STUDENTS EDUCATIONAL BACKGROUND AND ITS IMPLICATIONS ON THEIR ACADEMIC PERFORMANCE IN HIGHER LEARNING INSTITUTIONS: A CASE STUDY OF RUBAVU DISTRICT

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ABSTRACT

This research explores students educational background from their early school and its implications on their academic performance, the case of Rubavu District and University of Tourism, Technology and Business Studies, Rubavu Campus (UTB) was sampled. Using the theories of constructivism and Life Course, the study examined three identified key factors influencing university education outcomes that are nursery school attendance, family residence either rural or urban and type of secondary school attended either public or private. A sample of 196 students from three departments were used to collect data using desk review and questionnaire. The findings reveal that there is a significance correlation (r = .613, p < .05) between nursery school attendance and university performance. Students who attended nursery schools dominantly demonstrate higher academic success. In the same way, students from family living in urban areas tend to successfully perform better than those from families living in rural areas (r = .780, p < .05). Lastly, students who attended private secondary schools have better academic performance than those from private secondary schools, there is a moderate positive correlation (r = .530, p < .05). Findings highlight the necessity of early education, continuous family and school support in shaping students' academic trajectories. There is a need to continue promoting nursery school education, bridge the gap between rural and urban education and also improve quality teaching in public secondary schools. Findings underscore that the performance of students at university is continuously prepared from early childhood education engaging family efforts, socioeconomic conditions and supportive educational environment.

Keywords: Nursery school, private/ public secondary school, family residence, University performance

1.0 INTRODUCTION

Education is a fundamental and universal human right and when it is of quality, it becomes a vital and interconnected priority that provides individuals with skills, knowledge and freedom to take informed decisions. Quality education fosters autonomy and critical thinking, serving as the essential foundation for national development (Falconnet, 2019). Quality education depends on a social, economic and political environment where learners are fully motivated at the family, school and individual levels. Fruitful completion of the learning process through higher education is influenced by (1) learner's background, including their socio-economic

environment; (2) effective learning strategies; and (3) learner's intelligence and motivation to learn (Ndagijimana, 2013; Cantin, Bouchard & Bigras, 2012). The most critical milestone for successful university learning includes strong early education that is nursery and primary schools, socio-economic support that boost physical and mental wellbeing and conducive learning environment that promote essential skills and stability towards academic performance. This learning foundation facilitate adaptability, critical thinking and access to mentorship enhancing problem-solving and personal growth (Johnson, 2018; Walsh et al., 2020). If this foundational stage of education is not well-developed, it can negatively impact the entire learning process up to the university level (Berliner & Eyre, 2017). Therefore, this research focuses on examining the relationship between university performance and learners' backgrounds at the University of Tourism, Technology, and Business Studies, Rubavu Campus.

There are three contextual factors considered to influence students' performance in Higher Learning Institutions (HLI) that are nursery school attendance, student residence either in rural or urban and attending a private or public school.   The study aims to:

H1: Assess the impact of nursery school attendance on university performance;

H2: Explore the relationship between a student's family residence (rural or urban) and their university performance;

H3: Evaluate how attending public versus private secondary schools affects academic performance.

2.0 THEORETICAL REVIEW

This section presents the theoretical background with various relevant studies reviewed and appropriate theories applied.

2.1 The theory of constructionism

Human learning is developed through socialization, where a child is introduced to family and cultural environments (Noss & Clayson, 2015). In this context, learners build skills and knowledge on the foundation of their previous formal or informal learning experiences (Michailakis & Schirmer, 2014; Alanazi, 2016). The learners' success in higher education is influenced by their past experiences and learning environments (Kynigos, 2015). When analyzing new information, learners actively reflect on their experiences; they are not passive receivers of knowledge (Noss & Hoyles, 2017). Learning is an active process and strategies that promote early education, along with the learner's intelligence, family environment, self-esteem and the type of school attended are key factors influencing success in higher education (Busari, 2017; Cook & Artino, 2016). The traditional view of learners as 'empty vessels' to be filled has evolved; nowadays, learners actively motivated to engage in decision making towards constructing new knowledge from their experiences (Fillery-Travis & Robinson, 2018).

