

ISSN Online: 2616-8383



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ISSN: 2616-8383

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How to cite this article: Claudete, M., & Claire, M., M. (2022). Effect of Early Childhood Education on Socio-Economic Transformation of Communities in Rwanda. *Journal of Education*, 5(1), 11-27. <https://doi.org/10.53819/81018102t5041>

Abstract

The effective provision of basic education in Rwanda increases the competition level among graduates which promotionally improves the socio-economic transformation of communities. The purpose of this study therefore was to establish the effect of early childhood education on socio-economic transformation of communities in Nyamasheke district in Rwanda. The target population was 368 respondents that provided the sample size of 192 got using Yamane formula. Interview guide and questionnaire were used as data collection instruments. Correlation research design was also employed. The study findings revealed there is 31% of accessibility of ECE able to affect the level of socio-economic transformation of communities as indicated by the R square = .310 and the remaining 69% of socio-economic transformation of communities can be affected by other factors. However, it was found that, there is a statistically significant moderate relationship between accessibility ECE and socio-economic transformation of communities ($P=.000$ and $r = .555$). The study recommended the ministry of education which represents the government in the sector of Education should provide the adequate infrastructures of ECE schools in Nyamasheke district to improve and make easy accessibility of ECE in the area thus also increase the literacy level. The non-governmental organizations should invest more in ECE of Nyamasheke district in order to develop youth who are competent and able to compete at the labour market.

Keywords: Early Childhood Education, Socio-economic transformation, Communities

<https://doi.org/10.53819/81018102t5041>

1.0 Introduction

Early childhood education pertains to instructional policies and interventions aimed at children between the ages of birth and eight. It is a method or technique aimed at affecting evolutionary processes in children under the age of eight, and it is the cornerstone stages during which children develop their aptitude and talents for the future (UNESCO, 2000). A quick and substantial change in the structures and structures of proprietorship that regulate the economy is referred to as economic social transformation (Kerr, 2015). The provision of possibilities for all citizens to live productive, wealthy, and dignified lives must be the primary goal of this shift in economic relations (Kerr, 2015). Globally like in German, there is a growing recognition that our early experiences shape who can become as adults, and that improving children's positions which is inextricably linked to a bigger process of creating social and economic development. Furthermore, there is a growing worldwide agreement that economic growth is necessary but not sufficient for human potential to be realized. Money invested in children is thus not only the moral thing to do for their quality of life, but it is also the smart thing to do. It is also necessary for the creation and maintenance of broad-based job creation (Commission on Growth, 2008).

In South Africa, in all regions, Early Childhood Development (ECD) is progressively becoming the cornerstone for socio - economic development (Verdisco, 2018). ECD is presently ranked as the number one public income in order to provide value by domestic and international economists and finance ministers. In 2007, in an Inter-American Development Bank meeting in Costa Rica, 40 economists and finance ministers named ECD top out of a list of 29 pretty efficient cultural - financial projects (Verdisco, 2018). During the early child education, many researchers consider this period in a child's life to be particularly important for overall development since it lays the groundwork for future learning. The evolution of intellectual, emotion, and social relationships happens in an individual's newborn period, according to study (World's Children Report, 2003).

In Nigeria, Early Childhood Development Education (ECDE) is critical in building the groundwork for future education and characterization (UNESCO, 2016). It gives children a more equal and better start in life. People between the ages of 0 and 8 are served by early learning. As a result, it is widely acknowledged as a critical system that pays the groundwork for a kid's sustainable and comprehensive schooling, which takes into account intellectual, social, moral, religious, emotional, physical, and developmental needs. Plato and Aristotle (384-322 BC) were among the first philosophers to understand the necessity of starting schooling with small kids. We will have decent citizens if children are taught as early as feasible, according to Plato. They placed a strong emphasis on the mental and physical development of youngsters in order to foster a community of law-abiding citizens (Sifunar & Otiende, 2007).

In Kenya, Muli (2015) revealed that pre-school education seeks to assist children in the early stages of infancy in improving their knowledge, particularly in the area of producing things with their hands, thereby uncovering and developing their hidden gifts. This establishes the groundwork for writing, which will be a crucial ability for them in the future. Early childhood education instills vital life skills such as washing of hands to prevent infections, tooth cleaning after meals to avoid tooth decay and problems, and hygiene to encourage a healthy lifestyle (Muli, 2015). This would be performed in available applications by telling stories, reading books, and putting together videos, dramas, and skits with the help of their instructors (Ngala & Odebero, 2010). Children are

<https://doi.org/10.53819/81018102t5041>

also taught how to communicate thanks to their families, instructors, and peers, as well as how and whether to apologize to their buddies, parents, and instructors if they have offended them. The essential life skills that constitute modern civilization bind us all together; they enable society to work in harmony, allowing us to experience our Divinely existence (Donkor, 2011).

