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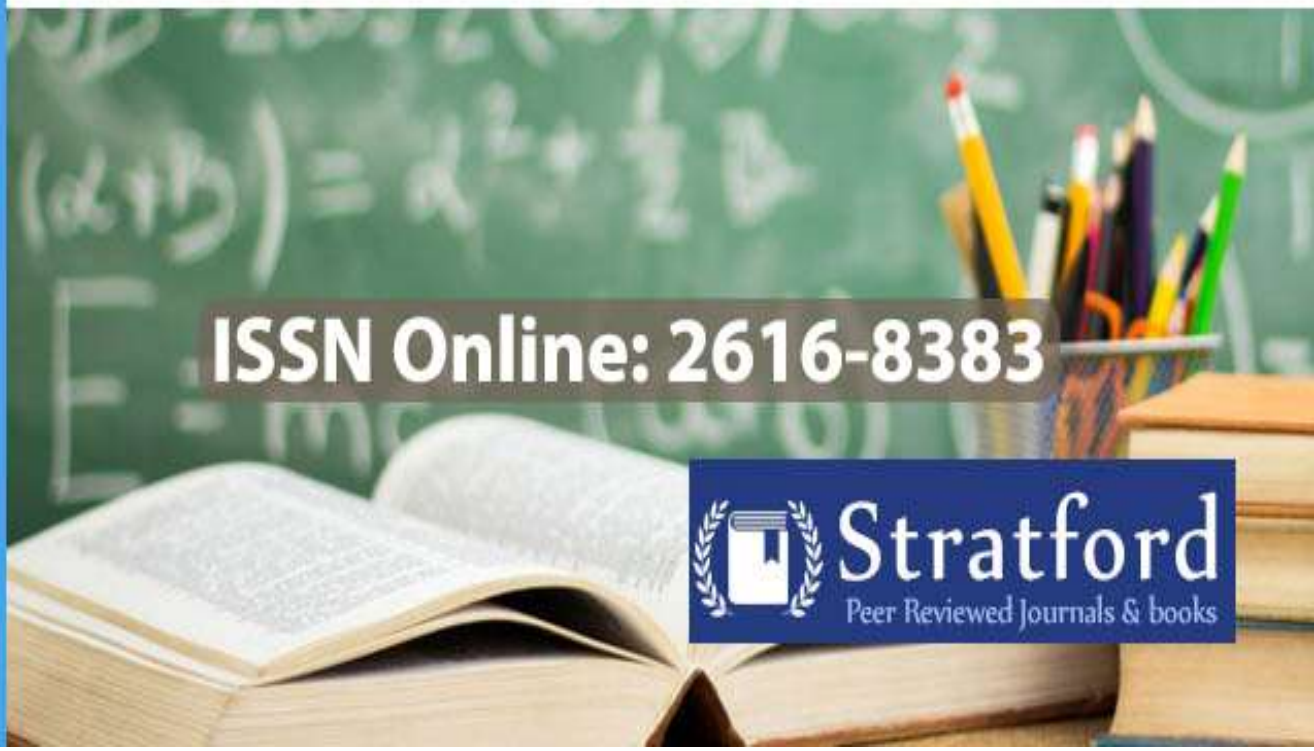

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Students' Attitude and Smart Learning in Public Secondary Schools of Bugesera District-Rwanda

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Abstract

The use of ICT creates a powerful learning environment and it transforms the learning and teaching process in which students deal with knowledge in an active, self-directed and constructive way (Volman & Van Eck, 2001). This study investigated students' attitudes towards smart learning in selected public secondary schools in Bugesera district, Rwanda. The objectives of the study were to: ascertain the students' attitude towards learning using ICT tools in smart classroom, assess the factors that influence students' attitudes towards smart learning. The sample size of 185 respondents was selected. The participants of the study were 8 head teachers, 8 deputy head teachers, 48 teachers and 121 students who were selected from 8 public secondary schools of Bugesera district, Rwanda. The schools and teachers were selected through a purposive sampling technique while students were selected using a simple random sampling technique. This study adopted a descriptive design where quantitative and qualitative approaches were used. Quantitative data were analysed, presented in tables and graphs, through descriptive statistics with the SPSS version 16.1. Qualitative data were analysed and presented in categories and themes through content analysis. Findings were summarized, general conclusion drawn and recommendation forwarded. It was found that 96.6 % of students liked the idea of using ICTs in learning, and even interact with ICTs when provided with homework and other activities to search on internet by teachers. The teachers (52.4 %) corroborated the students' views. Results from the analysis of qualitative data suggest 4 major sub-themes (heavy workload, accessibility of tools and, school rules and regulations, teachers' self-efficacy and lack of full learner engagement) on factors that influence students' attitudes towards learning using ICT tools. The important recommendations are that Ministry of Education should develop pre-service and in-service staff training programs that are tailored to the school programs to keep raising teachers'

self-efficacy in order to enable the full integration of ICT in the teaching and learning process. Schools should plan for other places to access the computers from, like library and staffroom.