2.2 Life Course Theory (LCT)

Developed by Elder in 1974, Life Course Theory (LCT) is based on five key principles: life-span development, human agency, historical time and geographic place, timing of decisions, and linked lives (Bengtson et al. 2012). Elder's research, which examined the impact of the Great Depression on children and families, emphasised how historical contexts and social structures shape individual development over the lifespan (Elder, 1994). His work laid the foundation for the life course perspective, exemplifying how significant socio-historical events influence the trajectories of individuals' lives influencing their educational performance. LCT accentuates the roles of time, context and processes in shaping a person's life, impacted by historical events, social changes, and personal choices. The theory provides policymakers, researchers, and practitioners with a framework to design effective interventions and supports aimed at improving individuals' life outcomes. It is a multidisciplinary approach to understanding human development over time, incorporating key concepts such as trajectories, transitions, turning points, and socio-historical context (Elder & George, 2016).

3.0 METHODOLOGY

The study used a descriptive and correlational design targeting 196 students of University of Tourism, Technology and Business Studies, Rubavu Campus (UTB) located in Rwanda's Western Province, Rubavu District. A desk review and questionnaire were used to collect quantitative and qualitative information about sampled students on their educational background and family environment in relation to their university academic performance (Saunders et al., 2019). Correlational, percentage and thematic analysis were used to assess the relationships between identified variables under discussion (Gupta & Gupta, 2022). Using the formula developed by Yamane, Chaokromthong, and Sintao (2021), the sample size was determined as follows:

$n = \frac{N}{1+Ne^2}$ Where

n: Sample size

N: Population size

e: Level of significant

In this research, a 95% confidence level was assumed and the formula mentioned above was applied accordingly

The sample size is: $n = \frac{384}{1+384*0.05^2} = 196$

3.1 Sampling

Stratified sampling was applied dividing the population into three strata and within each stratum simple random sampling was used (Sharma, 2017). Year two at UTB Rubavu Campus has 384 students distributed across three departments: 182 students in Hotel and Restaurant Management (N1=182), 104 students in Travel and Tourism Management (N2=98) and 98 students in Business and Information Technology (N3=104). The sample size for each stratum was calculated based on its proportion as follows:

$n_i = n * p_i$ Where i=1,2, 3 the number of strata. Pi is a proportion of the population($p_i = \frac{N_i}{N}$)

Specifically, the population considered in this research is divided into three strata and their sample sizes equals to 196 students calculated as follows:

$$HRM, \quad n_1 = 196 * \frac{182}{384} = 93$$

$$TTM, \quad n_2 = 196 * \frac{104}{384} = 53$$

$$BIT, \quad n_3 = 196 * \frac{98}{384} = 50$$

4.0 FINDINGS

4.1 Impact of nursery school attendance on university performance (H1)

Nursery education introduces children at their early age to a learning environment and fosters the development of skills such as sociability, language and an understanding of competition and complementarity that inspire creativity and innovation (Dynia et al., 2028). This has been substantiated by Uchenna and other authors, who accentuated the direct impact of nursery education attendance on academic performance at University level (Uchenna et al., 2021). Early childhood education has long-term effects on children's development and supports their academic success (Agi & Ruth, 2018). University is a continuation of the educational journey that begins with nursery, primary, secondary and professional schools. According to the life course theory, any disruptions or gaps in this sequence can significantly impact performance at the university level.

Table 1. Nursery attendance * Performance of a student Cross tabulation

		Performance of a student					Total
		Fail[1]	Pass[2]	Good[3]	Very good[4]	Excellent[5]	
Nursery attendance	No	17	33	43	13	1	107
	Yes	2	3	15	51	18	89
Total		19	36	58	64	19	196

The sample consisted of 196 students. Of these, 19 students (10%) failed; among them, 17 (89%) had not attended nursery school, while 2 (11%) had. Among the 36 students (19%) who achieved a pass grade, 33 (92%) did not attend nursery school, and 3 (8%) did. Of the 58 students (30%) who earned a good grade, 43 (74%) did not attend nursery school, whereas 15 (26%) did. Among the 64 students (33%) who received a very good grade, 13 (20%) did not attend nursery school, while 51 (80%) did. Lastly, of the 19 students (10%) who achieved an excellent grade, 1 (5%) had not attended nursery school and 18 (95%) had. These findings

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[1] Fail equals to less than 50% (<50%)
[2] Pass is between 50 to 59% (50-59%
[3] Good is between 60 to 69% (60-69%)
[4] Very good is between 70 to 79% (70-79%)
[5] Excellent is from 80 % and above (≥ 80)

indicate a significant relationship between nursery school attendance and university performance.

