiterate parents (Agirdag & Vanlaar, 2018). Not long ago, Emeka (2012) carried out a study and confirmed that educated parents tend to have children who are more motivated to excel in schools than children whose parents are neither educated nor have low level of education. Later on, Mamet and Mudassar in (2017), asserted that educated parents possess favorable attitudes towards education and repetitions rate and dropout rate were very low within students whose parents had high level of education. Soon after, the findings of a study conducted by Crimson Foundation entitled Rwanda Educational Multi-Covariates study confirmed that educated parents possess improved understanding on the value of education (Hynes et al., 2018). Despite of various studies carried on parental education level and its effects on academic achieved, Literature found no study which provide reliable information on the influence of parental educational level on internal efficiency in Western province of Rwanda. Thus, a need for this this research. This study was therefore bridged the gap. The purpose of this study was to investigate the influence of parental educational levels on internal efficiency (repetition rate and dropout rate) of public primary schools in Western province of Rwanda.

## **II. REVIEW OF RELATED LITERATURE**

Education has become as a necessity for children to succeed in life, parents become supportive towards their children when it comes to education (De Guzman & Gallardo, 2017). Schooling becomes a family matter in which children become at least partly dependent on the education level of the parents. Parents with little knowledge can be less supportive after all; they are less able to help with things children need to learn at school. Furthermore, it is apparent that parents with higher education levels spend more time doing interactive activities, like walking and playing, which can be explained by the felt necessity to invest in children for their future benefit (SCP, 2011). These activities can have an influence on the scholastic achievement.

Farooq Chaudhry, Shafiq and Berhane (2011), conducted a study on the impact of parental education level on students' academic performance in metropolitan city of Pakistan. The study findings indicated that students' whose parents had higher level of education performed better in standardized test than their counterparty whose parents were not attended any formal school. This is true because educated parents can better communicate with the children in school works and makes follow up on the children's progress more effectively than illiterate parents. Concurrence was found in the study conducted by Emeka (2012), confirming that educated parents tend to have children who are more motivated to excel in schools than children from less educated parents. In similar ways, Mamet and Mudassar (2017), asserted that educated parents possess favorable attitudes towards education. Furthermore, the findings of the study conducted by crimson foundation on Rwanda educational multi-covariates confirmed that parental educational level influences effectiveness of school in Rwanda (Haynes et al, 2018). In Rwanda NISR (2014) reported that 32% of household heads have no education, 55% have attended primary school and 8% and 3% have attended secondary school and university respectively. The percentage of household heads with no education is two times higher among females compared to males and is three times higher in rural areas compared to urban ones.

This study was conducted in line with education production function theory (EPF). The theory was proposed by Hanushek (1979), and it was extensively developed by Pritchett and Filmer (1997), and later Hanushek revised the theory in 2007. This theory is based on systematic relationship between resources and students' outcomes and relationship between school and students' outputs.

In economic view, Production function theory state that there is a relationship between physical outputs, production process and inputs. Hanushek (1979) further explained that number of outputs depends on the quantity of inputs and the constraints imposed by the underlying technical process. So, this theory was suitable for this study because it helps to explain how quality of parental educational levels (inputs) influenced the rates of dropout and repetitions of schools in Western province of Rwanda.

### **III. RESEARCH METHODOLOGY**

Referring to the view point of Kothari (2017), A research Design was defined as a framework create to seek answers to scientific problems. This study employed Mixed Method research design Known as “MM Design”. The term “mixed methods” refers to an emergent methodology of research that advances the systematic integration, or “mixing,” of quantitative and qualitative data within a single investigation or sustained program of inquiry. The basic premise of this methodology is that such integration permits a more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis Johnson & Christensen (2014).

The target population of the study under investigation was made of Nine thousand, one hundred and twenty- seven (9127) educational stakeholders in Western Province of Rwanda within which, 8640 students, 384 teachers, 96 headteachers and 7 district directors of education (DDE) were targeted. A total sample of five hundred fifty-three (553) respondents including four hundred and eight (408) pupils; one hundred and fifteen (115) teachers; Twenty-eight (28) Head teachers and Two (2) District Directors of Education (DDE) were selected to participate in this study by using Slovene formula of sampling, stratified sampling, simple random sampling and purposive sampling techniques.

The research instruments used for the purpose of this study included questionnaires, interviews and document analysis schedules. The structured questionnaire was used for this study. There were two categories of questionnaires. One for teachers another for pupils. Questionnaire for teachers was consisted of two sections. The first section of teachers’ questionnaire sought information on demographic data such as gender, marital status, age group, education qualifications, and professional working experience. Whereas the second section consist of questions organized in Likert scale format. Questions sought information revealing teachers’ views on the influence of parental educational levels on internal efficiency (dropout and repetition rates) in Public Primary Schools in Western Province of Rwanda.