Keywords: *Smart learning, Students' perception, Students' attitude, ICT, E-Learning, Smart classroom.*

1.1 Background of the Study

Information and communication Technology (ICT) is declared as very crucial in the creation of new ideas and practicing them. Worldwide, it is assumed that ICT is the cornerstone for development and social behavior transformation. The objective of smart learning in education is to promote learners educationally, aiming at the improvement of the long-life learning. It promotes the engagement of learners' intelligence and support solving their issues and the ability in the called smart learning area and environment. Additionally, surveys by Sosin *et al.* (2004), explain that technology has a positive influence in self- driven learning amongst pupils. The use of ICT because it stimulates learners for self-driven work and it is easier to access information. The way teachers and students view the use of technology will enhance the quality of its exploitation (Australasian Journal of Educational Technology, 2017).

The East African Community (EAC) is a sub- regional organization that is composed by six countries in the African Great Lakes region towards east: Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda. Indeed after colonization the countries were freed while the following was strikes, rebellion, conflicts, misunderstanding, corruption and disorders. By maximizing the educational potentials, it is believed that the challenges can be faced and resolutions found out. ICT in education could help in promoting quality of teaching and learning as the education solves social and economic difficulties (Sara, & Brown, 2009).

The government of Rwanda (one of the members of EAC) considers ICT as the most important key which it may use to transform the knowledge-based economy in the sector of education laying an important role in the development of necessary resources by human. The nation wishes to become middle-income status by 2020 as a result of imparting citizens' skills for knowledge competitiveness and use of ICT in teaching and discovery as well as all professions. This vision, as enrolled in listening to all partners and population started in 1998. MINEDUC has done an ambition to originate the use of computer in secondary and primary schools since 2000 by integrating them in the educational domain (Rubagiza, 2011).

This research tried to find the students' perceptions and attitudes on smart learning, their impacts on learning ICT in public schools of Bugesera District.

1.2 Statement of the Problem

Were, Rubagiza, Denley and Sutherland (2007) said that the use of ICT in the process of teaching, learning and discovery would serve to improve outcomes from education. Students are one of the pillars that will strengthen the implementation of ICT integration in the curriculum. The ICT integration in curriculum will enhance the smart and e-learning. From the year 2000 a lot of initiatives were tried to teach computer as a subject and incorporate ICT skills in the

formal syllabus of courses (Rubagiza *et al*, 2007). As it is said above the human resource, hardware and internet connections are availed from 2000 for the implementation of ICT policy but the problem is the limit in practices due to few materials and ten it hinders students' practices and their potential increase in knowledge.

After giving schools access to World Wide Web through the smart classrooms, the MINEDUC/ Rwanda' s vision of completely flourishing ICT in the curriculum (Rwanda ICT policy, 2016). Even if the fundamental goals of the program is to help students receive the information, learning with ICT and through it, still the maximum usage of internet for learning purpose is not yet attained by students in secondary schools. The barrier, to the ICT policy implementation, can be the one that the students in Rwanda were brought upon to the education system with the limitation of technology and it is found difficult to utilize the technology to engage and uplift learning and teaching. (Were, 2010). Based on the researcher personal observation as the teacher of ICT and in charge of smart classroom, conducting search on internet is done by few students. They prefer to visit social and entertainment websites like Facebook and YouTube music. Average 42,145 participants in Advanced level national exams in 2018 and 37,184 being 88% have succeeded. This shows a shift of 1.33% in comparing to 2017 which had success rate at 89.55% (Williams, 2019). As the majority of the students in Rwanda have access on Wi-Fi through the smart classroom and mobile phones in order to facilitate their learning, why did the pass rate decline instead of increasing? This research was sought to ascertain the learning attitudes of students within the smart classroom environment.

1.3 Objectives of the Study

i. To ascertain the students' attitudes towards learning using ICT tools in smart classroom in public secondary schools of Bugesera District, Rwanda.

ii. To identify the factors that influence students 'attitudes towards using ICT for learning.

1.4 Research Questions

i. How do students perceive smart classroom usage for learning in public secondary schools of Bugesera district?

ii. What are the factors that influence (support or hinder) students 'attitudes towards using ICT for learning?

1.5 Significance of the Study

First of all, this study will equip the public with the information about the image of smart delivery and acquisition of lessons. With this information, the Ministry of Education and school management will get to know how smart classrooms are managed and useful for the students and thus, policy adjustment will be made when necessary. In addition, secondary school managers will know the relationship between positive or negative students' perceptions on smart learning for the academic achievement. Therefore, the managers will try to improve on the way they manage ICT issues in their schools. The results of the research will be of great importance in perceiving where exactly efforts are to be paid on the use of ICT technologies to achieve the education purpose.

Second, this study will give the insight on the students' attitudes in pubic secondary schools in terms of smart learning and this will enable the schools implement necessary changes on smart learning level to try to correct ineffectiveness where found so that the students' academic achievement will be improved.

Lastly, this study will provide information about how smart learning is perceived in public secondary schools. Thus, this will facilitate ICT content developer in Rwanda to know which contents are better approved by students for learning and the teachers in pubic secondary schools in Rwanda to localize their strength and weakness in enhancing the students' interaction with smart classrooms and to strive to become better facilitators of students' learning using ICT tools.

2.0 Literature Review

2.1 Empirical Literature

There were various studies which showed the findings related to the students' attitudes and smart learning in secondary schools on how the learners develop their academic achievement. Among the documents reviewed by the researcher include books, journals and thesis or dissertations. In this section, the researcher attempts to examine the debates surrounding the phenomenon under study, draws a meaningful conclusion on the identified gaps and adds some comments about the result of theirs research activities.