In Rwanda, the Ministry of Education (MINEDUC, 2009) indicated that the government is devoted to the construction of Early Childhood Development Centers in every administrative sector (2010-2017). To meet the objective of Education for All (EFA), this takes into consideration all young children, both males and females. The age group from infancy to six years old, which is directly affected by the ECD Policy, is expected to number 2.2 million people, or 24% of the populace. There are roughly 1.1 million children from birth to three years old, with another 1.1 million children aged 3 to 6 years old people aged (NIS, 2008). Furthermore, babyhood is widely recognized as a critical period for promoting child development and, as a result, improving prospects of success in later schooling and the labor market (Cameron, 2006). Childhood is an important time for cognitive development and communicative competence, and early learning is essential for future learning (Knudsen *et al.*, 2006).

Furthermore, the government must provide adequate help to parents, legal representatives, and family members in carrying out its duties (UNESCO, 2012). This can lead to educated and healthy workforces that are also more productive and they receive higher wages. It leads to an improvement in their standards of living and higher consumption as well, thus contributing to economic growth and development of the country (Shahzad & Ahmed, 2014).

1.1 Statement of the Problem

In Rwanda, socio-economic transformation is crucial and fundamental change in the systems and patterns of ownership and control that govern the economy. The social economy aims at addressing inter-related social, economic and environmental issues affecting the sustainable development of the people, communities and nations, and the inter-dependent nature of global human development. In socio-economic development, housing condition, medical insurance, schooling, feeding, saving and investment are very important (Tremblay, 2009). However, according to the Second Economic development and Poverty reduction Strategy (EDPRS 2) of Rwanda, it's important to note that Nyamasheke district face the problem of high rates of unemployment and poor infrastructures like schools. This affects the growth of socio-economic transformation in the region.

Ministry of Finance and Economic Planning (MINECOFIN, 2018) revealed that Early Childhood Education (ECE) is very important as far as the government's quest to provide quality education and care as a foundation for social and economic development and free and also compulsory primary Education for children. Early childhood development is a foundation on which our education for all and especially basic education should be founded (Mwai, 2003). Save the Children (2018) also added that in Nyamasheke district, ECE is not effectively implemented which significantly affect the quality of basic education attained. Mwai (2003) stated that effective socio-economic transformation is significantly affected by the level of communities' basic education. Save the children (2018), indicated that in Nyamasheke district 20% get later to enroll in nursery school while 35% enroll primary school without even attending ECE thus affect the effectiveness of basic education which leads to lowering the socioeconomic transformation of local communities

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because of having low knowledge and skills to be invested. This paper therefore, sought to determine the effect of early childhood education on socio-economic transformation in Nyamasheke district in Rwanda.

1.2 Research Objective

The objective of this study was to establish the effect of accessibility of early childhood education on socio-economic transformation of communities in Nyamasheke district in Rwanda.

2.0 Literature Review

2.1 Child Development

The aspects of child maturation seem to have become a massive performs all types over the last 50 years as the field has grown dramatically (Hopkins, 2005). It is indicated that child development in the last quarter-century has been of general and politically passionate concern. Child development has therefore become central in broader societal discussions and policies. When and how might 'schooling' begin even before a child enters school; how much should schools aim for; and how may the wider social surroundings hurt or aid a child's preparedness for future classroom instruction are some of the concerns that have been analyzed in the public eye (Bruner, 2005). The field of child development is multidisciplinary spanning across the domains (social and natural sciences) of developmental biology, psychology, neuroscience, sociology, medicine and philosophy. Theories from these specialized domains have shaped pedagogical philosophies and practices. As a result, the integrated or whole kid method has been proposed, emphasizing the significance of conceiving about and acting around children as full individuals with diverse talents and competencies working in tandem to support their development as a whole (Lindon, 2010). Different study explains that the five periods in a child's development follows a sequence. There is the prenatal period, followed by infancy, next early childhood, then middle childhood and late childhood, and lastly adolescence. The prenatal period which is the first period is the time from conception to birth, whereas the infancy and toddlerhood which spans the period from the period of getting birth up to three years old. This suggests that the study of child development can be tackled from any of these stages. This study however focuses on early childhood (Santrock, 2005).

