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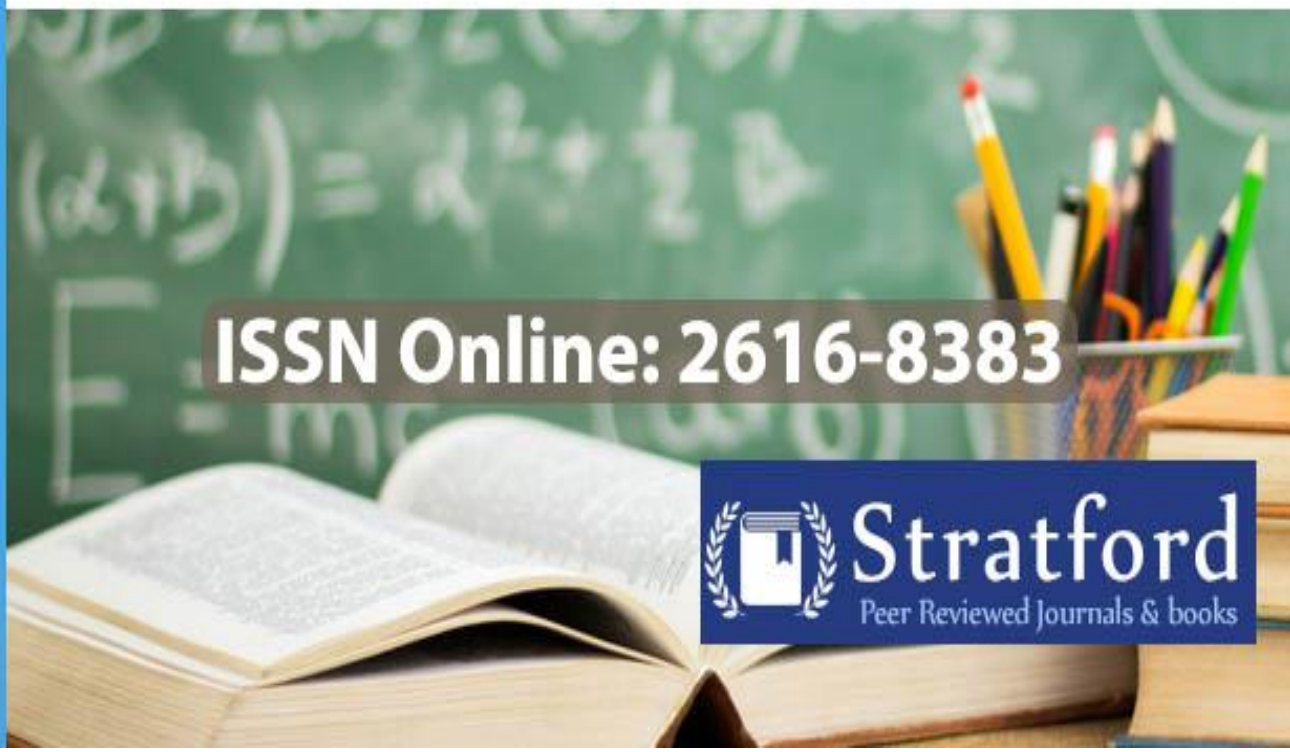

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Instructional Learning Materials' Use and Students Academic Outcomes in Private Secondary Schools in Rwanda: A Case Study of Nyarugenge District

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Abstract

The study aimed at investigating the influence of instructional learning materials use on students' academic outcomes in private secondary schools in Nyarugenge District. The objectives that guided the study were: to identify the instructional learning materials used by teachers in the teaching and learning process in secondary schools of Rwanda; to assess the students' academic outcomes resulting from the implication of instructional learning materials in teaching and learning process; to establish relationship between instructional learning materials and the students' academic outcomes. The study was guided by system theory and descriptive survey design and correlational design. The sample of 244 respondents including students, teachers, headteachers and deputy headteacher in charge of study participated in this study. Questionnaires and interview schedule were used to collect data. Frequencies, percentages, mean, thematic approach and Pearson product moment correlation coefficient were used to analyse collected data, whereas, tables, figures and textual model were used to present collected data. The study findings revealed textbooks, worksheets, computers, chats, projectors, recoding books for students' progress, chalks, internet sources, laboratory materials and workshops as the commonly used teaching and learning materials in private secondary schools in Nyarugenge district. Furthermore, findings revealed that computers and laboratory materials are not adequately used. The findings from teachers revealed that 68% of participated teachers agreed that effective use of instructional learning materials in teaching and learning process improves learners' motivations in learning, and improves students' academic outcomes, 82% of teachers reported that effective use of instructional learning materials improves students class participations. Furthermore, findings revealed a significant relationship between instructional learning materials and the student's academic outcomes in private secondary schools in Nyarugenge district. This was revealed by p-value of 0.000 in the findings given by students and p- value of 0.004 in the findings given by the teachers. In addition, findings revealed that there is a positive degree of relationship between instructional learning materials and students' academic outcomes as shown by the computed Karl Pearson product moment correlational coefficient of 0.433 and 0.78 findings from students and teachers respectively. The study recommended that students need to use effectively and efficiently available leaning materials in their schools. Teachers should use available learning materials in effective ways. In the schools where there are inadequate learning materials, they should explain to their leader the need for these materials. The study also recommended that school leaders should do all possible measures to provide their schools with adequate learning materials.