2.1.1 Students' attitudes towards using ICT in a social constructivist environment

In the 21st century, the use of ICT in educational field is emphasized on and it includes all the electronic tools for use in collecting and keeping and saves information; it also helps in sharing and spreading information (Anderson, 2010). Those are laptops, electronic pads, smartphones, broadband Internet, interactive Web technologies and cloud applications. Based on the educational technology growth, education has become accessible anywhere and anytime (Thomas & Stratton, 2006), as well for the most developed countries, the sufficient rooms are saved for ICT usage in institutions researches (Abedalaziz, Jamaluddin, & Leng, 2013). In Singapore, 3 planning documents were elaborated (1999–2014) and implemented by the Ministry of education striving in equipping students with all requirements for them to explore the country's needs and act at providing the economic growth through the achievements from education (Chung, 2011).

2.1.2 Association of chalk-talk learning and smart learning

In secondary schools, the books are to be possessed by teachers who interpret to learners. That is what is referred to as chalk-and-talk, the activity of teachers to choose for students what to copy down and study. The students must accept and adopt Smart learning as another tool, another kind of chalk. Chalk-talk can be associated with smart learning like in business where the e-commerce completes instead of replacing traditional trading in developing countries. And in natural sciences, a simplest experiment (performed personally) is worth more than the most advanced simulation or YouTube presentation (researcher, 2019).

Students are recommended to start familiarizing with smart learning so that they can comprehend better instead of copying and memorizing. Secondary school leavers will be able to find various

opportunities of tertiary learning but only if their attitudes towards ICT usage for learning are positive. Inspired by Technology Acceptance Model (TAM) the following factors were tested: smart learning self-efficiency, internationalization of process, awareness of duties and roles, tasks accomplishing mode, attitude (AT), and having the spirit to join smart learning. The study results showed that smart learning attitude was the most important factor in explaining the adoption of smart learning process. They found that learners in schools especially to the smart learning implementation need to meet the effective and efficient planning, and that there is a connection between their attitudes, activities and achievements (SungYoul P. & Seung-Bong C., 2012).

2.1.3 Effect of smart class on learning concepts

Teaching and learning by using computer has a very big importance in education, SMART classroom is a much better and larger and easier-to-access storehouse of learning and teaching materials Where internet facilitate to storing retrieved teaching and learning resources materials, it is easier to do on computers than maintaining hand-written notes (Farrel,2007).

In India, there were many trials to flourish in ICT development and utilization in the educational system, especially smart classroom preparation and equipment. This kind of instruction has brought in varied changes in the teaching and learning of almost all lessons. These include for example the computer, the projector, the White Board (WB) and e-content. In Delhi, a research had been done in checking the influence of these tools on the lesson of Biology as the case of secondary school. The findings revealed the strong positive correlation on Biology learning and ICT.

2.2 Theoretical Framework

2.2.1 Theory of Reasoned Action

This theory of Fishbein and Ajzen (1975) is well known for clarifying behavioral among an individual for that behavior to be expressed. The theory defines ‘attitude’ as the personal appreciation of anything whether positively or negatively. By ‘belief’ they mean connection of any object and feathers. And ‘behavior’ is the outcome from the will and heartfelt motives and the acceptance of a person.

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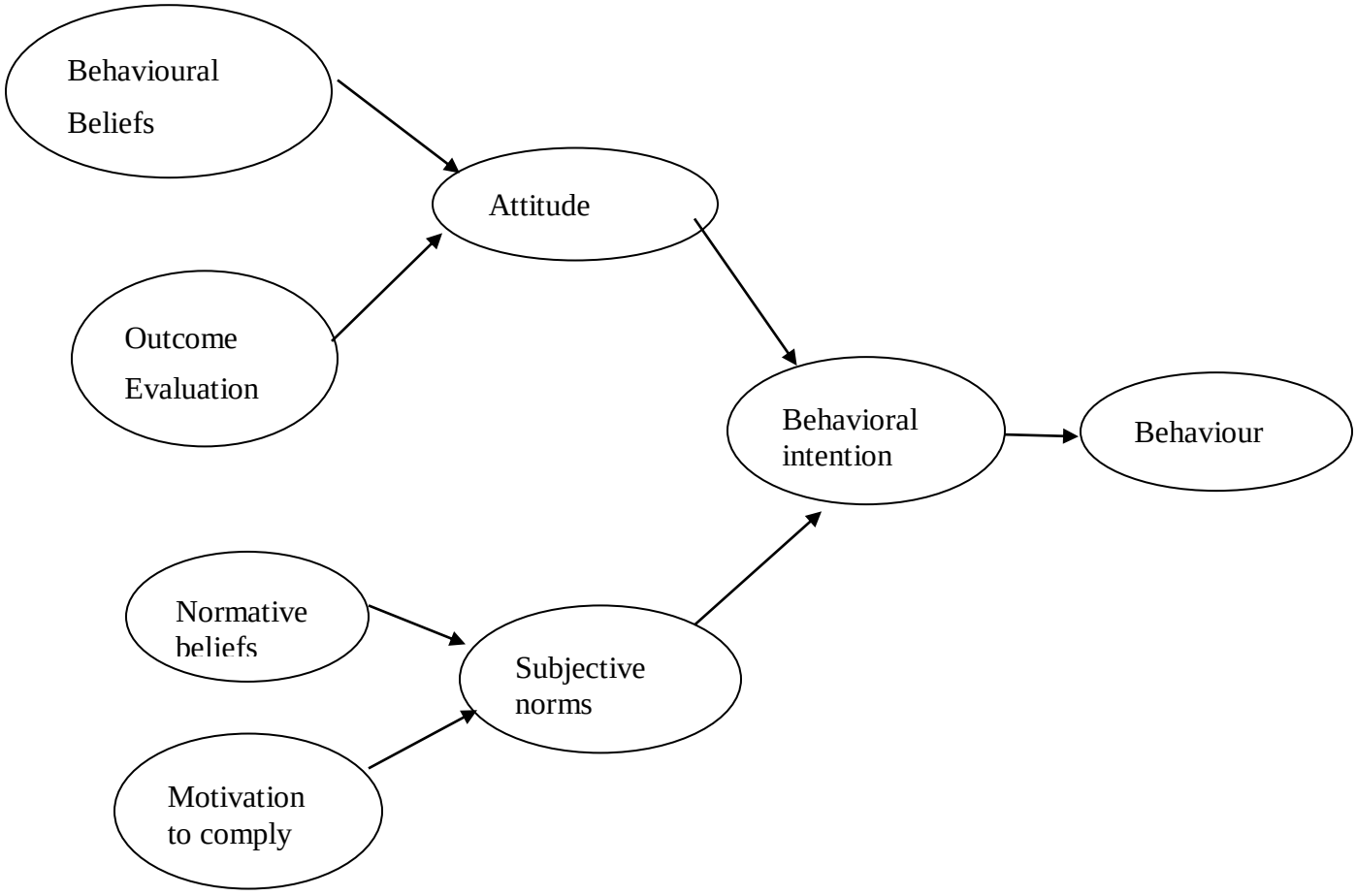