Table 2: Correlations

		Nursery attendance	Performance of a student
Nursery attendance	Pearson Correlation	1	.613**
	Sig. (2-tailed)		.000
	N	196	196
Performance of a student	Pearson Correlation	.613**	1
	Sig. (2-tailed)	.000	
	N	196	196

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

The Pearson product-moment correlation between nursery school attendance and university performance was found to be highly positive and statistically significant ($r = .613$, $p < .05$), supporting H1 which stipulates that nursery school attendance influences university performance. The results indicate that students who attended nursery school largely perform better than those who did not, though there are exceptional cases (5%) where students who did not attend nursery school still achieved excellent performance (see Table 1).
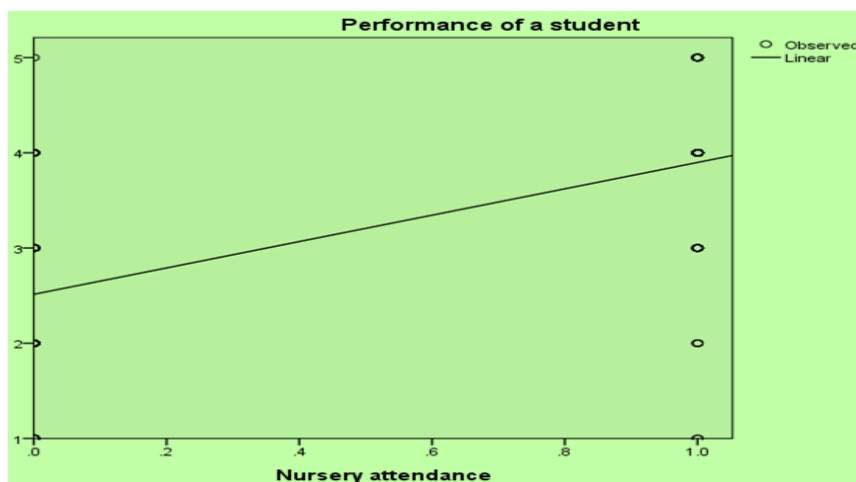
Graph1

This show generally linear relationship with a positive slope. The curve displays that nursery attendance and university performance are changing in the same direction.

Education at an early age is vital to empower children with the knowledge and understanding essential for developing cognitive, communication and analytical skills. From nursery school to university, it is a process aligning with the principles of constructionism which postulates that learners actively construct their understanding and knowledge through experiences and interactions. Furthermore, life course theory emphasizes how early educational experiences can influence an individual's developmental trajectory over time. Together, the two theories

and findings feature the necessity of early education in shaping teenagers high learning performance.

4.2 Influence of student's family residence (rural or urban) on university performance (H2)

A comprehensive examination into the relationship between university performance and students' family residence backgrounds revealed a substantial disparity. It indicates that students from rural areas are mostly at a disadvantage compared to those from urban. This demerit may originate from factors such as limited access to educational resources, less opportunities for extracurricular activities, inadequate infrastructure in rural schools and teachers' facility to accomplish the task. In contrast, learners from urban areas often benefit from better educational facilities, more experienced teachers and greater support systems, all of which contribute to learners' performance (Byun, et al. 2015). Data analyzed revealed that students' family residence backgrounds potentially influences university performance, students from rural areas are mainly at a disadvantage compared to those from urban schools.

Table 3: Residence of a student and Performance of a student Cross tabulation

		Performance of a student					Total
		Fail	Pass	Good	Very good	Excellent	
Residence of student	Rural	16	36	25	8	2	87
	Urban	1	0	6	49	53	109
Total		17	36	31	57	55	196

Among the 196 students sampled, 17 students (9%) failed, with 16 (94%) coming from rural areas and 1 (6%) from urban area. All 36 students (100%) who received a pass grade are from rural areas. Of the 31 students (16%) who attained a good grade, 25 (81%) are from rural areas, and 6 (19%) are from urban areas. Out of 57 students (30%) who achieved a very good grade, 8 (14%) are from rural areas while 49 (86%) are from urban areas. Lastly, among the 55 students (28%) who attained an excellent grade, 2 (4%) are from rural areas and 53 (96%) are from urban areas.

