

# Functionality of Secondary Education: An Investigation into Numeracy, Literacy and Civic/Citizenship Competencies of Secondary School Graduates in Rural Communities of Southwestern Nigeria

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**Abstract** The Functionality of Secondary Education (FSE) system in Nigeria has become a subject of concern among stakeholders. Evidence shows that many secondary school graduates, especially in rural communities of the country, cannot demonstrate basic skills required by the world of work. However, extant studies often devote more attention to functionality of education, generally, than probable causes of dysfunctionality of the system in rural communities. This study, therefore, investigates the current level of functionality of secondary education (functional literacy, functional numeracy, and functional civic/citizenship competence) in rural communities of Southwestern Nigeria (RCSN). The study was located within a post-positivist paradigm that incorporated the convergent parallel design in the collection, analysis, and interpretation of qualitative and quantitative data. The multi-level mixed methods sampling technique was adopted for the study. Three states with the highest rural demography in the southwest zone of Nigeria were purposively selected, while at the second stage, the cluster sampling method was used to select one Local Government Area from each of the three senatorial districts per state. At the third stage, the simple random sampling technique was used to select a secondary school from each Local Government Area. Lastly, proportionate-to-size sampling technique was adopted for the selection of 467 secondary

school graduates. The participants for Key Informant Interviews comprised three principals and three senior officials from the Teaching Service Commission and Ministry of Education in each of the 3 states. A research instrument, Secondary School Graduate Aptitude Test (SSGAT) with a reliability coefficient of 0.715 was used for the study. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically. The FSE was found to be moderate for Civic/Citizenship Competence (60.8 percent) while it was low for Functional Literacy (50.3 percent) and Functional Numeracy (45.88 percent). The study concluded that urgent interventions are fundamental to stemming the ebbing tide of FSE in RCSN.

**Keywords** Functional Literacy, Functional Numeracy, Civic/Citizenship Competence, Functionalist Secondary Education, Rural Education

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## 1. Introduction

Education serves as the bedrock of the socio-economic and political development of any nation. Developed countries like Japan, Russia, and United States of America,

among others, have achieved various breakthroughs due to their commitment and dedication to ensuring a functional educational system [1]. Even developing economies have attributed their developmental strides to a strong commitment to the functionality of their educational systems. It is instructive to note that in the early years of these developed countries' nationhood, their leaders recognized the linkages between human capital and socio-economic development. These countries have proven beyond measure that there exists a correlation between functional education and development [2].

In 1872, almost three decades after Christian Missionary had brought Western education to Nigeria, Japan adopted a modern educational system which galvanized its education and later accelerated its developmental growth. The Japanese system was designed to enhance the welfare of humanity, develop the full personality, create love for truth and justice among students, and promote commitment to academic freedom, equal opportunity, and coeducation [2,3]. However, by 1952, which was eight years before Nigeria gained its independence, Japan was still ranked as a less developed country; but by 1953, its economy took a giant leap achieving phenomenal growth, which by 1968 made it the world's second largest economy. That feat was made possible due to Japan's commitment to functional education in producing a skilled labour force with a strong commitment to work [2,3].

It is, of course, universally acknowledged that China has become a global economic giant far ahead of several countries from both European and American continents. The sudden trajectory of the Chinese economy typifies the pivotal role of functional education. In 1985, China was still grappling with problems associated with how to forge a nexus between education and national development [4]. China owes its sudden flight from economic quagmire to its commitment to functional education and production; its citizens who choose not to pursue formal learning became productive apprentices and this catapulted it to become a world superpower [2]. By 2013, China became the world's second largest economy based on both nominal and purchasing power parity (PPP) Gross Domestic Product (GDP). It also became the world's largest exporter and importer of goods, and by 2019, it was reported to be the world's largest economy on PPP. In addition, China is among the world's fastest growing economies [5,6]. The sudden but stunning growth within a short period, despite its problems in the 80s, bears eloquent testimony of what functional education is capable of offering to any nation that is committed to it.