Assistance for ECD and Community Agencies has viewed as a prominent development objective within 3years old. ECD Policy and Strategic Plan, as well as the EDPRS, take this seriously (EDPRS II 2013–2018). Not only is ECD essential for improved schooling performance and development, but the overall benefit of integrated ECD, which extends throughout academic childhood, is also critical. ECD lowers stunting, atrophy, and hunger in children, as well as their impact on childhood diseases. It lowers infant mortality, enhances birth outcomes, and aids human growth. The advantages are especially noticeable in people and families who are facing social and economic hardships. ECD is increasingly considered as a catalyst for improving maternal and child health (MDGs 4 and 5), assisting to schooling outcomes (MDG2), and, in the long run, pulling people out of poverty (MDG1). This would be mirrored in worldwide policies and programs such as the 'Dakar Plan of Action,' which includes daycare growth and enhancement (UNESCO, 2010).

2.2 History of Early Childhood Education

By establishing Early Childhood Education (ECE) and social economic transformation of communities in Rwanda taking a case study of Nyamasheke district, it's crucial to give a quick overview of ECE. To know existing processes and activities, but also vision for business programs. When Martin Luther (1483-1546) openly criticized inequality due to socioeconomic class in the 15th century, the concept of teaching children became a concern (Auleta, 2009). Rather than complying with cultural traditions that minimal education for the poor, Luther was one of the first to argue that every kid had the access to learn, and thus the concept of mandatory schooling was established (Auleta, 2009; Giardiello, 2013 & Hewes, 2015). The school's role, they argued, was to help youngsters develop their academic, religious, physical, emotional, and social abilities. Later, these viewpoints aided in the establishment of a large network of kindergartens in Germany. His thoughts about inclusive access, nevertheless, did not become a reality until the nineteenth century in America (Giardiello, 2013).

Another educational theorist, John Amos Comenius (1592-1670), supported Luther's beliefs a generation ago. He, too, recognized in the necessity of ECE and expected that it would benefit society. Although Comenius felt that wisdom could not be forced upon a child, he did feel that a skilled master might make a kid hungry to relish information (Auleta, 2019). Early Childhood Education is closely linked to human capital and development. Hence, human capital should be supported by consistent investments because it results into improving life expectancy and longevity, better health of population, and well-educated people among communities which leads to development. At the same time, morbidity and mortality rates are declined. Educated and healthy workforces are being more productive and they receive higher wages. It leads to an improvement in their standards of living and higher consumption as well, thus contributing to economic growth and development of the country. (Shahzad & Ahmed, 2014).

Human capital theory claims that attending school in early stage improves individuals' productive skills such as personal features, general analytical capabilities, and technical capacities. It also holds that wages depends on marginal productivity of people and education attainment linked to social capital. People with social capital have interpersonal relationships that assist them advance in places like the profession and institutions. The well-educated and economically advantaged people are less lonely and excluded from the society than the disadvantaged people with lower education.

The higher their education, the higher wages they earn and the rise of their social status generally (Kingston *et al.*, 2013). So called chartering means that "Students adopt individual and interpersonal attributes that are acceptable for the positions to which their institutions are authorized to allocate them, as well as delayed socialization. Adults, on the other hand, tend to develop characteristics that are acceptable for the responsibilities and functions that their educational levels have allocated to individuals. The rituals of schooling may therefore have socialization effects because the locative role of education is so evident (Kingston *et al.*, 2013). According to (Pulkkinen, 2012), there are three reasons why early childhood education is important in child care. To begin with, ECE is the foundation for a person's life, development, and learning. Preschool in child care is a childhood initiative in which the child and childhood are investigated (Pulkkinen, 2012). ECE contributes substantial value to a kid's development by

<https://doi.org/10.53819/81018102t5041>

providing a variety of impulses for development and change, as well as a peer group environment in which the kid can build material wealth (Pulkkinen, 2012).

As more students play in group activities at earlier ages, engagement in educational settings has gradually increased for decades. Only 60% of 5-year-olds attended kindergarten in 1965, compared to nearly 95% nowadays (National Center for Education Statistics, 2011a). For younger youngsters, there is a comparable but faster growth pattern. Despite the fact that the economic crisis has had an impact on attendance, all types of early development programs, notably corporate nurseries and daycare centers, state-funded pre-kindergartens, nursery special education, and Head Start, have seen growth throughout the years (Barnett *et al.*, 2011 & National Center for Education Statistics, 2011a).