The rural-urban disparity that is characterized by lower productivity in economic activities, higher poverty levels and differences in infrastructure and electricity quality, places urban areas at an advantage over rural areas in developing countries including Rwanda (Blimpo & Cosgrove-Davies, 2019). The unfavorable circumstances in rural areas clarify that children from rural and urban settings are exposed to different learning environments leading to better achievement for those who are advantaged, those from urban areas (Ajai & Imoko, 2013). Educational performance tends to be higher in urban areas due good learning environment and improved living conditions that positively influence children's learning. Education is often prioritized in urban settings where most of parents are educated and are able to closely monitoring their children's education and provide the essential support and resources to motivate them (Faisal, Shinwari & Mateen, 2016). Correlation analysis confirms a significant relationship between a student's residence and university performance.

Table 4: Correlations

		Residence of student	Performance of a student
Residence of student	Pearson Correlation	1	.780**
	Sig. (2-tailed)		.000
	N	196	196
Performance of a student	Pearson Correlation	.780**	1
	Sig. (2-tailed)	.000	
	N	196	196

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

Pearson correlation between a student's residence and their performance was found to be highly positive and statistically significant (r = .780, p < .05). Consequently, hypothesis H2 which explored the relationship between a student's family residence and university performance at UTB, Rubavu Campus is confirmed. This indicates that students from urban areas tend to perform better compared to those from rural areas as revealed in Table 3.
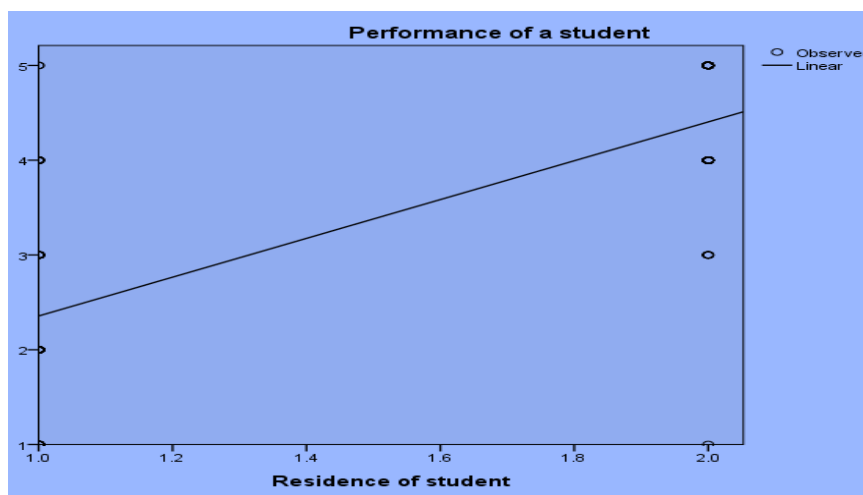
Graph 2

The graph shows how residence of a student is positive linearly related to univevesty performace

The findings reveal a significant correlation between students' residence and academic performance where students from urban areas are more successful than their peers from rural. This imbalance is clarified through the theory of constructionism and the Life Course perspective which accentuate that early life conditions and family environments greatly influence adulthood success towards achieving higher performance at University.

4.3 Effect of public secondary schools versus private ones to academic performance (H3)

Administered and funded by the Government, public schools are affordable than private ones primarily funded by none government institutions or individuals. Private schools rely on school fees and promoter's contribution, only few of them receive partial government support.

Education for all in Rwanda has significantly increased class size within public schools. Though the initiative of education for all has significantly helped reduce illiteracy, it also presents several challenges: teachers are not able to support students in developing their personalities due to class size and student participation levels remain low (Iyakaremnye, 2019; Li and Mengyan, 2021).

Table 5: School ownership of a student and Performance of a student Cross tabulation

|		Performance of a student					Total
		Fail	Pass	Good	Very good	Excellent	
School ownership of a student	Public	10	11	35	12	7	75
	Private	4	2	7	64	44	121
Total		14	13	42	76	51	196

Information included in table 5 specifies that among the 196 sampled, those who attended private secondary schools usually perform better at the university level compared to those who attended public schools. Explicitly, 44 students (86.3%) from private secondary schools achieved an excellent grade, compared to 7 students (13.7%) from public secondary schools. For the very good grade category, 64 students (84.2%) were from private secondary schools, while 12 students (15.8%) were from public secondary schools. In the good grade category, 7 students (16.7%) were from private secondary schools and 35 students (83.3%) were from public secondary schools. For those with pass grade, 2 students (15.4%) attended private secondary schools whereas 11 (84.6%) attended public secondary schools. Finally, among students who failed, 4 students (28.5%) were from private secondary schools and 10 (71.5%) were from public secondary schools. It is noticeable that students from public secondary schools are predominantly found in the good, pass and fail grade categories, though those from private secondary schools are mostly in the very good and excellent grade categories. The Correlation Analysis confirms that there is significant relationship between school ownership and University performance.