Keywords: *Students' academic outcomes, instructional materials, learning outcomes, private secondary schools, Nyarugenge District, Rwanda*

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1.0 Introduction

Background to the study instructional materials and teaching in secondary school in Rwanda can be drawn from the transition from informal system to the formal European system of Education in the country introduced by the colonial government of German at first time. The first formal schools were founded by white missionaries (Ndengejeho, 1985). Muligande (2006) said that education in Rwanda developed due to the initiative of voluntary organisation especially those of the Christian missionaries.

The quality educational facilities during the days so far were only available to a small elite group and the masses remained largely either illiterate or poorly educated. In nineties, the focus was put on the general restructure and rehabilitation of structures and restoration of provision of facilities and services all which had been damaged by world war and civil strife. Even though considerable expansion took place in many of primary and secondary schools in the early eighties, most of the new schools were ill-planned and poorly supplied with physical equipment as (Muligande, 2006) contends. Mutsindashyaka (2008) echoes that the first established schools' infrastructure and scholastic materials were fruits from the effort of the founder missionaries. After eleven years the German administration ruling the nation that is 1907 to 1918 there was replacement by the Belgians after the World War I. Regardless of coming from different nationalities, missionaries hold supporting education building infrastructure, providing physical resources and building more schools after the World War I (Mukabaranga,1999).

After the independence schools formerly owned by the missionaries were under control by the government and the government began a major expansion of its educational programs. From now on educational resources to these schools were provided by from the government and Non-Governmental Organizations but also the Roman Catholic Church continued to support education by building infrastructure as well as providing resources (Kabaana, 1999). However, after the 1994 genocide facilities had been damaged and destroyed in most schools. The survey undertaken by the World Bank (1997) indicated that in visited schools a big number of children were taking classes under the trees without any textbook or even other written materials. The Republic of Rwanda, Ministry of Education, Science, Technology and Scientific research (1998) was committed to match resources availability with resource equipment, to increase infrastructures and to provide school facilities to meet the standards set, offering relevant facilities such as books, equip science and information technology laboratories in learning institutions in order to comply with curricula standards especially pedagogical materials in science and technology, technology, enrich facilities for instance laboratories the areas of priority(sciences), strive for the best conditions of learning environment in terms of space, equipment and learning materials considering also gender disparities.

However, the Ministry in charge of education in Rwanda, (2009) reported that although the achievements in school standards, constraints are made more heavy because of inadequacy of reading materials, with a particularity for the first cycle of primary education and also secondary schools, textbooks and other resources distribution is largely dependent on the funds availability, which in turn affects the ability of the government to have adequate planning and may not be able to effectively respond to supply and demands . Consequently, there is the discrepancies in terms of the ratios between the number of students and textbook number in different districts.

This really indicates that the achievement of high-quality education still has a number of challenges for instance in the angle of access to instructional materials and there are always

expected to be addressed to upcoming plans. In the same vain, the Rwanda Parliament, the Senate (2011) also feels that the major challenges that Rwandan system of education has to put up with at all levels include insufficiency of infrastructure, equipment and lack of didactic materials. Different people including the Ministry of Education and teachers highlight the scarcity of resources in education area in Rwanda. Teachers on the other side associate the challenges in access to quality learning materials with ineffective teaching and learning, ineffective classroom management and the poor content delivery. It is against this backdrop that this study which aims at investigating the instructional materials and teaching in secondary schools in Rwanda

1.1 Statement of the problem

Rwanda recognized an impressive growth enrolment especially at primary education level following different education policy implementation and a number of strategies aiming at achieving basic education for all, as the ministry of education reports, (MINEDUC ,2015). However, the performance in subject is not yet satisfactory and yet the students are still plagued with poor results and low achievement in annual and national examinations (REB, Report 2012). The EDPRSII declares that the quality of education has not been able to match the pace of improvements in access (MINECOFIN, 2013). The analysis of the internal efficiency identified key indicators in line with challenges in the education system which principally includes the stress on instructional materials attributable to high repetition rates and low retention rate. Rwanda has found the knowledge-based curriculum less than relevant to the vision of the nation for development (vision 2020, EDPRSII).

Teaching-learning materials, must be adequately availed to make learning process more meaningful and relevant to the receivers. Reflecting on the effects of learning resources availability and the content delivery, Ominde as it was quoted by Kabaan (1999) evokes that teaching and learning resources availability helps teachers to perform effectively in a convenient and conducive atmosphere. The shortage of the physical resources makes the teaching activity stagger; and it suppress the children attitude and enthusiasm towards their teachers. In addition to that Eicher, et al. (1982) assumes that for the improvement of the effectiveness of teaching, instructors use different means and tools such as blackboard and technology techniques and tool like experimentation in laboratories, drama classes in the school theatre, radio, television, video and audio cassettes and computers to supplement what they can do with their local available resources. In secondary schools' teachers and students are not provided with enough materials to enhance effective learning and complain efficacy of school-based textbook acquisition mechanism. During national practical examination students present fear for manipulation of products and materials which leads to their poor performance. This indicates the poor use and familiarity with instructional materials for instance in science subjects.

1.2 Research objectives

i. To identify the instructional materials used by teachers in the teaching and learning process.
ii. To assess the learning outcomes resulting from the instructional materials use in teaching learning process.
iii. To analyse the relationship between instructional materials, use and the learning outcomes.