2.3 Availability of Early childhood education

Availability of ECE promotes the quality of living as well as childhood environment which also promote the growth of labor force (Putnam, 2015). This implies that the availability of ECE expresses worries regarding the availability and quality of parenting which also lead to the future socioeconomic transformation of communities. According to Heckman (2018), low skilled parents significantly reduce the availability level of ECE as they do not invest in provision of early childhood education thus proportionally reduces the knowledge and skills development of their children. On the other hand, Reardon et al (2011) established that the ECE initiatives are provided by the government help children to have opportunities related to their future lives and developed communities.

According to Feller *et al.* (2014), the inability to address the fact the level of children's options and the quality of their home situations as well as the socioeconomic transformation of communities may affect the effectiveness of ECE. Zhai, *et al.* (2014) explained that the low availability of early childhood in community reduces the cognitive skills among youths and their social adaptation compared with other quality center-based childcare that have ECE in the local communities. UNESCO (2012) conducted the study related to the education of today and revealed that in developing countries, the increasing availability of early childhood education in developing countries is still very low where only the gross enrollment of ECE was 23% which is also used to be very low.

2.4 Accessibility of Early Childhood Education

The accessibility of ECE especially in Africa is associated with the cognitive gap due to low-income of children of the parents and their literacy level (Dobbins, 2016). According to Hart and Risley (2011), children of low-income families get unequal access to ECE which leads to low development of reading skills and self-future of economic development. The accessibility of children getting early childhood education can be identified along with income lines and parental education (Annie, 2016). According to Espinosa and Garcia (2012) the accessibility of children is mostly found among children' ages birth of four years whose mother educated and employed. This implies that the socio-economic factors are likely to be associated with children' accessibility in early childhood education. Regardless birth origin, Goff *et al.* (2014) indicated that children coming from poor families are less likely to be at the center-based care and more likely to be cared for by a relative at their homes. According to Cook (2015), ECE and care are one of the most

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significant expenses in family budget. This implies that low-income families are especially burdened by high cost of ECE thus reduces the children's accessibility to ECE.

2.5 Affordability of Early Childhood Education

According to Bloom *et al.* (2013), all families that desire or need high-quality pre - school courses must be able to access them at a cost that each family pays. This implies that affordability of ECE programs support families better provision of better education to their children. On the other hand, Helburn (2015) revealed that the ECE goal should be attained so as to ensure the high quality of the offered programming and cheap access without depending on a hidden subsidy from an underpaid early childhood workforce. This also indicates that in the rural areas where they face a challenge of socioeconomic status, the affordability of early childhood education is still a problem thus the families are not aware of compensating their children to afford ECE program.

Goelman and Pence (2017) revealed that the inequities based on financial status, may significantly affect the affordability of ECE because when some parents of low income need an assistant in their daily lives. There should be some specific measures related to the extent through which families are spending relatively to their income which also reflect on prices that do not allow the school to recruit and retain the compensation of the school staff (Siegel & Loman, 2011). However, the inequities are not enough to consider that all families have affordable access to the program of ECE. Ruapp *et al.* (2019) revealed that there should be social economic transformation in communities in order to make effective management of tuition fees and ECE schools' compensation. This implies that communities need to improve their economies in order afford the ECE of their children. Ruapp *et al.* (2019) also added that there should be mechanisms to help families that need any external assistance to pay the cost of a high quality early childhood program.

2.6 Socio-economic transformation in Rwanda

Rwanda is a hilly, landlocked country with a total area of 26,338 square kilometers. It is a component of EAC. By 2020, the demographic is predicted to reach 14.3 million. With 85.3 % residing in rural areas and 95 percent in urban areas, it is primarily an agriculture based country (NISR, 2002). The amount of living born children is estimated to be around 365,000 per year, with 52 percent of the population under the age of 18 years old (Census: 2002). The overall increase in population is 2.2 percent (UNFPA, State of the World Population: 2003), and the birthrate is still high at 5.5 percent (DHS: 2007-2008). The peer group from childbirth to six years of age, which is directly affected by the ECD Policy, is expected to number 2.2 million people, or 24% of the population. There are roughly 1.1 million children from birth to 3 years of age, with another 1.1 million children aged three to six years old (NIS, 2008).