Figure 1: Theory of reasonable action (Fischbein & Ajzen, 1975)

2.2.2 Expectancy value theory

Based on expectancy-value theory, behavior is consequence of what someone was expecting and the orientation of interests. The time there are many alternatives, then there is urgent choice of priority just considering the most profitable. This theory is founded on following preset goals to achieve and the convictions are respected as well as social norms and values. It explains the motives and intentions for acting and orientation of behavior. (Wigfield, 2008).

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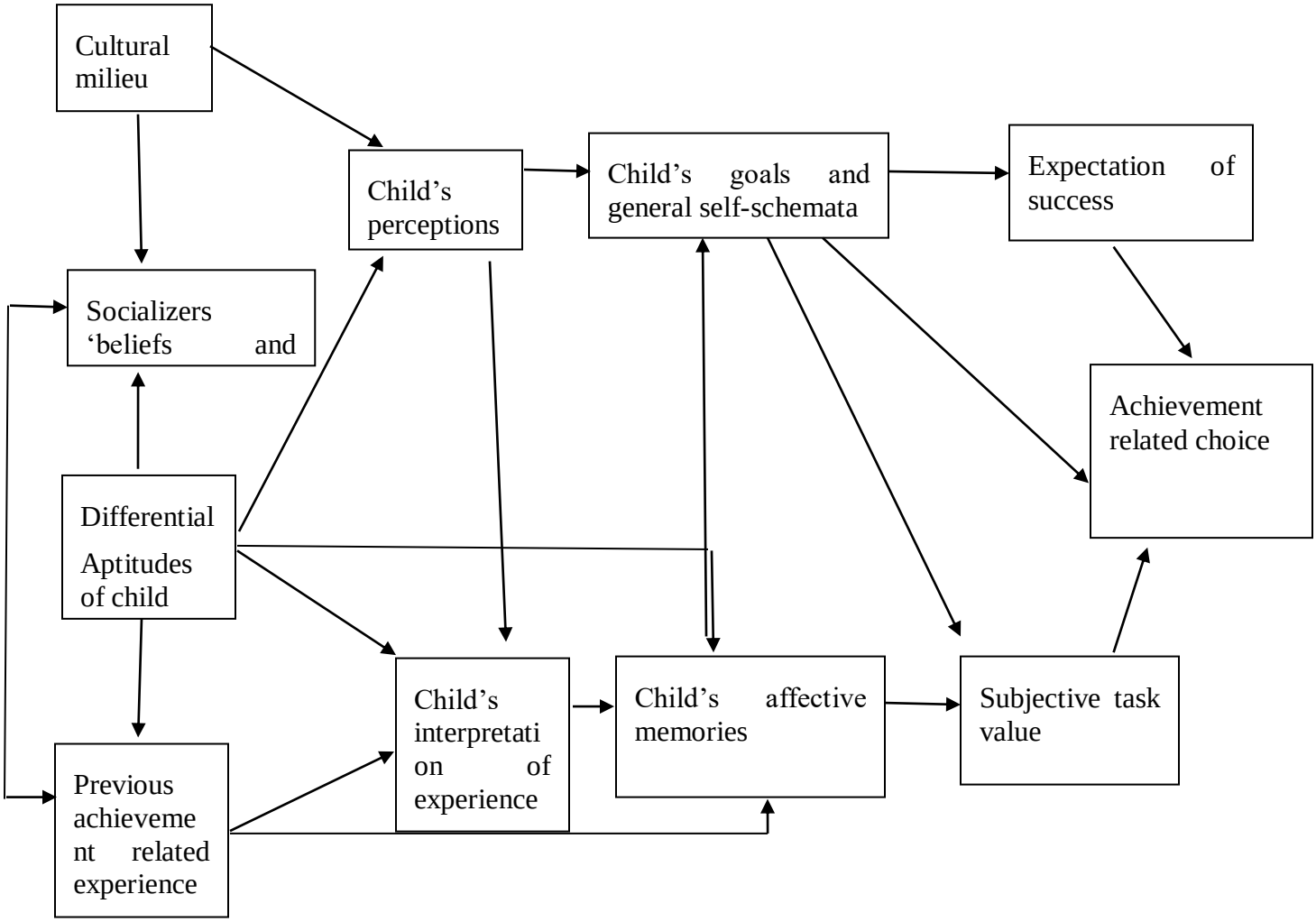