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2.0 Literature Review

2.1 Empirical Literature

The study by Adeogun (2001) showed there is a strong positive linkage between instructional materials and academic performance. According to Adeogun (2001), schools that possess more instructional materials perform better than schools that have less instructional aids. His finding is supported the study done by Babayomi (1999) which found that private schools have better performance than public schools because of the availability and adequacy of pedagogical materials. Adeogun (2001) suggested that there is a low level of instructional aids available in public schools and hence commented that public schools have acute shortages of both teaching and learning resources. He further goes on to say that effective teaching and learning cannot occur in the classroom environment if essential instructional resources are not available. Fuller and Clark (1994) suggested that the quality of instructional processes faced by a learner determines quality of education. In their view they went to comment that quality instructional materials create into the learners' quality learning experience. Mwiria (1995) also supports that students' performance is affected by the quality and quantity of teaching and learning resources. This implies that the schools that possess adequate teaching and learning materials such as textbooks, charts, pictures, real objects for students to see, hear and experiment with, stand a better chance of performing well in examination than poorly equipped ones. Chonjo (1994) in his study on the physical facilities and teaching learning materials in Primary schools in Tanzania confirms the above views.

Chonjo interviewed teachers and students aiming at knowing the role of instructional materials on effective learning. From his study he concluded that performance could be attributed to adequate teaching and learning materials but also equipment that are in a school setting. He suggested a recommendation that in order to provide quality education the availability of sufficient quality facilities is very important. The study was done by Chonjo in Tanzania which linked the role of physical facilities with students' academic performance in primary schools. However, Chonjo emphasized only on physical facilities, leaving out instructional materials. To the research Physical facilities which can be considered as buildings including classrooms, chairs and desks are not enough to provide quality teaching and learning Instructional materials rather are also essential. The further study was done by Maundu (1987) and supports the ideas that for a school not to have a poor performance it must be well equipped with relevant and adequate teaching and learning resources.

2.2 Critical Review and knowledge gap identification.

Most studies that look into the students' performance, do not attach it within adequacy or lack of instructional materials. Although studies in Tanzania (see for example those of Sumra and Rajani, 2006; Hakielimu, 2007; Makombe et al, 2010) have commented on poor performance in secondary schools, they did not link this situation with inadequate quality instructional resources. The only study, about the availability of teaching and learning resources and learners' academic performance, done in Rwanda was done by Bizimana Benjamin (2014) and it aimed at determining the correlation between teaching and learning resources level and effective classroom management and content delivery. His research did not relate the students' performance with the quality and adequacy of instruction materials. The present envisaged study will look at covering the existing

gap in literature that speaks about instructional materials and students' academic performance in Rwanda and it will contribute largely to the quality education in Rwanda.

2.3 Theoretical Framework

The study was based on system theory that was proposed by Bertalanffy in 1968.According to this theory, a system is thought to consist of four aspects. The first refers to the objects: the parts, elements, and variables within the system which may be physical or abstract or both, depending on the nature of the system. Second a system consists of attributes: the qualities or properties of the system and its objects. Third, a system has internal relationships among its objects. Four, a system exist is in an environment. In sum, a system is therefore a set of things which are interrelated and which affect one another within an environment and form a larger pattern that is different from any of the parts, according to Infante et al (1997. Infante, et. al. (1997), goes on, further, to say that the fundamental systems interactive paradigm of organisational analysis features is the continuum stages of input, throughput (processing) and the output. For many systems, their characteristic features include the wholeness and inter-dependence, correlations, perceiving causes, chain of influence, hierarchy, supra-system and subsystem, self-regulation and self-control, goal-oriented, interchange with the environment, inputs/outputs, and the need for balance (homeostasis), change and adaptability (morphogenesis).

The research study relied on the system theory because even schools are systems since teaching process is observed as a process used to transform the students and resources who are, for the present research, considered to be inputs into outputs (graduates with different skills and attitude). In addition, in schools there is an interrelation between teachers, resources and students which constitute a sine quoi none condition for the effective This study was guided by the System Theory because schools are systems where the teaching/learning process is observed as a throughput (process) used to transform inputs students and resources into outputs (graduates with different skills and attitudes). In schools we also observe an interrelation between teachers, resources and students which constitute a sine quoi none condition for the effectiveness of the teaching/learning process. Realistically, any school has objectives to achieve and achieving them requires it to treat all the elements involved in the process (inputs like students, teachers and resources; throughput like teaching methods and outputs like graduates with different skills and attitudes) as interdependent.

2.4 Conceptual Framework

Conceptual framework in this study was based on Bloom's (1982) model of evaluation because of its suitability in utilization and usage of instructional materials in the process of teaching and learning. The model consisted of three items: Predictor variables or independent variables, Mediating variables and Performance (the dependent variables). The conceptual framework is presented in Figure 1