Regardless of the fact that all of Rwanda's housing and welfare facilities was damaged during the conflict and Genocide of 1994, substantial progress has been achieved in re-building these institutions, which is helping exceptional socio - economic development. Rwanda, on the other hand, is ranked 152 out of 169 nations in UNDP's reliable statistics. A relatively short life expectancy is one of the hurdles in strengthening that situation. GDP increased by roughly 7.5 percent in 2010, up from 6.5 percent in 2009. Rwanda is well positioned to address the pressing demands of its parents and children, with most of the national resources repaired and renovated. Rwanda, on the other hand, suffers significant resource limits, but the state is committed to

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children, and every effort will be made to make the efficient use of resources and new means (UNDP, 2010).

It is critical to address a child's basic requirements for contact and excitement, love, security, and education via innovation and creativity in order for him or her to learn and develop in a natural and healthy manner (ECCD, 2009). The Public Investment Policy, which was enacted in 2003, asks for a variety of ECD measures, including increased healthcare and education, with the goal of achieving the UPE. This could also prioritize the development of services, as well as medical coverage, the eradication of malaria, HIV/AIDS, and tuberculosis, and the implementation of family planning programs. It focuses on women's engagement, social solidarity, and the development of life skills. Key components of the Federal Investment Plan are reinforced by the ECD Policy.

The standard of education in each country is determined by its economy, and poverty is one element that hinders successful ECE. Director Pascal of the NCEES in the United States of America remarked that "better education, by increasing real wages, is a key contribution to employees' financial strength. It may tend to the evidence of the resources for ECE students are costly, and that poverty impacts the degree of participation, assistance, and standard of education for ECE students (Decker & Rollefson, 2017). The handicap for poor families to pay all the necessary for the education of their children and thus this will be more difficult for families having children with disabilities because the cost of their education is high than other children without any disability (National Institute of Statistics of Rwanda, 2017).

3.0 Research Methodology

The study employed correlation research design. The target population was 192 respondents and Yamane formula was used to get sample size of 80 school head teachers and 112 teachers. Questionnaire and guided interview were used as data collection instruments. Stratified sampling was used as sampling technique. The simple random sampling technique was also used to pick the respondents from each stratum. The validity of the research instrument was maintained by distributing the research instruments to the expert respondents in the area of the study. The IBM SPSS software version 21 was used in data management. The reliability was maintained by making pilot study that provided reliability of the research instrument and got 89.5% using Cronbach's Alpha and considered to be reliable as it was greater than 70% as recommended.

4.0 Research Findings

The study sought to examine the effect of early childhood education on socio-economic transformation of communities in Rwanda. The research findings are presented into subsections.

4.1 Early Childhood Education

This study assessed the level of accessibility of early childhood education in Nyamasheke district. Both questionnaire and guided interview were used as data collection instruments and employed to the study respondents.

4.1.1 Level of accessibility of ECE in Nyamasheke District

The study results on the level of accessibility of ECE in Nyamasheke District is presented in Table 1

Table 1: Level of accessibility of ECE in Nyamasheke District

Statements	SA		A		U		D		SD		Mean	Std
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
70% and above of pupils can access ECE	11	10.5	20	19	22	21	27	25.7	25	23.8	2.84	1.29
18% of pupils hardly access ECE	13	12.4	23	21.9	22	21	32	30.5	15	14.3	3.12	1.26
12% and below of pupils do not access ECE	34	32.4	32	30.5	14	13.3	15	14.3	10	9.5	3.2	1.48
Pupils of ECE take short distance to reach the school	17	16.2	19	18.1	17	16.2	28	26.7	24	22.9	3.1	1.48
Increased illiteracy level due to inaccessibility of ECE	29	27.6	31	29.5	14	13.3	17	16.2	14	13.3	2.92	1.33

SD: Strongly Disagree, **D:** Disagree, **U:** Undecided, **A:** Agree, **SA:** Strongly Agree and **Std:** Standard deviation

The findings presented in Table 1 indicates the level of accessibility of ECE in Nyamasheke district. Majority of respondents quantified with the mean of 3.2 and 1.48 of standard deviation corresponding with 62.9% agreed that 12% and below of pupils do not access ECE in Nyamasheke district. This was followed by the respondents' mean of 3.12 and standard deviation of 1.26 corresponding with 34.3% of respondents agreed that 18% of pupils hardly access ECE. This implies that having effective access to ECE in Nyamasheke district is still a challenge. According to Hart and Risley (2011), children of low income families get unequal access to ECE which leads to low development of reading skills and self-future of economic development.