Questionnaire for pupils was also consisted of two sections. Section A sought demographic information of pupils including gender, age and Ubudehe category. The second section consisted of questions sought information on pupils’ parents’ education levels, and the family living conditions. The second research instruments employed in this study was interview. Semi-structured interview was administrated to headteachers and District Directors of Education. The purpose of interview was to collect complement and balance of the information collected from questionnaires. The third data collection tool for this study was document analysis schedules. It also provided supplementing data and balancing information to what collected from both questionnaires and interview.

Face validity of the test items was done by the experts in the field of education to ascertain the relevancy of the questionnaire. Prior to approval, necessary corrections were made by the experts. In addition to this, Cronbach ‘Alpha coefficient was computed to ascertain internal consistency of the instrument. The computed Cronbach’ Alpha coefficient revealed significant level of 90 percent for pupils’ questionnaire and 75 percent on teachers’ questionnaire.

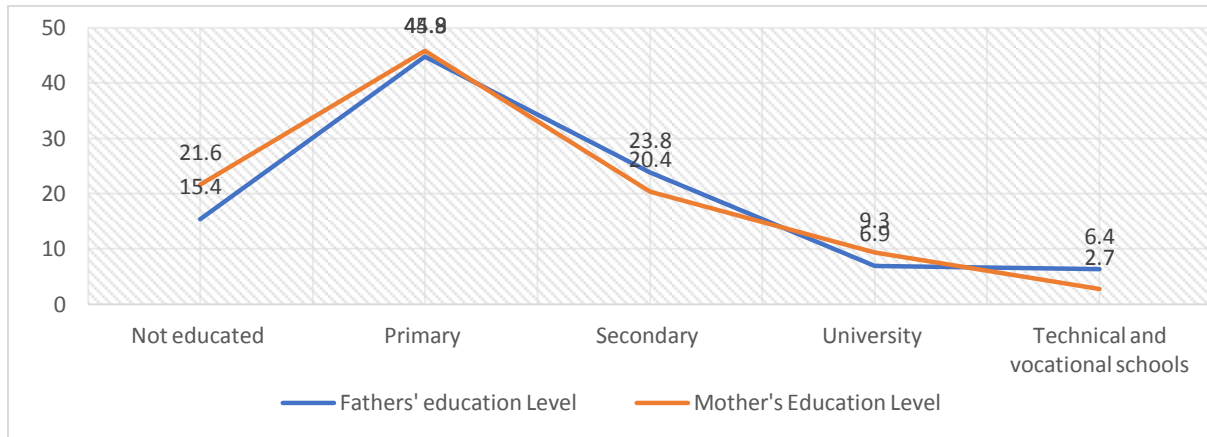
Research Instruments for this study were self -administrated. Data for pupils was collected in time series. Researcher collected data showing socio-economic status of the targeted pupils before doing Primary Leaving Examinations (PLE), after primary leaving examinations, researcher collected data scored by each targeted pupil. Notes taking and audio-record was used to manage interviews. Document analysis schedules focused on academic document of last five years, they found at schools’ archives.

The collected data was coded and entered into the computer with SPSS version 22<sup>rd</sup> and STATA version 13<sup>th</sup>. After data cleaning, descriptive statistics (mean, frequency, percentages, Variance and Std. Deviation) were computed with the same software. Thematic approach was used to analyze qualitative data collected. Tables, graphs and textual models were employed to summarize and to present collected data. Pearson correlation coefficient was used to establish correlation, while influence of parental educational levels on internal efficiency was established within regression analysis.

### **IV. FINDINGS OF THE STUDY AND DISCUSSIONS**

#### **4.1. Education Level of Parents in Western Province of Rwanda**

Distribution of education levels of parents in Western province was presented in Figure 4.1.