Malaysia, one of the leading emerging economies from Asia, remains one of the top destinations for Nigerians in their educational pursuits. It is on record that the number of citizens leaving Nigeria is on the rise [7]. This is owing to Malaysia's investment in education- the outcome of which is that the majority of their children attend primary school, while more than 50 percent are enrolled in secondary

school. Malaysia has also achieved one of the lowest poverty rates of about 26 percent among all less developed countries in the world by combining educational investment with employment creation [8]. Other developed countries which are globally acknowledged because of their commitments to functional and higher standard of education are Russia, Canada, the United States of America, Finland and the United Kingdom, to mention just a few [7].

It is worth noting that the Africa Human Development Department (AFTHD) of the World Bank has pointed out that expanded access and improved quality of secondary education in Sub-Saharan Africa are two of the key ingredients for economic growth in the region [9]. Secondary education grooms the recipients with the capacity required for the next educational level or trade after primary school. The designation "secondary education" varies across the globe and may be referred to as high schools, lyceums, sixth-form colleges, gymnasias, or vocational schools, and so on. The usage is largely dependent on the desire of the immediate environment [10]. In Nigeria, it is called high or secondary school. Also, Nigerian secondary education is of a six-year duration and split into junior and senior levels of three years each. This level of education completes the provision of basic education which starts in primary school and lays the foundations for human development and lifelong learning through skills-oriented instruction [11].

However, the demand for secondary education in Africa continues to rise astronomically, compared to other regions of the world [9]. In relation to this, Verspoor and Bregman [9] pose the questions: What are the provisions for primary school leavers? If opportunities to further their learning do not exist, how would their useful living be guaranteed? Will the parents continue to render support to their wards? [12], similarly, observed that Africa is under-educated at secondary education if placed comparatively with other regions of the world. The lower secondary education gross enrolment rates are below 50 percent while more than half of the children from poorest countries who ought to be enrolled, fail to do so. These consequences seem to be the failure of governments and development agencies to secure successful schooling [13]. Universalizing access to education is clear but what ought to be done to achieve this, is often neglected [12].

Verspoor and Bregman [9] succinctly capture the roles of secondary education in the society, when they state that secondary education must fill dual roles: providing skills, knowledge, and technical training for youth planning to enter the labour force, while at the same time preparing others for opportunities to further their studies in higher education. Unfortunately, it often fulfills neither role. A shortage of schools, as well as demand-side constraints such as the inability to pay for education, has slowed the expansion of secondary education coverage, and the quality of secondary schooling is often poor. At the same

time, the United Nations Educational, Scientific and Cultural Organization Institute for Statistics (UNESCO UIS) and the Global Educational Monitoring (GEM) affirm that secondary education can alleviate perennial problems of unemployment in the lives of its global citizens and, if all adults completed secondary schooling, the global poverty rate would be more than halved [14]. Similarly, UNESCO [15] posits that developing job-related competencies among the poor and youth is a crucial way to progress in reducing poverty. Secondary education therefore remains an important sub-sector of education in the preparation of human capital for development, as it creates a vital link between the world of work and higher training [16]. It also serves dual purposes of being both a transitional trajectory between primary education and higher education, and an occupational pathway for secondary school leavers to have useful living either in the interim, if they lack the wherewithal, or are unwilling to continue to tertiary education at any later date.

Generally, education refers to the process of skill development, inculcation of right values, and impartation of knowledge [17], [18]. Functional education, however, differs in that it is more holistic, comprehensive, and meaningful. Several scholars have queried the type of education handed to Nigeria by its colonizers and called for a complete overhauling so that young Nigerians could be equipped with appropriate skills and competencies [19]. Functional education arms the recipients with the knowledge and skills required for the performance of productive tasks. It is the type of education that empowers people to meet their developmental needs [1]. Adewale [20] posits it as an education that identifies and solves problems for the benefits of end users through skills and knowledge, while Udoh and Akpan [21] contend that for education to be adjudged functional, it should produce individuals who will be able to transform raw materials into finished products for the benefit of their society.