Despite, the mean of 3.1 and standard deviation of 1.48 corresponding with 34.3% agreed that Pupils of ECE take short distance to reach the school. This also implies that majority children attending ECE in Nyamasheke face various problems associated with the distance covered from home to school. However, the mean of 2.92 and standard deviation of 1.33 corresponding with 57.1% of respondents agreed that there is an increased illiteracy level in Nyamasheke district due to inaccessibility of ECE while the mean of 2.84 and 1.29 of standard deviation which corresponds

<https://doi.org/10.53819/81018102t5041>

with 29.5% of respondents agreed that 70% and above of pupils can access ECE in Nyamasheke district. This implies that majority of children in this district do not have access to ECE which sometimes discourage the socio-economic transformation of communities in the area. According to Espinosa and Garcia (2012) the accessibility of children is mostly found among children' ages birth of four years whose mother educated and employed.

The school head teachers were given a guided interview on accessibility of early childhood education in Nyamasheke district and revealed *“that the accessibility of ECE in Nyamasheke district is still having a gap as the ECE schools they are still insufficient especially in rural areas of the district.”* This implies that the socio-economic transformation of communities is still having a problem due to inadequate ECE schools.

4.1.2 Level of availability of ECE in Nyamasheke District

Table 2: Availability level of ECE in Nyamasheke district

Statements	SA		A		U		D		SD		Mean	Std
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
80% of pupils enroll automatically in primary school	27	25.7	34	32.4	17	16.2	16	15.2	11	10.5	2.91	1.3
10% of pupils in ECE experience poor infrastructures	38	36.2	40	38.1	5	4.8	13	12.4	9	8.5	2.88	1.28
10% of pupils face financial burden in ECE	26	24.8	34	32.4	16	15.2	18	17.1	11	10.5	2.92	1.33
There is insufficient ECE schools	29	27.6	25	23.8	14	13.3	19	18.1	18	17.1	2.80	1.3

SD: Strongly Disagree, **D:** Disagree, **U:** Undecided, **A:** Agree, **SA:** Strongly Agree and **Std:** Standard deviation

The findings presented in the Table 2 indicate the level of availability of ECE in Nyamasheke district. Majority of respondents having the mean of 2.88 and 1.28 of standard deviation corresponding with 74.3% of respondents agreed that 10% of pupils in ECE experience poor infrastructures. This implies that the inadequate and poor infrastructure discourage the performance of ECE in Nyamasheke district which may indirectly affect the socio-economic transformation of communities. The availability of ECE promotes the quality of living as well as childhood environment which also promote the growth of labor force (Putnam, 2015). Despite, the mean of 2.80 and standard deviation of 1.30 corresponding with 51.4% of respondents agreed that the ECE schools are not insufficient in Nyamasheke district. This also implies that the

insufficiency of ECE schools affects the provision of quality education thus reduce the skills and competent graduate in Nyamasheke district.

The school head teachers were given a guided interview on availability of ECE in Nyamasheke district and stated that *“the availability of ECE in Nyamasheke district is found in the area where families with high financial capacity are settled.”* This implies that there is no equity of ECE distribution in Nyamasheke district due to the availability of ECE schools found in the area of well-educated parents.

4.1.3 Level of Affordability of ECE in Nyamasheke district

Table 3: Affordability level of ECE in Nyamasheke district

Statements	SA		A		U		D		SD		Mean	Std
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
5% of parents can afford ECE private schools	22	21	35	33.3	20	19.0	15	14.3	13	12.4	2.63	1.30
65% of parents can afford ECE public schools	12	11.4	21	20	19	18.1	34	32.4	19	18.1	2.74	1.28
30% of parents do not manage about ECE	28	26.7	40	38.1	0	0	21	20	16	15.2	2.97	1.27
There is an issue associated with affordability of ECE	23	22.0	28	26.7	18	17.1	20	19.0	16	15.2	2.90	1.34

SD: Strongly Disagree, **D:** Disagree, **U:** Undecided, **A:** Agree, **SA:** Strongly Agree and **Std:** Standard deviation.

The findings presented in the Table 3 indicate the level of affordability of ECE in Nyamasheke district. The majority having the mean of 2.97 and 1.27 of standard deviation corresponding with 64.8% of respondents agreed that 30% of parents do not manage about ECE. This implies that the understanding and caring about ECE among of parents in Nyamasheke district affect the productivity of schools providing basic education in Nyamasheke district while can also discourage the human capital development. Goelman and Pence (2017) revealed that the inequities based on financial status, may significantly affect the affordability of ECE because when some parents of low income need an assistant in their daily lives.