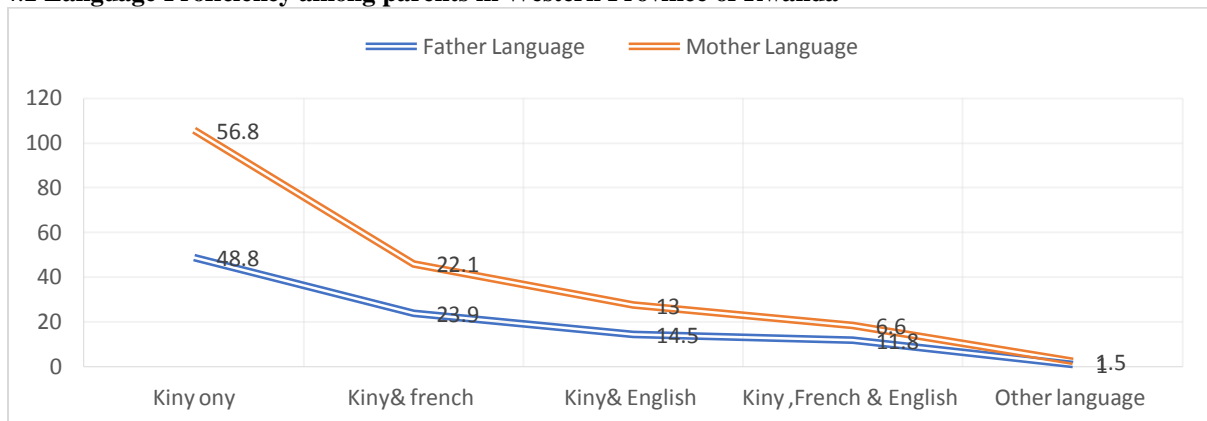


**Figure 4.1 Parental Educational Levels in Western province Rwanda**

Source: Source Primary Data, 2019

The Figure 4.1 shows that majority of the parents in Western Province of Rwanda have primary level of education as indicated by (45.90%; 44.80%) fathers and mothers respectively. Surprisingly, (21.60%) of mothers and (15.40%) of fathers did not attend any formal schooling. These findings were in line with the findings presented by MINEDUC, (2018) where showed adult literacy rate of 73.2 percent among people above 15 years.

#### 4.2 Language Proficiency among parents in Western Province of Rwanda

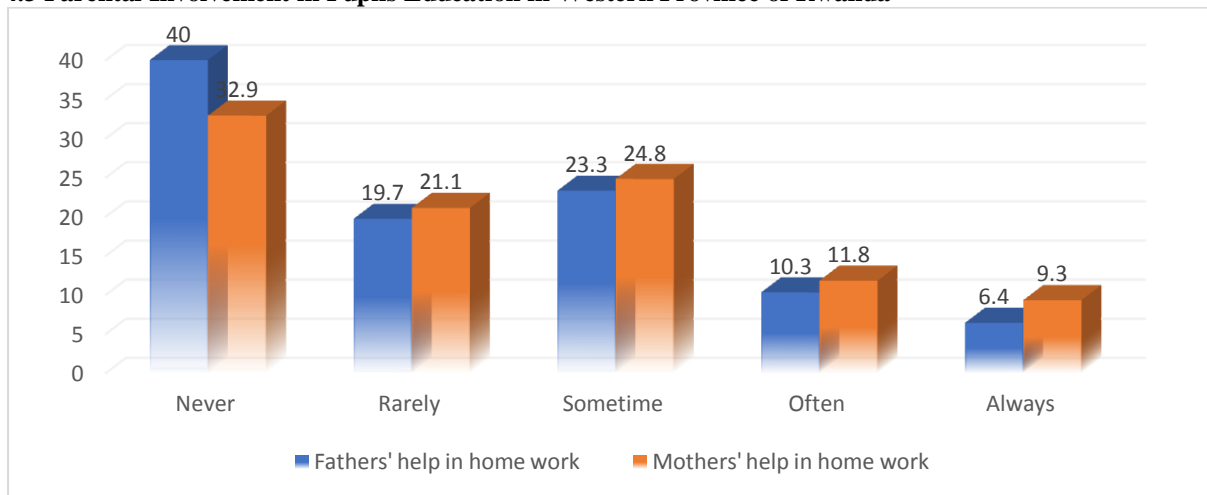


**Figure 4.2 Languages Proficiency among parents in Western Province of Rwanda**

Source: Primary Data, 2019

Figure 4.2 shows that majority of the parents in Western Province of Rwanda speak only mother tongue (Kinyarwanda). This was indicated by the rates of (56.80% and 48.80%) for both mothers and father respectively. About (22.10%) of mothers and (23.90%) of fathers speak both Kinyarwanda and French. About (13.00%) of mothers and (14.50%) of fathers speak both Kinyarwanda and English. And about (6.60%) of mothers and (11.80%) of fathers were able to speak English, French and Kinyarwanda. Only 1.50 percent were able to speak additional languages such Kiswahili, Kirundi, Kigande and Lingala.

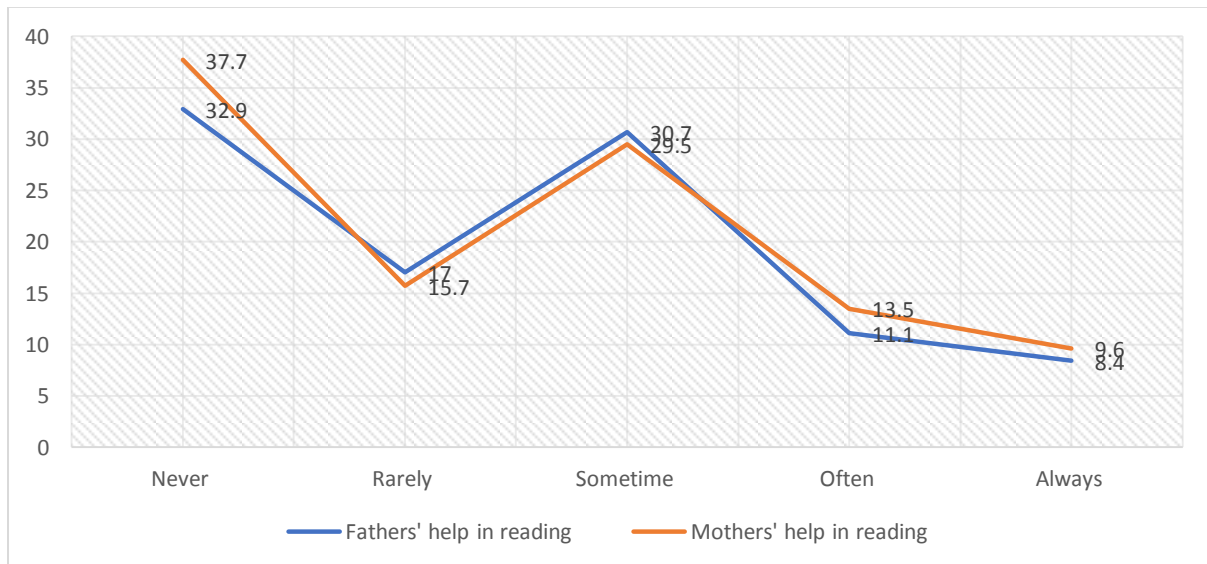
**4.3 Parental Involvement in Pupils Education in Western Province of Rwanda**