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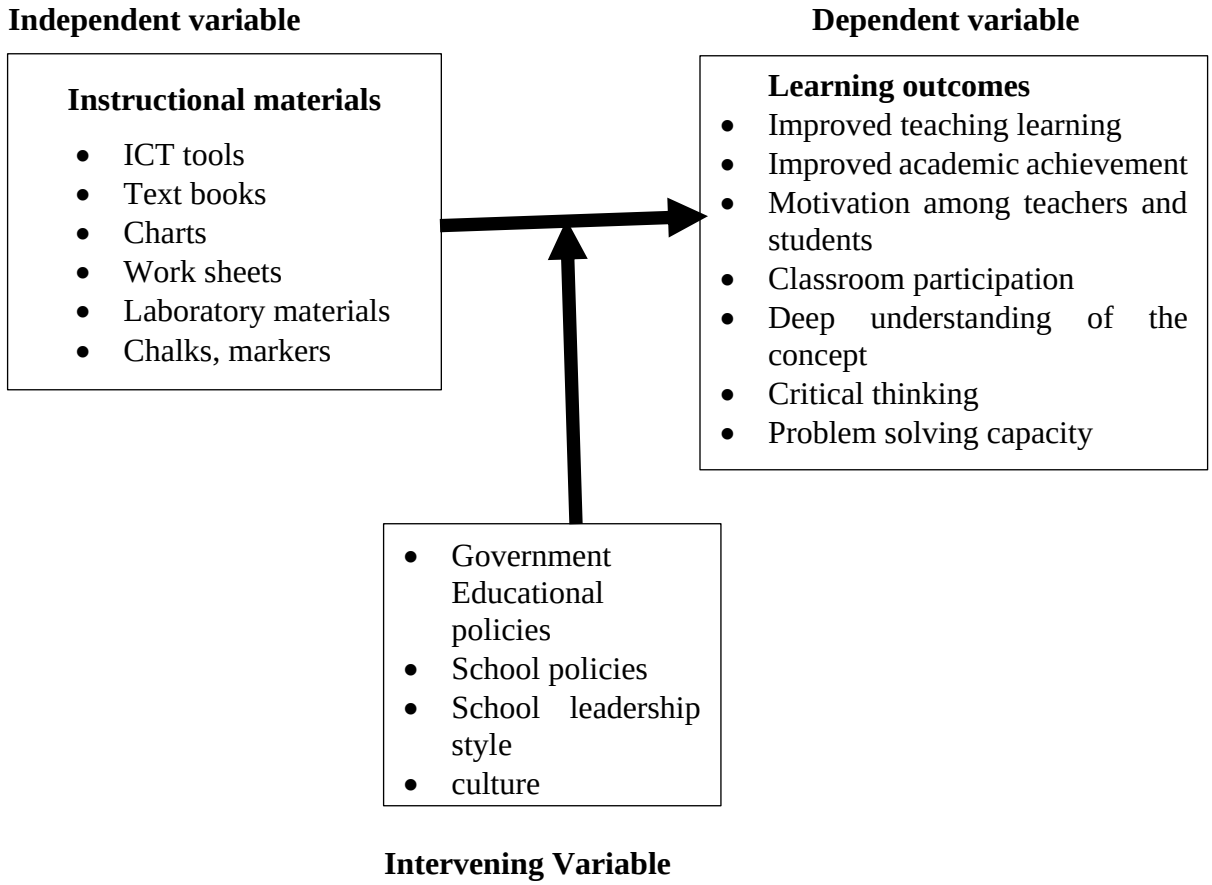

Figure 1: Conceptual Framework

3.0 Research Methodology

The descriptive survey design was chosen for the study because the study sought to gain insight or perception into a phenomenon as a way of providing basic information in an area of study. Population comprised of 420 respondents. The sample of 244 respondents including students, teachers, headteachers and deputy headteacher in charge of study participated in this study. Questionnaires and interview schedule were used to collect data. Frequencies, percentages, mean, thematic approach and Pearson product moment correlation coefficient were used to analyse collected data, whereas, tables, figures and textual model were used to present collected data.

4.0 Research Findings Interpretation and Discussion

4.1 Instruments return rate

Questionnaires were administrated to students and teachers, whereas interview guide was administrated to deputy headteachers in charge of studies and headteachers. Table 1 present research instrument return rate

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Table 1: Instruments return rate

Types of instruments	Number administrated	Number returned	% return rate
Headteacher	4	4	100 %
DOS	4	4	100 %
Teachers' questionnaire	60	52	86.66 %
Students' questionnaire	200	184	92.00 %
Total	**268**	**244**	**94.66 %**

The Table 1 revealed that researcher administrated interview guide to four (4) headteacher and deputy headteachers of private secondary school in Nyarugenge district. The table showed that all directed interview guide returned back which makes the instruments return rate of 100 percent. Out of 200 questionnaires distributed to students 184 questionnaires were returned back and this make students questionnaire return rate of 92 percent. Last but not the list, out of 60 questionnaires distributed to teachers 54 were returned back this makes the questionnaire return rate of 86.66 percent. Based on the recommendations given by Mugenda and Mugenda, (2008) saying that instrument return rate above 70 percent will be valid. Then we are confident to say that questionnaire return rate in this study is quite enough in this study to continue with further analysis.

4.2 Findings Showings Instructional Learning Materials Used by Teachers in Teaching and Learning Process in Private Secondary School in Nyarugenge District

The first objective that this study aimed to achieve was to establish the influence of instructional learning materials on students' academic outcomes in private secondary schools in Nyarugenge district. Information to achieve this objective was collected from questionnaires administrated to teachers and students and from interview guide directed to headteachers and deputy headteachers in charge of studies. Collected data was analysed with descriptive statistics such as mean, frequencies, percentages and thematic approach. Collected information was presented by using tables, figures and textual models.

4.2.1 Findings from students showing the instructional learning materials used in teaching and learning process in private secondary schools in Nyarugenge district

Findings from the students showing the instructional learning materials used in teaching and learning process in private secondary schools in Nyarugenge district were collected. After analysis findings were presented in the Table 2.