This was also followed by the mean of 2.90 and standard deviation of 1.34 corresponding with 48.7% of respondents agreed that there is an issue associated with affordability of ECE in Nyamasheke district. This means that lack of affordable ECE schools could be a challenge to poor families who are like to enroll their children in nursery schools of Nyamasheke district thus affects

their intellectual development. Siegel and Loman (2011) indicated that specific measures related to the extent through which families are spending relatively to their income which also reflect on prices that do not allow the school to recruit and retain the compensation of the school staff.

Similarly, the mean of 2.74 and the standard deviation of 1.28 corresponding with 31.4% of respondents agreed that 65% of parents can afford ECE public schools. This implies that majority of parents in Nyamasheke district are unable to afford the cost of education incurred in ECE schools of Nyamasheke district. Ruapp *et al.* (2019) revealed that having effective financial management is one the factors that could strengthen families to afford the cost of schooling. However, the mean of 2.63 and 1.30 of standard deviation corresponding with 54.3% of respondents indicated that 5% of parents can afford ECE private schools. Ntakirutiamana, Mutegi and Wanjala (2021), revealed that the amount of education released by households to afford the private cost of education depends on socio-economic status. This shows that there is a shortage in Nyamasheke district that are able to afford the available ECE schools and this can affect them to automatically enroll the children in primary school.

The school head teachers were given a guided interview on affordability of early childhood education in Nyamasheke district to support the obtained quantitative findings and revealed that *“the ECE schools in Nyamasheke district are affordable because majority of children come from poor families and their parents do not get funds to incur the cost of education required in ECE”*. This implies that the cost of ECE is burden to majority of parents in Nyamasheke district and get hard to develop the socio-economic status.

4.2 Socio-economic Transformation of Communities in Nyamasheke District

The respondents of the study provided their responses related to the Socio-economic Transformation of Communities in Nyamasheke district.

Table 4: Socio-economic transformation of communities

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Increased revenue collection	105	1.00	5.00	2.52	1.33
Adequate infrastructural development	105	1.00	5.00	2.24	1.26
there is an improvement of job creation	105	1.00	5.00	2.75	1.17
Effective provision of knowledge and skills	105	1.00	5.00	2.33	1.53
Effective cultural integration and growth	105	1.00	5.00	2.64	1.20
Valid N (listwise)	105				

The findings presented in the Table 4 indicate the status of socio-economic transformation of communities in Nyamasheke district as was quantified by the respondents. It was revealed that improvement of job creation can be considered to be the factor associated with socio-economic transformation as agreed the mean of 2.75 and the standard deviation of 1.17 agreed that there is

an improvement of job creation. This implies that state of job creation is still at lower level thus may affect the level of level living conduction in local communities. Michal (2019) revealed that creating jobs requires economic transformation and investments in human capital. However, Michal (2019) also added that helping to equip the next generation of workers with the skills needed to tackle the types of jobs which the changing worlds of works could require.

On the other hand, 2.64 of the mean and the standard deviation of 1.20 of the respondents indicated that there is an effective cultural integration and growth in Nyamasheke district. Similarly, it was mentioned that the mean of 2.52 and the standard deviation of 1.33 indicated that there is an increased revenue collection in Nyamasheke district. This implies that collection of revenues in Nyamasheke district is still low and cannot support the households in Nyamasheke district to make full access of their children to earl childhood education thus affect the effect socio-economic transformation of communities. However, the mean of 2.33 and the standard deviation of 1.53 indicated that there is an effective provision of knowledge and skills in Nyamasheke district. This implies that the provision of adequate knowledge and skills in this area is low thus reducing the competition level among the community members. As per the OECD (2016), education used to be largely about teaching kids something; now, it's about ensuring that students build a trustworthy compass and driving skills to navigate a more uncertain, unstable, and confusing world on their own. As a result, according to the OECD (2016), teachers should try to take a more active part in their very own education.

The school head teachers were given a guided interview on socio-economic transformation of communities in Nyamasheke district to support the obtained quantitative findings and revealed that *“the socio-economic transformation of communities is still weak in Nyamasheke district where majority of graduates are not effectively competent at the labor market”*. The respondents also added that *“parents are also not aware of managing the provision of education to their children at the standard level”*. This implies that parents need training or mobilization associated on providing the standardized education to their children.

4.3 Effect of ECE on Socio-economic Transformation of Communities in Nyamasheke District

This study assessed the effect of the accessibility of ECE on socio-economic transformation communities in Nyamasheke district. Therefore, the study performed linear regression analysis to indicate the extent to which the independent variables (accessibility, affordability and availability of ECE) can affect the socio-economic transformation of communities. However, the study also performed the correlation analysis in order to find out the direction of relationship between ECE and socio-economic transformation among communities.