Asaju and Sunday [1] further state that functional education advocates for the capacity to perform productive tasks in which emphasis is premised on an anticipated application and transferable learning into action. Functional education emphasizes self-reliance for the recipients. It prepares young ones to be on their own, using their knowledge and skills for wealth creation and employment opportunities [19]. In essence, it is not the type of education with mere academic knowledge; rather, it is one with skills and competencies that can make things happen in society. Osaat [22] states that functional education is seen as a process which aids in the provision of skills and preparation of young ones for socio-economic functions. Todaro and Smith [8] further elucidate on what functional education can achieve, most especially, in developing countries where farmers with primary education will be more productive, and trained artisans such as mechanics, who can read and write, will get more patronages, while secondary school graduates with

arithmetic knowledge and clerical skills required for administrative bureaucracies would most likely get spaces in formal organizations.

Functional education at secondary level is a task that ought to be accomplished. If not, its effects become more evident as recipients of such dysfunctional education go into society or transit to a higher level of education. A functional education is not only useful to the recipients; the society as a whole also benefits, ultimately [23]. In other words, functional education helps to showcase why formal learning is worthwhile by creating a nexus between education and development. This can only be visible and appreciated if the society benefits either covertly or overtly. Functional education is not driven by unnecessary emphasis on certification, but rather on productive skills and useful knowledge. Rice and Schwartz [24] acknowledge that the central purpose of education is to prepare those who will contribute meaningfully to the upliftment of societal institutions. In essence, a society will bear the brunt of a dysfunctional educational system, if left unattended to for a long time. In summary, functional education supports human capital development.

However, the institutional mechanism for developing skills and knowledge remains formal schooling at either primary, secondary, or tertiary levels. Owing to this, several countries from Africa, Asia and Latin America have committed large fortunes to its pursuit. Yet, after several decades of expending hundreds of billions of dollars on educational enterprise, the life of average citizens seems only little improved [8]. It may be naive to jump to conclusions and to condemn education as not producing the desired result in these parts of the world. But, it is perhaps more appropriate to differentiate between functional education and acquisition of mere certificates in these countries.

In this study, the functionality of secondary education is traceable to outcomes of successful schooling that can produce students imbued with critical and innovative skills, disruptive thinking and civic competence skills [25]. Other indicators of functional education include occupational skills and competencies useful in the labour market which can make its graduates self-reliant [26]. The Sustainable Development Goal (SDG) indicator 4.6.1 states that a proportion of population in a given age group should achieve at least a fixed level of proficiency in functional literacy and numeracy skills. The target age group for this SDG indicator is 15 years and older, which falls within the purview of this study. The SDG 4 was designed towards ensuring inclusive and equitable quality education and promotion of lifelong learning opportunities for all. The SDG 4.6 states that its target is that, by 2030, all youth and a substantial proportion of adults should have achieved literacy and numeracy. The global indicator for this target is directly related to the measurement of learning outcomes or functionality of secondary education in the context of this study. The SDG indicator, 4.7.1, which is on global

citizenship education, also calls for promotion of civic competencies, gender equality, cultural diversity, human rights, peace and nonviolence, and that these should be mainstreamed at all levels in education policies, curricula, teacher education and student assessments [27,28]. However, in this study, 3 indicators are considered, namely functional literacy, functional numeracy, and civic/citizenship competence.

Functional literacy, the first indicator of functionality of secondary education, measures secondary school graduates' competence in terms of literary ability to know if it is sufficiently functional. In the United States of America, a committee of scholars assembled by the National Adult Literacy Survey (NALS) adopted a definition of literacy as the ability to use printed and written information to function in a society, to achieve an individual's goals, and to develop that individual's knowledge. The National Commission for Mass Literacy, Adult and Non-formal Education (NMEC), a Nigerian national agency, also explains that literacy rate is derived through the percentage of persons from age of 15 and above who can read and write simple statements in their everyday life [29]. These definitions go beyond mere decoding of ordinary text. It has to do with having the capacity to handle various tasks in real life situations [30]. Literacy is also a good indicator of educational achievement since it usually reflects a minimal level of successfully completed schooling [31]. Murray [27] observed functional literacy in a variety of contexts ranging from sociological to economic. He concluded that a sociological view of literacy relates to reading tasks individuals do in their daily lives while an economic view looks at the economic consequences that accrue when individuals are unable to cope with unfamiliar reading tasks.