**Figure 4.3 The extent to which parents help pupils in doing homework**

**Source:** Primary Data, 2019

Figure 4.3 shows that majority of parents in Western Province of Rwanda were not actively involved in schooling of their children. This was indicated by (40.00% and 32.90%) of fathers and mothers respectively who have never helped their children to do the homework. About (17.70%) of fathers and (21.10%) of mothers have rarely helped their children (23.30%; 24.80%) of fathers and mothers respectively have sometimes help children when doing homework. However, only (6.40% of the fathers and 9.30%) of the mothers always help the children do homework.



**Figure 4.4 parental help in reading books**

**Source:** Primary Data, 2019

Figure 4.4 shows that (32.90%) of fathers and (37.70%) of mothers have never helped their children to read books; (17.00%) of father and (15.70%) of mothers rarely help their children; (30.70%) of fathers and (29.50%) of mothers sometime help their children to read books; (11.10% and 13.50%) of fathers and mothers respectively always help their children to read books. This tells us that majority of parents in Western province Rwanda do not help children to read.

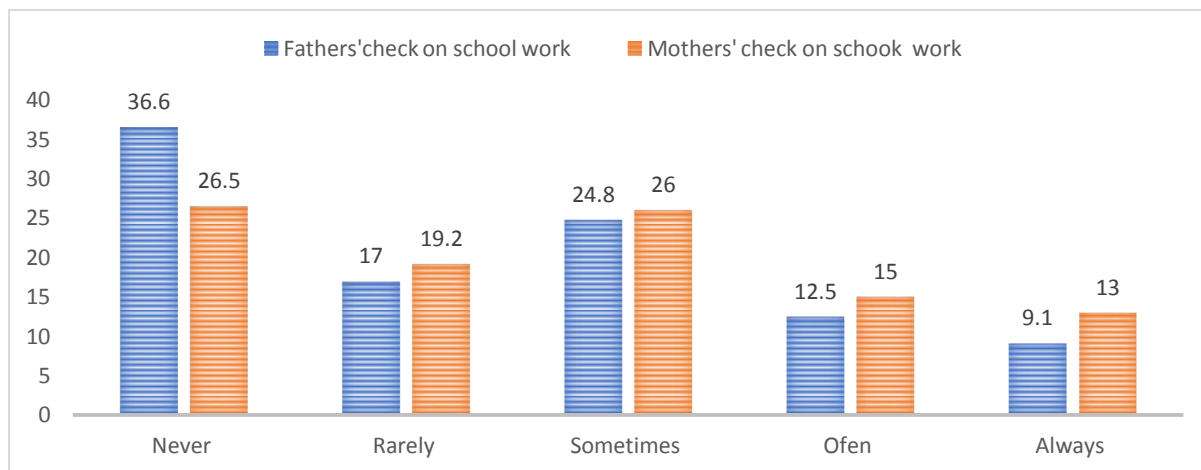


Figure 4.5 Parental Follow up on pupils' school Works

Source: Primary Data, 2019

Figure 4.5 shows that majority of parents in Western Province have never follow up academic activities of their children. This was indicated by (53.60%) of fathers and (45.70%) of mothers who never check pupils' school works, (24.80%) of fathers and (26.00%) of mothers who sometimes check pupils' school work; only (21.60% and 28.00%) fathers and mothers respectively often check school works assigned to their children at school. It was also revealed that mothers were more involved in academic activities of their pupils in public primary schools in Western province of Rwanda.

The findings presented in the section named 4.3 shows that majority of parents in Western province of Rwanda were not actively involved in schooling of their children and this effect internal efficiency of their children.

#### Parental Educational Levels and Pupils Dropout and Repetition Rates in Western Province Rwanda

The findings from documents reviewed as found in school Archives indicated that majority of pupils who dropped out and repeated schools in Western province of Rwanda, their parents have primary level of Education. This was indicated by 59.02 percent and 44.83 percent of the participants dropout and repetition rates respectively.