Table 6: Correlations

		School ownership	Performance of a student
School ownership	Pearson Correlation	1	.530**
	Sig. (2-tailed)		.000
	N	196	196
Performance of a student	Pearson Correlation	.530**	1
	Sig. (2-tailed)	.000	
	N	196	196

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

Pearson correlation analysis (r = .530, p < .05) demonstrates a moderately positive and statistically significant relationship between private secondary school attendance and better academic outcomes at the university level, confirming the third hypothesis (H3).
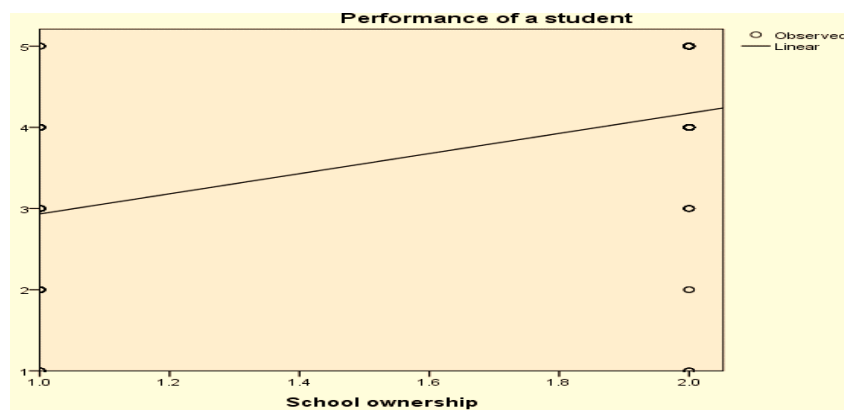
Graph3

The graph below shows that there is positive linear relationship between school ownership and university performance.

Research findings reveals that the type of secondary school attended (private or public) significantly influences university performance. University students from private secondary schools' background are more likely to perform well compared to their colleagues from public secondary schools. There is a positive correlation that private secondary school attendance provides conducive learning advantages due to better resources, more individualized consideration and enhanced learning environments that contribute to improved academic performance at the university level.

5.0 CONCLUSION

The three combined factors influencing students' performance in higher education align with constructivism and life course theory accentuating the importance of a supportive environment in shaping university educational outcomes. Constructivism states that learning is an active, constructive process shaped by student's backgrounds and interactions with their environment. This perspective emphasizes the critical role of the learning context counting family and school resources from early learning in constructing the foundations for university academic success. Life course theory additionally underlines that early life stages and experiences have long-term effects on a student's trajectory in academic accomplishment. University student's performance is not only shaped by the resources available and conducive environment but also by their commitment and determination that may challenge disadvantageous contexts such as not attending nursery school, rural residence or public school attendance. Although these contexts can be obstacles, some students demonstrate resilience, drawing upon their earlier experiences and detrimental learning situations to excel. Consequently, preparing students for university success is complex; lifelong process that begins within the family and early school environment, necessitating a collective effort to maximize learners and students' potential is crucial.

REFERENCES

Ajai, J. T., & Imoko, B. I. (2013). Urban and rural students' academic achievement and interest in geometry: a case-study with games and simulations method. Taraba State University Journal of Education Research and Production, 1(2), 56-63.

Alanazi, A. (2016). A critical review of constructivist theory and the emergence of constructionism. American Research Journal of Humanities and Social Sciences, 2, 1-8.

Agi, W. C., & Ruth, U. N. (2018). Influence of Nursery Education on the Academic Performance of Primary School Pupils in Rivers State: Implications for Counselling. International Journal of Education and Evaluation ISSN 2489-0073 4 (6) 11-26.

Bengtson, V. L., Elder Jr, G. H., & Putney, N. M. (2012). The life course perspective on ageing: Linked lives,timing, and history. Adult lives: A life course perspective, 9-17.

Berliner, W., & Eyre, D. (2017). Great minds and how to grow them: high performance learning. Routledge.

Blimpo, M. P., & Cosgrove-Davies, M. (2019). Electricity Access in Sub-Saharan Africa [Accès à l'électricité en Afrique subsaharienne]. World Bank Publications-Books.