In Nigeria, proficiency in the English language at secondary level of education cannot be overemphasized because it is the language of instruction in schools and a prerequisite for academic performance. However, UNESCO had reported that illiteracy is prevalent in developing nations, including Nigeria in Sub-Saharan African countries [31]. The NMEC, an agency in charge of national literacy in Nigeria put the illiteracy rate at 35% [29]. This worrisome percentage shows that more than a third of the country's total population lacks literacy skill, which is a strong indicator that Nigerian education requires more interventions. It may be a pointer to the need for greater investment in education, and an urgent need to do more through adequate funding of the sector. Another report by the United Nations Development Programme (UNDP) put Nigeria's literacy at 69.1% compared to Cuba, Slovenia and Poland whose literary figures stood above 99% [29]. Judging by the latest statistics from the National Population Commission (NPC) in 2019 that estimated the population of Nigeria to be 198 million [32], it means that the 35% figure of illiteracy by NMEC represents almost

70million people, which is alarming. It thus implies that more than a third of the most populous black nation lacks the capacity to use or interpret printed or written materials. Also, the 70 million threshold is huge and more than the entire United Kingdom population which in 2019 stands at 66.4 million, and 36% of entire West African States' population which is 391, 440million according to the United Nations Department of Economic and Social Affairs [32-34]. The statistics above confirm the low level of literacy. It is also clear that the carry-over effects of dysfunctionality in literacy from schools are more pronounced in the society [35]. It then seems that the deficiency in reading and writing skills among secondary graduates in Nigeria is a product of dysfunctional education. Given the current situation, the realization of the goal of secondary education as it relates to literacy and as prescribed by the National Policy on Education, may remain elusive unless a solution is proffered [36].

Functional numeracy, the second indicator of functionality of secondary education is concerned with the ability to access, use, interpret and communicate mathematical information and ideas for engagement in real life situations and roles. Numeracy, in this context, emphasizes the application of mathematical knowledge to everyday life as it manifests mostly in socio-economic affairs and other related issues [37]. Numeracy is not just the ability to manipulate figures; rather, it is the numerical competence demanded by employers and a skill needed by individuals to function and fit-in in real life situations. Meanwhile, the current economic climate and competition for limited market opportunities have made it more imperative to be employable or transact businesses independently [38]. If learners have acquired adequate knowledge in mathematics, they easily develop numeracy, reasoning, thinking, and problem-solving skills [39]. In other words, mathematics is a fulcrum for numeracy skill. In Nigeria, it has been reported that the government has been making several concerted efforts to make mathematics a subject of interest of learning for students and teachers alike. Despite these measures, mathematics still remains a great challenge [40].

The civic/citizenship competence, the third indicator of functionality of secondary education in this study, is located among four central functions of education identified by [41]. For education to be adjudged as well-functioning, it must fulfil these functions for the society, namely, equal opportunities function, selection function, allocation function and socialization function. The socialization function involves preparing youths for active citizenship. Thus, schools have pivotal roles to play in the formation of active and participating citizens and can help in the promotion of civic competences. This is equally in line with the SDG 4.7.1 indicator which is global citizenship education that calls for the promotion of civic competencies, gender equality, cultural diversity, human rights, peace and nonviolence to be mainstreamed at all

levels in education policies, curricula, teacher education and student assessments [27,28].

Meanwhile, the current National Policy on Education (NPE) of the [36] drafted by the Nigerian Educational Research and Development Council (NERDC), which is the national guiding instrument for the operation of national education in Nigeria, stipulates that education policies must be implemented within the framework of the overall philosophy of the nation. Section 1, subsections 3e, 8b and 8c, respectively, prescribe the following:

- Education is to be qualitative, comprehensive, functional, and relevant to the needs of the society.
- Teaching shall be practical, activity based, experiential and Information Technology (IT) supported.
- And education shall be related to overall community needs.