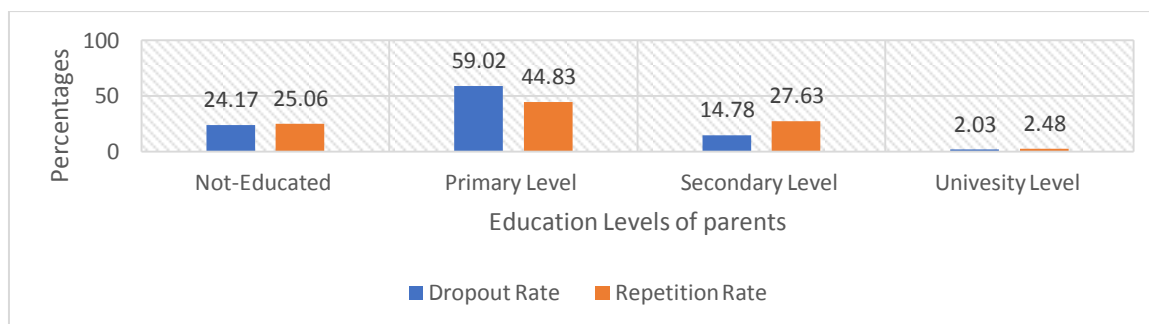


Figure 4.6 Relationship between parental Education Level and Pupils Dropout and Repetition rates in Western Province of Rwanda

Source: Primary Data, 2019

Figure 4.6 shows that dropout and repetition rates were very high among pupils whose parents have primary level of education as indicated by 59.02 percent; 44.83 percent and decreased up to 2.03 percent; 2.48 percent drop out and repetition rates respectively for pupils whose parents were university graduates. This shows as that there is a strong degree of relationship between parental educational levels and internal efficiency (dropout and repetition rates) in Western Province of Rwanda. That increase in parental education These findings were in line with the findings presented by Laterite (2017) under the recommendation of MINEDUC and UNICEF, where revealed that dropout and repetition rates were very high among students whose parents have low levels of educations.

Through correlational test results, it was revealed that there is a strong negative degree of relationship between parental educations levels and dropout and repetition rates in Western province of Rwanda as presented in the table 4.1.

**Table 4.1 Correlation between Parental Education levels and Dropout and Repetition Rates of Pupils in Primary Schools in Western Province of Rwanda.**

		Dropout rates	Repetition rates
Parental Education Levels	Pearson Correlation	-0.759**	-0.701**
	Sig. (2-tailed)	.000	.000
	N	284	408

\*\* . Correlation is significant at the 0.05 level (2-tailed).

\* . Correlation is significant at the 0.01 level (2-tailed).

Source, Primary Data (2019)

Table 4.1 shows that there is a high negative degree of relationship between parental education levels and dropout rates and indicated by (r= -0.759\*\*; p = 000; N = 284), and parental educational levels and repetition rates as indicated by (r= -0.70\*\*; p = 000; N = 408). This tells us that an increase in parental education led to the reduction of dropout and repetition rates in Western province of Rwanda. These findings collaborated with the findings presented by Ntawiha, Otieno, and Libese (2016); and Mutegi, Wanjara, Kinyanjui, (2015) that there is a strong degree of association between parental education levels and students' academic achievement.

#### 4.4 Role of Parental Education Levels on Internal Efficiency

Findings presented in the table 4.2 shows the role of parental educational levels on internal efficiency.

**Table 4.1 Role of Parental Educational Levels on Internal Efficiency**

STATEMENTS	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
Educated parents are more committed on academic progression of their children than non- educated parents	3	2.7	10	9.1	6	5.5	57	51.8	34	30.9
Pupils from non-educated households are more likely to repeat or dropout classes than pupils from educated households	2	1.8	10	9.1	10	9.1	58	52.7	30	24.3
Educated parents act as second teacher to their children, and they also possess positive attitude to word children' education	7	6.4	9	8.2	11	10.0	66	60.0	17	15.5
Parents with high level of education invest more in their children and create favorable learning environment in their homes.	4	3.6	10	9.1	11	10	58	52.7	27	24.5
<b>AVERAGE</b>	<b>4</b>	<b>3.6</b>	<b>10</b>	<b>9.6</b>	<b>9</b>	<b>8.1</b>	<b>60</b>	<b>54.2</b>	<b>27</b>	<b>24.4</b>

Source: Primary Data, 2019

The table 4.2 presents responses showing role of parental educational levels on internal efficiency of schools. Questions were organized in forms of statement with Likert models. Findings' presentations followed provided statements.