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Table 2: Findings from students showing the instructional learning materials used in teaching and learning process in private secondary schools in Nyarugenge district

Instructional learning materials used	Never		Rarely		Sometimes		Usually		Always	
	F	%	F	%	F	%	F	%	F	%
Extent to which textbooks are being used	0	0	4	2.2	19	10.3	83	45.1	78	42.4
Extent to which work sheet are being used	109	59.2	0	0	70	38.0	5	2.7	0	0
Extent to which computers are being used	0	0	0	0	112	60.9	72	39.1	0	0
Extent to which charts are being used	0	0	13	7.1	84	45.7	72	39.1	15	8.2
Extent to which projectors are being used	0	0	10	5.4	82	44.6	73	39.7	19	10.3
Recoding books for students' progress	0	0	5	2.7	70	38.0	100	54.3	9	4.9
Extent to which Chalks are being used	0	0	0	0	37	20.1	115	62.5	32	17.4
Extent to which Internet sources are being used	0	0	18	9.7	53	28.8	95	51.6	18	9.8
Extent to which laboratory materials are being used	4	2.2	23	12.5	52	28.3	91	49.5	14	7.6
Extent to which students practice workshops	86	46.7	15	8.2	73	39.7	10	5.4	0	0
Extent to which students use maps	0	0	47	25.6	71	38.6	66	35.9	0	0

The Table 2 presents students' findings showing instructional learning materials used in teaching and learning process in private secondary schools in Nyarugenge district. Interpretation of data in the table 4.5 was based on the statement. Statement one was *extent to which textbooks are being used*: The findings on this statement showed that 2.20 % reported that they rarely used textbooks,10.3% sometimes used them,45.1% usually use them, and 42.4% reported that they always use textbooks in teaching and learning process. The second statement was *extent to which worksheets are being used*: The findings on this statement revealed that 59.2% have never used worksheets, 0.00 % reported that they rarely used worksheets,38% sometimes used them, and only 2.70% usually used worksheets in teaching and learning process. This tells us that work sheets are not commonly used in teaching and learning process in private secondary schools in Nyarugenge district. The third statement was *extent to which computers are being used in teaching and learning process*: The findings on this statement revealed that 60.9% sometimes use computer in teaching

and learning process and that 39.10% usually used computer in teaching and learning process. The fourth statement was "*extent to which charts are being used in teaching and learning process"* The findings on this statement showed that 7.10 % reported that they rarely used charts in learning process,45.7% sometimes used them,39.1% usually use them, and 8.2% reported that they always used charts in teaching and learning process. On the fifth statement was the "e*xtent to which projectors are being used in teaching and learning process"*: The findings on this statement showed that 5.40% rarely used projectors, 44.60% sometimes used projectors,39.70% usually use them, and 10.30% reported that they always used projectors in teaching and learning process.

Statement six was *the extent to which recoding books are being used*: The findings on this statement showed that 2.70% reported that they rarely used them, 38% sometimes used them,54.30% usually used them, and 4.90% reported that they always used recoding books for students' progress. The statement seven was *extent to which chalks are being used in teaching and learning process:* The findings on this statement showed that 20.10% sometimes used chalks,62.50% usually use them, and 17.40 % reported that they always used chalks in teaching and learning process. The statement eight was *extent to which internet sources are being used in teaching and learning process:* The findings on this statement showed that 9.70% rarely use internet sources in learning, 28.80% used it sometimes, 51.60 % usually use it, and 9.80 % reported that they always used interment sources in teaching and learning process. The statement ninth was *extent to which laboratory materials are being used in teaching and learning process:* The findings on this statement showed that 2.20% have never done laboratory practices 12.50% rarely did lab practices,28.30% sometime did, 49.50 % usually do and only 7.60 % always do laboratory practices to internalize what they learn. The tenth statement was *extent to which students practice workshops:* The findings on this statement showed that 46.70% have never have workshops for their studies. 8.20% did it rarely, 39.70% sometimes get workshops and only 5.40% do always have workshops. The findings of this study were in line with the findings of the study presented by chonjo (1994), in Tanzania where he reported that instructional learning materials significantly influence students' academic achievement.

4.2.2 Findings from teachers showing instructional learning materials used in teaching and learning process in private secondary schools in Nyarugenge District

Findings from the teachers showing the extent to which instructional learning materials are being used in private secondary schools in Nyarugenge district were collected. After analysis findings were presented in the Figure 2.