Figure 2: Expectancy value model (Wigfield, 2008)

The students'attitude towards ICT usage for learning are determined by their expectations of success,the previous outcome experience (improvement in marks and knowledge after integrating ICT in their learning),socializers(school administration and teachers'self-efficacy) and their environment(smart classroom availability).

2.2.3 Technology Acceptance Model 2

The Technology Acceptance Model (TAM 2) justifies the usage of technological features and properties. Even if there were other models related to technology, but this is the one which got applied and productive. Venkatesh and Davis (2000) gives detailed reasons for using the TAM2 emphasizing that the theory gives relationship of work environment and social places as the system produces results in any form and all places(Venkatesh and Davis, 2000).

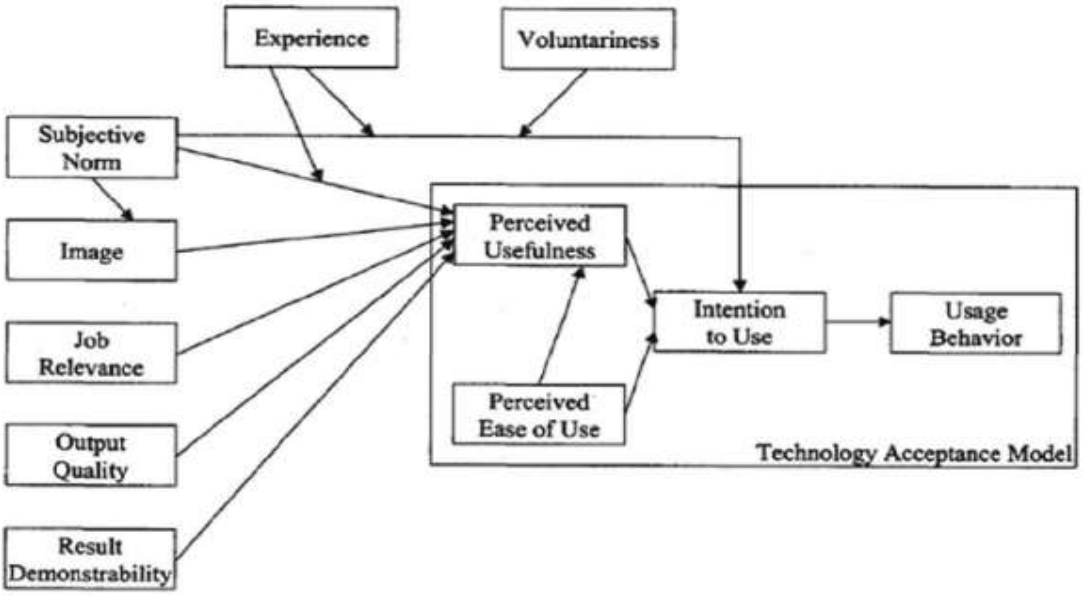

Figure 3: Technology Acceptance model 2 (Venkantesh & Davis, 2000)

One positive or negative attitude in a student conduct to the new stronger attitude .For example students' attitude like perceived usefulness and perceived ease of use will conduct to the intention of use and this will lead to the usage behavior.

3.0 Research Method

3.1 Research Design

The research design can be seen as the organization of the collection of some data characteristics and the conditions by analyzing the data in the ways that aim combining relevant to the research objective. As the researcher Kothari (2004) said, "the research design is a plan of action of the data collection, organization and analyzing them with the research objective survey design which will be used. The research design adopted in this study was descriptive survey. This method was relevant to the study because it involved frequency of answers to the same questions by different respondents. Both qualitative and quantitative techniques were used. This study sought to investigate students' attitudes on smart learning in Rwandan public secondary schools. The researcher used questionnaires to collect data. By qualitative techniques, the researcher included open-ended items where the respondents were given an opportunity to express their views. Data was categorized; themes established, coded and entered.

3.2 Target Population and sample Size

Any researcher has to get the knowledge on the needed information, the place to get it and exactly the group of people or individuals who possess it. The people who are considered to get the information from are called population (Frankel & Wallen, 1990). According to Burns and

Groves (1993), a target population refers to the elements representing the individual, things, and objects of event and situation which have some sample of the same criteria. The researcher has chosen the population which comprised 345 in total including 90 teachers, 15 Head teachers, 15 Deputy Head teachers and 225 students' representatives in over 15 public secondary schools of Bugesera District, from which a sample size of 185 was drawn; including 48 teachers, 8 Head teachers, 8 Deputy Head teachers and 121 students' representatives the selected schools were the ones with smart classrooms. Through the description of the informants the quantitative data were categorized and analyzed using SPSS version 21.0 and were presented in percentages and tables as well as graphics and averages in order to get the research findings correct and specific.