Busari, A. O. (2017). The relationship between personality types, learning styles, motivation, self-esteem and academic stress among distance learners in Ibadan Study Center. International Journal of Innovation and Applied Studies, 19(4), 850.

Byun, S. Y., Irvin, M. J., & Meece, J. L. (2015). Rural–nonrural differences in college attendance patterns. Peabody Journal of Education, 90(2), 263-279.

Cantin, G., Bouchard, C., & Bigras, N. (2012). Les facteurs prédisposant à la réussite éducative dès la petite enfance. Revue des sciences de l'éducation, 38(3), 469-482.

Chaokromthong, K., & Sintao, N. (2021). Sample Size Estimation using Yamane and Cochran and Krejcie and Morgan and Green Formulas and Cohen Statistical Power Analysis by G* Power and Comparisions. Apheit International Journal, 10(2), 76-86.

Cook, D. A., & Artino Jr, A. R. (2016). Motivation to learn: an overview of contemporary theories. Medical education, 50(10), 997-1014.

Dynia, J. M., Schachter, R. E., Piasta, S. B., Justice, L. M., O'Connell, A. A., & Yeager Pelatti, C. (2018). An empirical investigation of the dimensionality of the physical literacy environment in early childhood classrooms. Journal of Early Childhood Literacy, 18(2), 239-263.

Elder Jr, G. H. (1994). Time, human agency, and social change: Perspectives on the life course. Social psychology quarterly, 4-15.

Elder Jr, G. H., & George, L. K. (2016). Age, cohorts, and the life course. In Handbook of the life course: Volume II (pp. 59-85). Cham: Springer International Publishing.

Faisal, R., Shinwari, L., & Mateen, H. (2016). Evaluation of the academic achievement of rural versus urban undergraduate medical students in pharmacology examinations. Asian Pacific Journal of Reproduction, 5(4), 317-320.

Falconnet, L. (2019). Le droit à l'éducation et l'égalité des chances: la relation de soutien comme levier pour éviter la marginalisation des enfants au statut juridique précaire (Doctoral dissertation, Université de Genève).

Fillery-Travis, A., & Robinson, L. (2018). Making the familiar strange–a research pedagogy for practice. Studies in Higher Education, 43(5), 841-853.

Gupta, A., & Gupta, N. (2022). Research methodology. SBPD Publications. Iyakaremnye, E. (2019). The impact of class size on Teaching Methods in Public Secondary Schools in Rwanda:

A Case of Musanze District. ResearchGate Thesis for Master of Education in Educational Planning, Management and Administration, Mount Kenya University. Unpublished

Johnson, H. M. (2018). Children in the nursery school. Routledge.

Kynigos, C. (2015). Constructionism: Theory of learning or theory of design?. In Selected regular lectures from the 12th International Congress on Mathematical Education (pp. 417-438). Springer, Cham

Li, Xiaotian, and Mengyan Li. The Effect of Large and Small Class Size in Compulsory Education in China.Rangsit Journal of Educational Studies 8.1 (2021): 46-58.

Michailakis, D., & Schirmer, W. (2014). Social work and social problems: A contribution from systems theory and constructionism. International journal of social welfare, 23(4), 431-442.

Ndagijimana, J. B. (2013). Les facteurs de la faible motivation et leurs effets sur l'apprentissage. Cas des élèves de l'école normale primaire (ENP/TTC) au Rwanda (doctoral dissertation, université de Bouaké; université de Bouaké/côte d'ivoire).

Noss, R., & Clayson, J. (2015). Reconstructing constructionism. Constructivist foundations, 10(3), 285-288.

Noss, R., & Hoyles, C. (2017). Constructionism and microworlds. In Technology enhanced learning (pp. 29-35). Springer, Cham.

Saunders, M.N.K., Lewis, P. & Thornhill, A. (2019). Research Methods.Business Students, 8thEdition. New York: Pearson.

Sharma, G. (2017). Pros and cons of different sampling techniques. International journal of applied research, 3(7), 749-752.

Uchenna, E. J., Oguejiofor, C. N., Ukamaka, N. U., & Obiakor, M. 2021. Impact of Nursery Education on The Academic Performance of Primary School Pupils in Enugu East

Local Government Area of Enugu State. British International Journal of Education and social sciences 8 (6) 37-49.

Walsh, P., Owen, P. A., Mustafa, N., & Beech, R. (2020). Learning and teaching approaches promoting resilience in student nurses: An integrated review of the literature. Nurse education in practice, 45, 102748.