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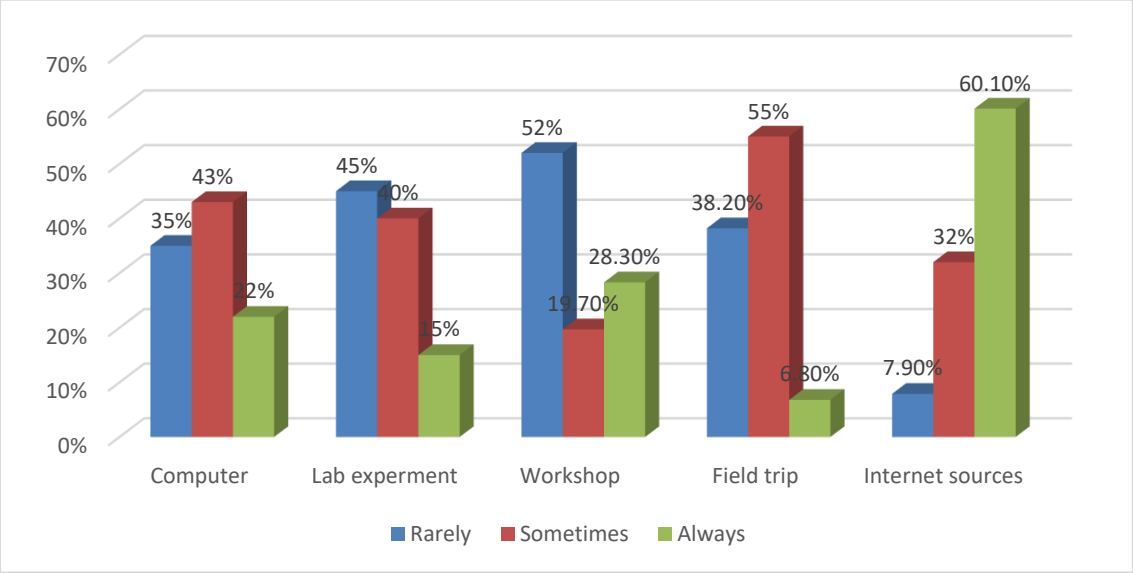

Figure 2: Teacher' findings showing extent to which instructional learning materials are used in teaching and learning process in private secondary schools

The findings as presented in the Figure 2 showed that computers are not adequately used in teaching and learning process in private secondary schools in Nyarugenge district. Being specific only 22 percent reported that they always use computers, 43 percent sometime use them and only 35 percent rarely used computers in teaching and learning process. The figure 2 also presents extent to which laboratory experiment are being done. The findings were also revealed that lab experiment was not adequately conducted. As only 15 percent always did lab practices, 40 percent did it sometime and whereas 45 percent never give laboratory practices on their students. Furthermore, Figure 2 presents extent to which workshops are being done. The findings showed that 52% rarely do workshops, 19.70% sometimes done, and 28.30% always do it.

Field trips: The findings on the field trips showed that majority of the teachers organize field trip fort their students as 55% sometimes sometime did it. 6.80% usually did it but 38.20% have never done it. Last but not the least, Figure 2 presents findings on internet source usage in private secondary schools in Nyarugenge district. The findings revealed that majority of teachers have adequate internet sources. Being specific 60.10% reported they usually used it, 32% sometimes used it and only 7.90% rarely used internet sources during teaching and learning process. The findings were supported by the study presented by Aina (2013), showed that instructional learning material influence students' academic achievement in Nigeria.

4.2.3 Findings from Interview Showing Instructional Materials used in Teaching and Learning Process in Private Secondary Schools in Nyarugenge district

Interview guide was the third source of information embodied in this study. Interview was administrated by the researcher to headteachers and deputy headteacher in charge of studies. Thematic approach was used to analyse collected data whereas textual model used to present collected data.

"***Instructional learning materials used in teaching and learning process***" Researcher was interested to present the learning materials and the extent to which they are being used in teaching and learning process in their schools. Four headteachers and four deputy headteacher in charge of studies were interviewed. Questions asked and provided answers for asked questions were presented in the paragraph below.

What are the instructional learning materials used in your schools during teaching and learning process and to what extent are being used in your school?

> Majority of the respondents revealed computers, text books, worksheets, internet sources, laboratory tools, chalks, projectors and maps as the most common learning materials used in teaching and learning process in private secondary schools in Nyarugenge district. Most of the interviewed school leaders (headteacher and deputy headteacher in charge of studies) showed that their schools have adequate textbooks for both teachers and students, chats, maps, chalks and recode books for students' progress. On the other hand, majority of them revealed that computers, worksheets, projectors, internet sources, laboratory tools as well as workshop materials are not yet enough to meet required target.

4.3 Influence of Instructional Learning Materials use on Students Academic outcomes

The second objective that this study aimed to achieve was to examine the outcomes resulting from implications of instructional learning materials in teaching and learning process in private secondary schools in Nyarugenge district. the Information to achieve this objective was collected from questionnaires administrated to teachers and students and from interview guide administrated to headteachers and deputy headteachers in charge of studies. Collected data was analysed with descriptive statistics such as mean, frequency, percentages and thematic approach. Collected information was presented by using tables, figures and textual models.

4.3.1 Findings from Students showing Outcomes Resulting from Implications of Instructional Materials in Teaching and Learning Process in Nyarugenge district

Students were asked to express their views showing the influences of instructional learning materials on students learning outcomes in Nyarugenge district. Information collected was presented in the Table 3

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Table 3: Students Findings Showing the Influences of Instructional Learning Materials on students Outcomes in Private Secondary Schools in Nyarugenge District

STATEMENTS	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
The use of teaching and learning aids improve learners' motivations	14	7.6	10	5.4	33	17.9	105	57.1	22	12.0
Implication of teaching and learning process encourage learners' participation in learning activities	9	4.9	9	4.9	23	12.5	125	67.9	17	9.2
The use of instructional learning materials in learning process improves students' academic performance	5	2.7	13	7.1	19	10.3	93	50.5	54	29.3
Application of instructional learning materials in teaching and learning process promote students critical thinking	10	5.4	16	8.7	14	7.6	84	45.7	60	32.6
Experimental practices in laboratory or in field trip improve students' skills	5	2.7	18	9.8	19	10.3	91	49.5	51	27.7
Average	**9**	**4.9**	**13**	**7.06**	**21**	**11.84**	**100**	**54.5**	**41**	**21.2**

Table 2 presents students findings showing influence of instructional materials on learning outcomes in private secondary schools in Nyarugenge District. Presentation and interpretation were based on statements provided.