On the first statement, majority of the respondents at 82.70 percent agreed that educated parents are more committed on the academic progression of the children than non- educated parents; on the second statement 77 percent agreed that pupils from non-educated households are more likely to repeat and dropout classes than pupils from educated households; the third statement revealed that 75.50 percent agreed that educated parents act as the second teacher to their children, and they possess positive attitude on education; in the fourth statement 77.20 percent agreed that Parents with high level of education invest more in their children and create favorable learning environment in their homes. In general, the findings presented in the table 4.2 shows that majority of the respondents at 78.60 percent agreed that education level of the parents influence internal efficiency of schools in Western province of Rwanda. These findings were supported by the findings of the study conducted by Emeka (2012), which revealed that educated parents tend to have children who are more

motivated to excel in schools than children from less educated parents, and Mamet & Mudassar (2017), who asserted that educated parents possessed favorable attitude towards education, this improves students' motivation and effective progress in schools.

**4.6 Interview Responses showing roles of Parental Educational Levels on Internal Efficiency.**

Thematic approach was used to analyze interview data and textual model used to present the findings. Interviewees has categorized the parents into two groups (illiterate/ non-educated and literate or educated ones).

**Educated parents act as the second teachers to their children**

An educated parent acts as the second teacher to his/her child and this improves academic progress of the child than a child whose parents are not educated. Educated parents provide academic support to their children through participation in the school activities such as doing homework, reading books, revising learnt content etc. Children from highly educated parents are good at instructional language, this helps them to perform better in classroom activities and reducing children's probability to repeat/ dropout the class

**Educated parents invest more in their children's education**

*Educated parents possess an advanced positive attitude towards social and economic benefits of education. They incur huge financial cost to enroll their children in the best schools where cost of education is very high but providing high quality of education.* These findings were supported by Ahmad (2013) noted that children from families where parents have less education tend to perform systematically worse in school than pupils whose parents were highly educated. To him, educated parents provide intellectual, economical, psychological and emotional support to their children which in turn make them be more comfortable and adjust to the learning environment and this result in high academic performance.

**Educated Parents Provide Moral Support to the Children**

This was shown by the fact that, majority of the educated parents, often visit their children at school to see how they are doing. Prior to this, educated parents create an academic household which is a pre-requisite for academic achievement. An educated parent is in good position to explain role and values of education to his/her child which stimulate learning interest. Thus, children from educated parents are less likely to dropout/repeat the class when compared to children whose parent have never attended formal schooling.

**Educated parents act as the role models to their children**

Most of the children's behavior is acquired through observation and imitation. Social learning theory that Bandura developed in 1969 revealed that parents are primary role models to their children. Therefore, children from educated parents tend to imitate their parents in terms of career or in any other academic related activities. Thus, pupils from educated households are likely to excel and progress academically than their counterparts from non-academic households.

**Educated parents provide learning motivation to their children**

Motivation is a driving force pushing someone to do something. Educated parents provide to their offspring internal and external motivation. A child in academic household born with learning motivation received from his/her parents' genes during the process of genetic transmission. Whereas external motivation is received from friendly and conducive learning environment created by the parents as results of their educative knowledge and experiences. This stimulates child's academic progression without wastage (dropout & repetition). Rana (2015), argued that parental education is such a motivating force for a child which paves and it is an admitted fact that the children of educated parents are more confident, resourceful and experienced than the children whose parents lack education.

Many of interviewees revealed that majority of the parents in rural region of Western Province of Rwanda do not maximally participate in the schooling of their children. The major reasons for this, was low level of literacy and numeracy among parents, this undermines schooling of the children. Furthermore, non-educated parents lack sufficient knowledge to support children learning this led to the increment of dropout and repetition rates. From there, it was concluded that the higher parental education, the lower pupils' dropout and repetition rate will be, and the lower parental education levels, the high pupils repetition rate will be vis versa.

**4.6 Performance of pupils in PLE in Relation to parental educational levels indicators**

**Table 4.3 Mean scores, Std. Dev and Variance of Pupils in PLE in Relation to the indicators of Parental Education Levels**

Variables	Indicators	Mean scores	Std. Deviation	Variance	N	Percentages (%)
Father's education	Not educated	50.00	6.508	42.355	63	15.40 %
	Primary	50.03	6.383	40.748	188	46.10 %
	Secondary	51.87	7.202	51.872	100	24.50 %
	University	51.06	4.861	23.638	29	7.10 %
Mothers' education	Not educated	48.86	6.067	36.809	88	21.60 %
	Primary	49.95	6.118	37.439	187	45.90 %
	Secondary	52.26	7.107	50.514	83	20.40 %



*The Influence of Parental Educational Levels on Internal Efficiency (Repetition and Dropout ..*