4.0 Results

4.1.1 The Students' Attitudes Towards Using Smart Classroom for Learning in Secondary Schools

Table 1: Statistics of Response from Students

Statements	N	SD		D		N		A		SA	
		F	%	F	%	F	%	F	%	F	%
I like the idea of using ICT for learning	121	3	2.4	1	0.8	0	0	60	49.5	57	47.1
ICT makes learning more interesting	121	21	17.3	10	8.21	3	2.4	27	22.3	60	49.5
when I have homework prefer to consult Google go to the school	121	40	33	11	9	6	4.9	28	23.1	36	29.7
I would like to receive notes through email from teacher	121	49	40.4	29	23.9	4	3.3	17	14	22	18.18
I like to search about my preferred course	121	51	42.1	39	32.2	0	0	11	9	20	16.52
I would like to complete assignment online	121	41	33.8	19	15.7	11	9	27	22.3	23	19
completion of activities online would improve ICT skills	121	38	31.4	29	23.9	8	6.6	21	17.3	25	20.66

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The findings revealed that the majority (96.7%) of respondents agreed that most students have the ideas of using ICT for learning and 2.4% respondents do not have any idea for ICT for learning while 0.8% of respondents hide his side about the idea he has on the idea of learning by using ICT. Also the results from the students showed that the majority (71.9%) of the students prefer to do their homework by consulting Google before they go to school while 25.6% do not prefer the use of Google during working their homework and 4.9% did not want to show their side on how they work their homework by consulting Google.

The third points in students' questionnaire were how the students receive notes through email from teacher. The majority (64.46%) of respondents said they didn't receive the notes through email sent by teachers while 32.23% of students agreed that they received the notes from teacher through email while 3.3% of students participated in this research said that they didn't know even what email is before they got the notes through email from their teachers.

The findings of this study also revealed that the 74.38% of students participated in this study said that they did not like to search about their preferred of courses to be learned while 25.6% of respondents show that they like to do search about preferred course. In this study also the students showed their side on how they complete their assignments using internet, the majority (49.58%) of respondents said that there is no need of internet to complete my assignment while 41.32% need the internet to complete their assignments and 9.09% students were neutral to show their view about the needs of internet during completion of their assignments. The last point of students' views on first objective is completion of activities online would improve ICT skills. The research revealed that 55.37% of respondents denied the improvement of ICT skills through online completion of activities and 38.09% of students participated in this research said that they need the internet in their everyday activities to improve their ICT skills while 6.61% of respondents didn't stand on any side.

Table 2: Responses from Teachers

Statement of respondents	SD F	%	D F	%	A F	%	N F	%	SA F	%
For students, idea of using ICT in learning is good	6	12.5	8	16.6	14	29.1	4	8.3	16	33.3
Students say that learning from smart classroom will increase their ICT Skills and knowledge	3	6.25	7	14.5	18	37.5	3	6.2	17	35.5
My students like to use smart classroom to do their homework generally in academic activities	14	29.1	15	31.2	6	12.5	7	14.5	6	12.5

Source: Field data, 2021.

The results summarized in the Table 4.6 showed the views of teachers about the first objective then they asked to show their opinion about students' attitude towards smart learning. First question was on the understanding from the students' idea of using ICT in learning. The majority (62.4%) teachers said that they agreed with the statement saying that for students, idea of using ICT in learning is good, 29.1% of respondent teachers disagreed with what said by the statement above, and 8.33% of teachers were neutral on that statement. The second point was the students' mindset about how learning from smart classroom will increase the students' ICT Skills and knowledge. The majority (73%) of teachers agreed the statement that learning by using smart classroom increase their ICT Skills and knowledge while the 20.75 % of respondents' teachers disagreed the statement and the 6.25% were neutral about the statements.

The last points of views from teachers were how their students like to use the smart classroom to do their homework generally academic activities, 60.3% of respondents teachers said that the students do not like to use the smart classroom to do their homework generally academic activities while 27.08% of respondents agreed that the students like to use the smart classroom to do their homework generally academic activities and 12.5% were neutral to the statements they do not know if the students like or not to use the smart classroom to do their homework generally academic activities. Edwards, B., & Berger, C., (2003), say that computers are important in stimulating students' thoughts, discovery, imagination, invention and learning skills, they also say that the learner had confirm their stimulus of ICT in learning better by using it (Edwards, B., & Berger, C., 2003). The teachers, the head teachers and the entire community have a great task to raise the students' intention of ICT tools use for smart learning, as the good attitudes and beliefs are already there.

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4.2.2 The factors that influence students 'attitudes towards using ICT for learning

Table 3: Results from the Teachers

STATEMENTS	SD F	%	D F	%	A F	%	N F	%	SA F	%
Learning from internet does not take place only in smart classroom	5	10.41	2	4.16	21	43.75	0	0	20	41.66
The smart learning increased the interaction between teacher and students	12	25	16	33.3	11	22.91	4	8.33	5	10.41
The most website visited by students are those of social media than website of searching for learning	8	16.66	7	14.5	12	25	2	4.16	19	39.58
Teachers give the opportunities to search on the internet library to the students	14	29.16	13	27.0	11	22.91	0	0	10	20.83
When I find difficult concepts I visit internet for more understanding	7	14.5	11	22.9	14	29.16	3	6.25	13	27.08
In 30 periods of a week, I prepare 6 lessons to be delivered in the smart classroom using internet & projector	19	39.58	24	50	3	5.6	0	0	4	8.33

Source: Field data, 2021.