Statement one was "*the use of teaching and learning aids in teaching and learning process improves learners' motivations*" The findings on this statement shows that (14) 7.60 % strongly disagree (10), 5.40% disagree, (33) 17.90% were neutral, (105) 57.10% agree and (22)12.00% strongly agreed that availability and effective use of teaching and learning materials in teaching and learning process improves students' motivations to learn. Statement two was "*implication of teaching and learning aids encourage learners' participation in learning activities*". The findings revealed that (9) 4.90% strongly disagree (9)4.90% disagree, (23) 12.50% were neutral (125) 67.90% agree and (17) 9.20% strongly agree that implication of teaching and learning encourage learners' participations in learning activities. Statement three was "*the use of instructional learning materials in learning process improves students' academic performance*" The findings revealed that (5) 2.70% strongly disagree (13)7.10% disagree, (19) 10.30% were neutral (93) 50.50% agree and (54) 29.30% strongly agree that the use of instructional learning materials in learning process improves students' academic performance.

Statement four was "*application of instructional learning materials in teaching and learning process promote students critical thinking*" The findings revealed that (10) 5.40% strongly

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disagree (16)8.70% disagree, (14) 7.60% were neutral (84) 45.70% agree and (60) 32.60% strongly agree applications of instructional learning materials in teaching and learning process promote critical thinking of the students. Statement five was "*experimental practices in laboratory or in field trip improve students' skills*" The findings revealed that (5) 2.70% strongly disagree (18)9.80% disagree, (19) 10.30% were neutral (91) 49.50% agree and (51) 27.7% strongly agree experiment practices in labs and field trips improve students' skills. On the average (9)4.9% strongly disagree, (13) 7.06 % disagree, (21) 11.84% did not respond, (100) 54.5% agreed and (41) 21% strongly agreed that instructional learning materials influence students out in private secondary schools in Nyarugenge districts.

4.3.2 Findings from Teachers showing outcomes resulting from implications of instructional materials in teaching and learning process in Nyarugenge district

The sample of 52 teachers were involved in this study to provide information showing influence of instructional leaning materials on learning outcome provided information was presented in the Figure 3.

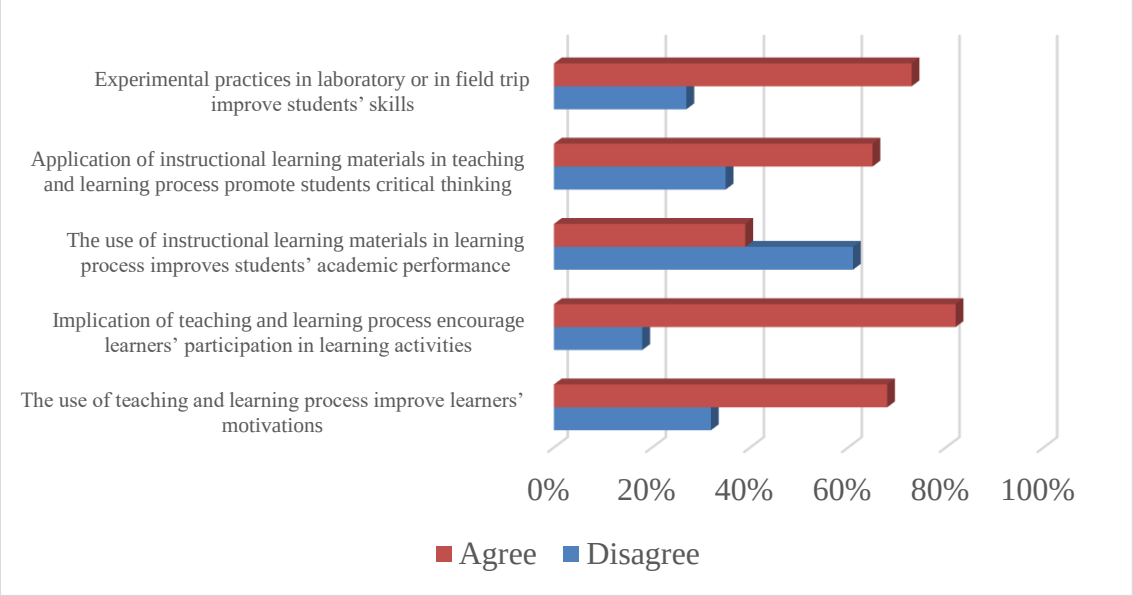

Figure 3: Teachers' findings on the influence of instructional learning materials on learning outcomes.