	University	53.23	6.945	48.240	38	9.30 %
Father's language	Kiny only	50.10	6.256	39.147	198	48.30 %
	Kiny & French	49.86	6.475	41.930	97	23.60 %
	Kiny & English	52.67	7.525	56.636	59	15.10 %
	Kiny, French & English	51.35	6.383	40.744	48	12.00 %
Mothers' language	Kiny only	50.18	6.134	37.636	231	56.80 %
	Kiny & French	49.87	6.412	41.120	90	22.10 %
	Kiny & English	52.01	7.407	54.865	53	13.00 %
	Kiny, French & English	53.74	8.373	70.123	27	6.600 %
Fathers' help in home work	Never	50.04	6.404	44.955	163	39.60 %
	Rarely	50.46	6.199	38.429	80	19.60 %
	Some time	50.86	5.760	33.183	95	23.50 %
	Always	52.18	7.913	62.631	43	10.90 %
Mothers' help in home works	Never	50.49	7.113	50.598	134	32.90 %
	Rarely	49.72	5.337	28.486	86	21.10 %
	Sometimes	50.39	6.499	42.222	101	24.80 %
	Always	53.26	7.660	58.686	38	9.30 %
Fathers' help to read	Never	50.26	6.844	46.841	134	32.70 %
	Rarely	51.13	6.997	48.968	69	17.10 %
	Some times	50.31	5.969	35.636	125	30.60 %
	Always	51.02	7.549	56.999	34	8.40 %
Mothers' help to read	Never	50.39	7.206	51.928	129	31.70 %
	Rarely	49.85	5.970	35.647	64	15.70 %
	Some times	50.55	6.139	37.695	120	28.50 %
	Always	53.53	7.866	61.887	39	9.60 %

**Source: Primary data, (2019)**

The table 4.3 shows that majority of parents in Western Province of Rwanda have primary level of education as indicated by 46.10 percent of fathers and 45.90 percent of mothers. About mean score: It was established that pupils whose parents were uneducated, scored the lowest mean in Primary Leaving Examinations PLE (48.86% and 50.00%) mothers and fathers respectively. Whereas pupils whose parents were educated scored the highest mean (53.23% and 51.06%) mothers and fathers respectively. These findings were supported by the findings of the study conducted by Musarat (2013) in the study conducted on 250 students from University of Sargodha Pakistan, where he revealed that there is a significant relationship between parental education levels and students Grade Point Average (G.P.A). Throughout the analysis it was established that mothers' education influenced pupils scores that father education (see table 4.3). The role of mothers' education was also emphasized by UNESCO (2014) that education of mothers helped to reduce stunting rates among children on the globe. For example, In Vietnam, infants whose mothers reached lower secondary education were 67.00 percent less likely to be stunted. UNESCO (2014) further noted that if all mothers in developing countries had at least primary level of education, 1.7 million children would be saved from stunting and if those mothers had a secondary education, 12.2 million children would be saved from stunting. This is due to the fact that educated mothers ensure that their children are vaccinated; sufficiently breastfed; fed with rich food etc.

Table 4.3 also shows languages spoken by parents in Western Province Rwanda. It was revealed that majority of parents speak mother tongue (Kinyarwanda) as indicated by (48.30%; 56.80%) fathers and mothers respectively. English language as medium of instructions in schools was spoken by (15.10% and 13.00%) fathers and mothers respectively. About mean scores: it was established that pupils whose parents speak English recoded the highest mean scores in PLE than others pupils (52.67% ;52.01%) fathers and mothers respectively. These findings collaborated with the findings of the study carried out by Benimana and Theogene (2016) which revealed that pupils whose mothers were unable to speak instructional language used in their schools recoded poor academic performance.

The Table 4.3 also shows the extent to which parents helped children to do homework: The findings revealed that majority of the parents in Western province of Rwanda have never helped their children to do homework. This was indicated by 39.60 percent of fathers and 32.90 percent of mothers participants. It was also revealed that only 10.90 percent of fathers and 9.30 percent of mothers often assist their children to do the homework. Based on the mean scores, it was established that pupils who always get supports from parents when doing homework showed higher score that pupils who have never get it. This was indicated by mean of 52.18 percent for fathers and 53.26 percent for mothers. These findings corroborated with the findings of the study

carried out by Jean de Dieu and Andala (2018) which concluded that there is a positive degree of relationship between parental involvement and students' academic performance in 12YBE (12Years Basic Education) in Nyarugenge District Kigali Rwanda. To the same extent Farooq *et al.*, (2011) have also concluded that students from educational households performed better in standardized than students from non-academic households in Metropolitan city of Pakistan.

#### 4.7 Hypothesis Testing and Regression Analysis

The null hypothesis (H0) tested in this study was, "there is no statistically significant influence of parental educational levels on internal efficiency on primary schools in Western Province of Rwanda". Whereas the alternative hypothesis (H1) tested was, there is no statistically significant influence of parental educational levels on internal efficiency in primary schools in Western province of Rwanda. The statistical test computed was Regression Model. Decision rule was based on p-value approach. P-value approach stated that if the level of significance to hold the decision to either reject or uphold the null hypothesis was 5% or 0.05, which mean 95 percent degree of confidence. Then, the probability obtained a sample mean given the value stated in the null hypothesis was true stated as p-value. If p-value is less than 5% ( $P < 0.05$ ), the null hypothesis will be rejected and accept alternative hypothesis vis-versa.