As to whether learning from internet does not take place only in smart classroom, the findings revealed that the many respondents (85.41%) proclaimed that they agreed with the statement, and 14.59 % rejected the hypothesis. This means that students can access the internet from anywhere for learning than in the school. The respondents answered about the interaction between teacher and students where 58.3% disagreed with the statement that smart learning increased their interaction between them and their students, 33.32% of teachers accepted that smart learning increased their interaction between them and students while the 8.33% were neutral. The findings revealed that 64.58% of teachers said that website visited the most by students, are those of social media than website of searching for learning which means that the social media are highly appreciated in the schools, 31.16 % of respondents disagreed with statements saying that website visited the most by students, are those of social media than website of searching for learning while the 4.16% were neutral. The other points revealed in Table 4.7 are how teachers give the opportunities to search on the internet library to the students for using the smart classroom resources and increasing their skills and knowledge. So, the majority (56.16%) of teachers don't provide opportunities to students to visit internet library for academic purpose, 43.74 % of respondents' teachers accepted that the student is given the opportunities to search on the internet library.

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Table 4: Statistics Results from Students

Statements	N	SD		D		N		A		SA	
		F	%	F	%	F	%	F	%	F	%
Teachers in our school provide homeworks as it is the best opportunity to search on the internet	121	46	38	38	31.4	2	1.65	23	19.05	12	9.9
If I find difficult concepts I visit internet for more understanding	121	17	14	21	17.3	32	26.4	20	16.5	31	25.6
Using ICT tools for learning would improve my learning and academic performance	121	25	20.6	19	15.7	3	2.47	40	33	34	28.17
I can complete tasks or a search if there was no one around to tell me what to do	121	13	11	40	33	10	8.2	45	37.1	11	9
I can't complete a task or a search without someone to guide me if I have a lot of work to complete while the computer is provided.	121	25	20.6	27	22.3	2	1.65	28	23.1	39	32.2
It is easy for me to get access to internet when I need to search	121	43	35.5	36	29.7	4	3.3	20	16.65	18	14

Source: Field data, 2021.

The first questions asked on how teachers provide the homework in the best manner to be done by using internet, the majority 69.42% of teachers do not give them the homework as it is the best opportunity to search on the internet, 28.9% of respondents agreed that teachers provide them the homework in the best manner to be done by using internet and 2 were neutral to the statements. Also the findings revealed that majority (42.14%) of the students' consult internet for more understanding when they find difficult concepts, 31.4% said that they can't consult internet when they when they find difficult concepts while 26.4% were neutral.

The results also showed how the students 'attitude about use of ICT tools to improve their learning and their academic learning. The response from the students respondents revealed that 61.15% of respondents accepted the use of ICT improve their learning and their academic performance, while 36.36% of students disagreed with the statements and 3 of them do not want to talk anything on how use of ICT improve their learning and affect their academic performance.

Other points of views were how the students complete their task by using internet when there is no one around to help them most of them (46.28%) accepted that they can complete tasks or a search if there was no one around to tell them what to do and 43.8% disagreed that they can't complete tasks or a search if there was no one around to tell them what to do and the rest 8.26% were not understand the questions and refused to show their views about statements.

Table 5: How Often Students use Internet Connection for Entertainment

Statement		A	O	S	R	NV
		F	F	F	F	F
Students use internet connection for entertainment	visiting WhatsApp	43	59	12	5	2
	visiting Facebook	61	47	6	4	3
	visiting YouTube	37	71	10	0	3
	visiting Instagram	58	40	17	4	2
Mean		**49.7**	**54.2**	**11.2**	**3.2**	**2.5**

Source: Field data, 2021.

As to whether the students use internet connection for entertainment purpose, the mean of those who answered they always use internet connection for entertainment was 49.9 of 121 and those who answered often were 54.2 of 121, those who answered sometimes were 11.2 of 121, those who answered rarely were 3.2 of 121, those who answered never were 2.5 of 121. Focusing on the responses got the respondents; secondary students of targeted population use internet connection for entertainment than academic propose.

The researcher interviewed the education officials including 8 head teachers and 8 deputy head teachers about how internet is useful to students' teachers in the process of teaching and learning and about Continuous Professional Development. The respondents said that the schools have Continuous Professional Development but the issues often discussed on are: lesson planning, model teaching, basic and generic competences and cross cutting issues, and rarely ICT integration in learning. The majority of them (6 of 8) head teachers and 7 of 8 deputy Head teachers testify that the computer laboratories are timetabled and time for accessibility is limited. Teachers and students from the secondary schools are obliged to follow the prescribed schedule of time.

Through interview, even if the respondents asked to do not record them, the researcher found some important factors that influence the students' attitudes towards smart learning in public secondary schools of Bugesera District.

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Table 6: Themes and Categories

Themes	Categories	
School Factors	Sub-theme 1	Heavy workload
	Sub-theme 2	Accessibility of tools and, School rules and regulations
Teacher Factors	Sub-theme 1	Self-efficacy
	Sub-theme 2	Lack of full learner engagement

Source: Field data, 2021.

Theme I: School Factors

Category 1: Heavy workload

Time is a crucial resource for preparation of ICT materials by the teachers. Teacher's timetable is full and there is no or few free time. And it becomes so hard to integrate ICT in their daily teaching process.