Table 5: Relationship between ECE and Socio-economic Transformation among communities

Correlations		ECE	socio-economic transformation
ECE	Pearson Correlation	1.000	.555**
	Sig. (2-tailed)		.000
	N	105	105
socio-economic transformation	Pearson Correlation	.555**	1.000
	Sig. (2-tailed)	.000	
	N	105	105

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

The results established in Table5 indicates that there is a statistical significance moderate positive relationship between ECE and socio-economic transformation of communities thus P-value = .000 which less than 0.01 as the level of significance and Pearson coefficient of correlation $r = .555$ which is high. This also implies that there is an association between ECE and socio-economic transformation of communities tends to positive direction. According to Shonkoff (2019), the investments established to provide ECE, and involvement of parents to education could be relatively correlated with the quality of education provided by a relevance learning institution which also leads to transform the socio-economic status among local communities.

Table 6: R Square results of ECE on Socio-economic Transformation of Communities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.557 ^a	.310	.289	1.00907	.310	15.108	3	101	.000

a. Predictors: (Constant), Availability of ECE, Accessibility of ECE, Affordability of ECE

The results in Table 6 indicate the R Square results of ECE and socio-economic transformation. The findings present the R Square of .310. This means that the variables like accessibility of ECE, affordability of ECE and availability of ECE are able to affect the socio-economic transformation of communities in Nyamasheke district. This also implies that the accessibility of ECE is ready to affect the socio-economic transformation of communities at 31.0% and the remaining 69% can be affected by other variables. Helmers and Patnam (2019) indicated that children meet various challenges associated to their future adaptation due to inadequate of having basic education effectively and efficiently.

5.0 Summary of the findings and Conclusion

The objective of this study was to establish the effect of ECE on socio-economic transformation of communities in Nyamasheke district in Rwanda. The study revealed that there is 31% of accessibility of ECE able to affect the level of socio-economic transformation of communities as indicated by the R square = .310. This implies that the remaining 69% of socio-economic transformation of communities can be affected by other factors. On the other hand, the findings

also revealed that there is a statically significance moderate relationship between accessibility ECE and socio-economic transformation of communities thus P-value = .000 which is less than .01 as the level of significance and Pearson coefficient of correlation $r = .555$. This study concludes that the high standard of accessibility of ECE can increase the socio-economic transformation of community in Nyamasheke district. Despite, the lack of standardized ECE in Nyamasheke district can reduce the level of socio-economic transformation in communities of Nyamasheke district.

6.0 Recommendations

Basing on the presented findings and drown conclusion, the following recommendations were addressed to the Ministry of Education, Non-governmental Organizations and Parents.

1. The Ministry of Education which represents the government in the sector of Education should provide the adequate infrastructures of ECE schools in Nyamasheke district to improve and make easy accessibility of ECE in the area thus also increase the literacy level.
2. The Non-governmental Organizations should invest more in ECE of Nyamasheke district in order to develop youth who are competent and able to compete at the labour market.
3. Parents having children ready to enroll in ECE schools of Nyamasheke district about the important of getting ECE for the purpose of removing out the number of parents that enroll their children directly in primary schools and also those that do not take care of ECE.

Acknowledgments

This work is the result of the collective efforts of many people to whom I would like to express my gratitude. There are so many who have helped me during this process. My sincere thanks goes firstly to the Almighty God who has granted success during my studies and Mount Kenya University Rwanda lecturers, especially in the school of Education, for their various contributions.

I want to express my gratitude to my supervisor, Dr. Mukamazimpaka Marie Claire, for gladly guiding me through the completion of my dissertation. Her wise counsel, patience, courage, passion, and suggestions for improvement have helped me to broaden my horizons. My appreciation goes to Nyamasheke district officials, teachers and residents for supporting the researcher during the study. Special thanks go to my family members and colleagues especially my husband Mr.HABIMANA Gervais, our children Mugisha HABIMANA Elmain Crespo, INEZA SANGWA Eloi Happy and SHEMA Alain Peace Claudien.

A special feeling of gratitude to my loving parents, Mr and Mrs.NSENGUMUREMYI Cyrille and MUHIMPUNDU Rose's encouragement and admonition to persevere echo in my ears. My sisters and I have always been close and are very dear to me. I also dedicate this study to my many friends and faith community who have morally and spiritually sustained me throughout my life. May God reward all of you!

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