The Figure 3 present teachers' findings showing influence of instructional learning materials on learning outcomes. The teachers were asked say if they agree or disagree with the statement provided and the analysis followed the same statement. Statement one the use teaching and learning materials in teaching and learning process improves learners' motivations: on this statement majority of respondents agreed. Being specific 68% agree whereas only 32% disagreed with the statement. The second statement was implication of teaching and learning process encourage learner's participation in learning activities: on This statement 82% of teachers participated in this study agreed with it only 18% disagreed. The third statement was the use of instructional learning materials in learning process improves students' academic performance: On this statement the findings indicated that 61% agreed and 39% disagree on the statement. The

fourth statement was application of instructional learning materials in teaching and learning process promote students critical thinking: The findings on this statement revealed that participated teachers in this study 65% of them agreed and only 35% disagree. The fifth statement was Experimental practices in laboratory or in field trip improve students' skills. Like the previous statement participated teachers at 73% agreed and only 23% disagreed that experimental practices in laboratory and in field trips improves students' skills. This tells us that instructional learning materials used in teaching and learning process influence students learning outcome.

4.3.3 Findings from Interview showing outcomes resulting from implications of instructional materials in teaching and learning process in Nyarugenge district

Interview guide was the third source of information embodied in this study for this objective. Interview was administrated by the researcher to headteachers and deputy headteachers in charge of studies. Thematic approach was used to analyse collected data whereas textual model was used to present collected data.

"*Influence of Instructional learning materials on students' outcomes*" Researcher was interested to present the findings showing the influence of instructional learning materials used in private secondary schools in Nyarugenge district on students' outcomes.

> Majority of the interviewed respondents revealed that instructional learning materials influence students learning outcomes in private secondary schools in Nyarugenge district. For example, respondents revealed that internet source support students' outcomes, students whose school have adequate internet connection, this can help students to have access to any form of data needed, this can influence students' outcomes or students' academic performance. Furthermore, they also revealed that students who do regular lab experiment perform better than students who never to it. This tells us that instructional learning materials used in teaching and learning process influence learning outcomes scored but the students in private secondary schools in Nyarugenge district.

4.4 Relationship Between Instructional Learning Materials and Students Academic outcomes

The third objective that this study aimed to achieve was to establish relationship between instructional learning materials and learning outcome of students in private secondary schools in private secondary in Nyarugenge District. To achieve this objective, data was collected from teachers and students as well as from schools' leaders (Headteachers and Deputy headteachers in of studies). After data collection product moment correlational coefficient was computed to establish the extent to which the two variables are related.

4.4.1 Findings from Students Showing Relationship Between Instructional Learning Materials and Learning Outcomes

Students participated in this study were asked to show if there is any relationship between instructional learning materials and students' outcomes in private secondary schools in Nyarugenge district. Provided information was presented in the Table 4.

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Table 4: Findings from students showing relationship between instructional learning materials and students' academic outcomes

		Students outcomes	Areas
Students outcomes	Pearson Correlation	1	.433
	Sig. (2-tailed)		.000
	N	184	184
Areas	Pearson Correlation	.433	1
	Sig. (2-tailed)	.000	
	N	184	184

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

The Table 4 presents findings given by students showing relationship between instructional leaning materials and students' academic outcomes in private secondary schools in Nyarugenge district, computed test statistics showed that there is a significant relationship between instructional learning materials and students' academic outcomes in private secondary schools in Nyarugenge district Kigali Rwanda. This is true, due to the fact that calculated P-value was 0.000, following the rule that if P-value is less than 0.05 it will be significant, then, it is significant. The findings in the table 4.7 also indicate a low positive degree of relationship between the two variables under investigation as the Karl Pearson product moment correlational coefficient (r) was 0.433.

4.4.2 Findings from Teachers Showing Relationship Between Instructional Learning Materials and students' Academic Outcomes

Information showing relationship between instructional leaning materials and students' academic' outcomes was not only collected from students but also from teachers as presented in the Table 5

Table 5: Presents Teachers findings showing influence of instructional leaning materials on students' academic outcomes.

		outcomes	Areas
Outcome	Pearson Correlation	1	.78
	Sig. (2-tailed)		.004
	N	52	52
Areas	Pearson Correlation	.78	1
	Sig. (2-tailed)	.004	
	N	52	52

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

The Table 5 presents findings given by teachers showing relationship between instructional learning materials and students' academic outcomes in private secondary schools in Nyarugenge district, computed test showed that there is a significant relationship between the two variables due to the fact that calculated P-value was 0.004 following the rule that if P-value is less than 0.05 then, it is significant. It was also found strong positive degree of relationship between instructional learning materials in private secondary schools in Nyarugenge district as the Karl Pearson product moment correlational coefficient (r) was 0.78.

5.0 Conclusion

In the view of research objectives and research questions set for this study, the discussion of the findings summarized in the section 5.2 it is clear that instructional learning materials has significant influence on students' academic outcomes. However, the findings revealed that instructional learning materials are not adequately used in private secondary schools in private secondary schools in Rwanda. Furthermore, the correlation coefficient indicated that there is a significant positive degree of relationship between instructional learning materials and students' academic outcomes in private secondary schools in Nyarugenge district of Rwanda

6.0 Recommendations

Referring to the nature of this study as well as the findings presented by its output, the recommendations were given to students, teachers and school leaders.

Students

Students are the first beneficiaries of instructional learning materials; they are recommended to use effectively and efficiently available leaning materials in their schools. They should also work hand in hand with their teaches as well as school leaders.

Teachers

Teachers as technician in learning institution, there should use available learning materials in effective ways. In the schools where there are inadequate learning materials, they are should explain to their leader the need for these materials.

Schools' leaders

The findings revealed that instructional learning materials are essential for effective and efficient achievements of students' academic outcomes, therefore school leaders should do all possible measures to provide their schools with adequate learning materials.

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