> DHT1 *said that teachers claims 'we have not enough time for search and preparation for courses to be delivered in smart classroom, as most of us have more than 32 periods a week.*

Teachers think that integrating ICT in their lessons is the extra work while this is can help them as that document can be saved and even easily edited.

> *'Teachers have a very high teaching load to have time to prepare the ICT materials required in class. Majority of the teachers have an average of 6 lessons per day. This is coupled with the co-curricular activities after the school programme', said the* DHT2

> *'It will be better MINEDUC transform class, adding white board that allows presentation without shift from class to smart classroom as periods are too short', said the* HT1.

Category 2: Accessibility of tools, school rules and regulation

The public schools (twelve years basic education) have no boarding and the school staff is very limited. As it is said below, students and teachers miss the opportunities to exploit the wireless through smart classroom and phones because the wireless is disconnected and smart classroom closed during weekends and after 5pm while the opposite should be of great importance.

> *'It will be better that the smart classroom are open the weekend, and that MINEDUC provide school logistics. Because the in charge of smart classroom is a teacher and have many tasks that's why smart classroom are not open the weekend', said* DHT3.

Theme II: Teacher Factors

Category 1: Self efficacy

In schools there are continuous professional development sessions, but the issues mostly discussed on are how to make lesson plans to assess, to develop competences but rarely ICT integration. This is one of the factors that highly affect ICT usage in teaching and learning process by teachers as their self-efficacy lower.

> *'Teacher has no enough skills on ICT usage and basic maintenance, teachers feared computer and technological breakdown as they teach. The staff training on simple basic skills of computer use and maintenance', said* HT2.

Category 2: Poor learner engagement

Teachers know the causes of that dominant and obsessive use of internet for recreational activities by students as it is seen in the testimony done some teachers. There can be a link between self-efficacy, heavy workload and this lack of full learner engagement.

> *'Students normally like to interact with smart classroom but the problem is that the teachers do not provide enough activities like preparing presentation of homework findings or group work findings from internet instead they give to them the homework and only the very courageous one consult internet, some read books in the school library and others copy-paste the findings of their classmates', said* teacher 1.

> *'It is fearful for me to bring students in the smart classroom in order to deliver the lesson or to guide them in their search because some of them can damage or still chargers, or other equipment. That why I prefer to plan teaching inside the classes, said* teacher 2.

> *'Students have smart classroom and smart phones but their interest is social media and other entertainment websites because teachers didn't engage them in using it for studying and learning, by enhancing the flipped classroom, presentation and other instructive activities', said* DHT 3.

According to Karimi, G.A (2012), proper use of ICT is not possible without knowledge, skills and experience to use the available infrastructure in the schools. ICT knowledge and experience depend of teachers' pre-service and in-service training. Only 8% of teachers prepare at least 6 lessons in a week to be delivered in the smart classroom. This rate of adoption which still very low indicates rejection of the technology use in learning.

5.0 Conclusions

In this study, 71% of the respondents were in agreement that they prefer to do their homework by consulting Google before they present it to the teachers. It shows a positive attitude to the use of ICT for learning. The findings show that factors that hinder students' smart learning are: opportunities of usage, accessibility and self-efficacy. The opportunity of usage as the main factor that could support smart learning, provided by the teachers. According to Kullberg (2011), keeping oneself updated, find good information and providing a variety of homework's to be done using internet, there really is not that big a difference compared to more traditional teaching. It is all about planning; teachers have to plan their lessons, go over their material etc. Basically, one has to have a natural interest in technology in order to make it work in the classroom. It takes longer to do research and find suitable material, time that usually has to be taken from one's spare time and therefore a certain degree of interest is necessary in order to "make it work" (Kullberg.T,2011). Teachers don't find working with technology to be fun, while it would be helping them to vary their teaching. Rather than seeing it as time consuming, as students are good at using current technology even if it is for recreational activities and that a lot of material has now become easily available thanks to computers and the Internet, teachers should be motivated to "try to keep up" with the students.

6.0 Recommendations of the Study

From the research findings, in order to improve on ICT usage in learning by students as their attitude towards smart learning are positive, the following recommendations may be considered: The government should invest heavily to provide adequate number of various ICT tools in schools and also enhance internet connection in the schools to ensure easy access to teaching learning materials in the web. Government should make available avenues in which the schools can acquire computers at a reduced cost. This can be done through tax waiver on computers meant for learning in the secondary schools.

The ministry of education should develop pre-service and in-service staff training programmes that are tailored to the school programmes to keep teachers up to date with the technological changes which will promote proper integration of ICTs in teaching and learning. Teachers may feel intimidated by their perceived lower level of ICT skills than of that of their students. There is the potential impact of situations where students know more than teachers about the ICT used in the classroom. Teachers could feel threatened by the perceived disparity in ICT knowledge and skills, particularly in more open-ended. It will be better the school organize periodic in-service trainings. More teachers should be deployed to the schools to train the students and teachers on the use of computers for more to increase the confidence in the teaching learning process using ICTs. There should be ICT technician at the regional education levels to help

teachers with the computer hardware or the software they would assist the teachers handle any computer breakdown.

The school administration should familiarize themselves with the national ICTs policies and especially in education in order for them to develop school ICT policy that would enable them integrate use of ICTs in teaching and learning in class. Schools should plan for other places to access the computers from, like library and staffroom. The days and hours for accessing the ICT tools should be increased in the public secondary schools.

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