**Table 4.4 Model Summary**

Model Summary				
Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.635 <sup>a</sup>	.403	.381	.648635

a. Predictors: (Constant), Parental Educational Levels

b. Dependent Variable: average marks scored by pupils in %

**Source: Primary Data, 2019**

Table 4.3 shows R = 0.635; R-Squared = 0.403; adjusted R-squared of 0.381 and the standard error of 0.648. The coefficient of determination also known as R-squared 0.403. This means that combined influence of parental education levels can explain 40.3 percent on the variation of internal efficiency of public primary schools in Western province of Rwanda. These findings collaborate with the findings presented by Mamet and Mudassar (2017) confirmed that parental education level have significant effects on academic achievement.

**Table 4.4 Presents Analysis of Variance (ANOVA).**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	144.704	4	48.235	176.426	.000 <sup>a</sup>
	Residual	47.571	403	.273		
	Total	192.275	407			

a. Predictors: (Constant), Parental Education Level

b. Dependent Variable: Internal efficiency

**Source: Primary Data, 2019**

The significance of the regression model was tested using analysis of Variance (ANOVA). The table 4.4 shows that regression model was significant at  $.000 < .05$  This means that it has not computed by chance. This made the results of regression model credible and reliable.

**4.5 Present Summary of Regression Coefficient Tested.**

Model	Unstandardized Coefficients		Standardized coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	47.793	1.069		44.718	.000

Father education	-.484	.357	-.077	-1.359	.175
Mother education	1.487	.392	.223	3.798	.000
	.232	.366	.038	.635	.526
Fathers' Language					
Mothers' Language	.225	.398	.035	.565	.573
Fathers' help in homework	.176	.361	.034	.489	.625
Mothers' help in homework	.127	.411	.025	.308	.758
Fathers' help in reading	-.266	.409	-.052	-.650	.516
Mothers' help in reading	.116	.391	.023	.297	.766
Fathers' check on school work	-.099	.393	-.020	-.252	.801
Mothers' check on school work	-.124	.352	-.026	-.353	.725

a. *dependent variable: Internal efficiency*  
\* $P < .05$

Table 4.5 present summary of regression coefficient of computed variables on parental educational level. It was established that only mothers' education has significant effects on internal efficiency. This was indicated of standard beta of 0.223 significant at .000. This means that improve on mothers' education by one will increase 0.223 units internal efficiency of public primary schools in Western province of Rwanda. The role of mothers' education on academic achievement was also emphasized by Ngetich (2015) in the study conducted in central Kenya revealed that maternal education and employments (salary) increase enrollment of both girls and boys whereas paternal education and employments improves only enrollments of boys. The impacts of mothers' education on internal efficiency were not only emphasized by us and Ngetich (2014) but also UNESCO (2014) notified that educated mothers help to reduce stunting, repetition and dropout rates. For example, In Vietnam, infants whose mothers reached lower secondary education were 67 percent less likely to suffer from stunting. UNESCO (2014) further revealed that if all mothers in developing countries had at least primary level of education, 1.7 million children would be saved from stunting and if those mothers had a secondary education, 12.2 million children would be saved from stunting.

## V. SUMMARY AND CONCLUSION

The purpose of this was to investigate the influence of parental educational levels on internal efficiency (Dropout & Repetition) of public primary school in Western province of Rwanda. The mixed method study design was used the sample of study were 553 respondents. Questionnaires, interview guide and document analysis schedule were used to collect the data. The findings indicated that majority of the parents in Western province of Rwanda have primary level of education (45.90% & 44.80%) mothers and fathers respectively. About 56.8% of mothers and 48.8% of fathers speak only mother tongue (Kinyarwanda). Only 11.80% of fathers and 6.60% of mothers were able to speak English, French and Kinyarwanda. About 40% of fathers and 32.9% of mothers have never involved in children' education. About 59.02% of pupils who dropped out of schools and 44.80% of pupils who repeated the classes several time, their mothers have primary only primary level of education. About 78.60 percent of the respondents strongly agreed that education level of the parents influence internal efficiency of schools in Western province of Rwanda.

About correlation, the study found strong negative correlation between parental education level and drop out and repetition rates (- 0. 759; - 0.701;  $P = .000$ ). About Regression, the study found R-quire ( $R = .403$ ,  $P = .000$ ) and Beta on Mother's education (Beta = .223;  $P = .000$ ).

Conclusion: Based on the findings presented in this study, it was concluded that increase in parental educations lead to the reduction of dropout and repetition rate, combined effects of parental educational levels explain 40.30 percent on internal efficiency in primary schools in Western province of Rwanda, more surprisingly, mothers' education was revealed as the most significant factor influencing internal efficiency. More specifically, improve in mothers' education by one unity will lead to the improve of 0.223 on the internal efficiency of public primary schools in Western province of Rwanda. The study concluded that there is a significant relationship between parental educational levels and internal efficiency of public primary schools in

Western Province of Rwanda. The researcher advocate for mobilization on parental involvement in children' education, girls and women education as well as adults' education in Rwanda.

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