The NPE prescribes that, among others, education should be functional, relevant, practical, experiential and based on community needs as enumerated in the quoted subsections above. However, how far these goals have been achieved, remains to be seen in urban centres and, more especially, in rural areas. The situation seems to be more precarious in rural communities of Nigeria than imagined. Rotimi [42] reported that education facilities in rural communities of Nigeria are disheartening in this 21<sup>st</sup> century. The infrastructural deficiencies range from broken classroom walls to open roofs, damaged chalkboards to damaged furniture, while the bushy environments house reptiles and classes are overcrowded. In order to achieve the purpose of this study, the study attempts to answer the following research question:

1. What is the current level of functionality of secondary education (functional literacy, functional numeracy, and functional civic/citizenship competence) in rural communities of Southwestern Nigeria?

## 1.1. Literature Review

### 1.1.1. Functionality of Secondary Education

The notion of "functional education" has been conceptualized by various scholars from different perspectives. Adewale [20] posits that functional education is an educational experience that ensures end users' useful knowledge and skills for the ultimate benefit and development of individuals and society as a whole. Udoh and Akpan [21] agree that functional education is a form of education that can ensure practical living for individuals to be able to produce raw materials and tools required in today's market, through which the fortune of a nation can be redirected from a consuming to a manufacturing one. Asaju and Adagba [1] submit that functional education is a kind of education that assists a society to meet its developmental needs and ensure productive performance by the recipients. Likewise, Ojokheta and Omoregie [44] interpret functional education as an education that results

in a cumulative process which has a positive impact on skills and attitudes which its recipients can demonstrate for the usefulness of society. The National Policy on Education in the Federal Republic of Nigeria [36] further prescribes that education to be given to Nigerian citizens should be relevant and functional so that its society can benefit ultimately. Giving such education shall be activity based, experiential and shall be related to overall community needs. Similarly, Nwaka [19] affirms that functional education should guarantee self-reliance for the education recipients either in creating wealth or in taking job opportunities. Osaat [22] as well states that functional education should prepare youths for socio-economic and political functions. This kind of education is not only useful to the recipients, but society as a whole benefits ultimately [23].

In addition, Elombah [45] sees functional education as education that aims at empowering its graduates to be able to adapt to modern society in accessing job opportunities, handling social media such as Facebook, Twitter, and My Space, learning about teleconferencing, webinar, etc., teaching about citizenship, children's rights, and investments in the capital market. In other words, functional education serves as a prerequisite for societal development. Education not only contributes by adding value to the standard of living of people but also strengthens their capacities to make meaningful contributions to society [46]. Education that will be categorized as functional should be capable of producing developmental strides in society, and such should lead to the attainment of manpower development, economic prosperity, and healthy living.

Nigeria as a nation is not different from other nations of the world and has an educational system that clearly stipulates what is expected to be achieved at the end of each level of education. Thus, section 3 of the Federal Republic of Nigeria's [36] National Policy of Education states that Post-Basic Education and Career Development (PBECD), inclusive of senior secondary education, is to cater for manpower needs in commerce, applied sciences and other areas at sub-professional grades by providing job-specific skills for self-reliance. It is worth noting that there is a nexus between a functional education and the development of nations of the world [47]. However, Babarinsa [48] makes the point that the current state of secondary education in Nigeria leaves much to be desired and that there is justifiable apprehension that in the next frontier of knowledge when nations of the world are being counted, it is doubtful if Africa, judging by available evidence, will be reckoned in. What is responsible for this quagmire is the current state of our primary and secondary education in Africa and Nigeria, in particular. School leavers seem unprepared. To generate outstanding scholars, policy makers need to revisit and rejig our primary and secondary education programmes like in the past Era of Awolowo, when primary school leavers were so good they

could be hired as teachers, and secondary school leavers were considered good enough to handle any assigned job. The competencies of school leavers during that era were never a subject of controversy as it is today [48]. The foregoing, and various scholars' positions above, have justified that functionality of secondary education is not just a mere issue but a critical requirement for the survival of both higher education institutions (HEIs) and institutions needed to sustain the wellbeing of the nation.

### 1.1.2. Numeracy and Literacy Skills

Literacy has been conceptualized in various ways by several scholars, depending on the context, purpose, or usage, and who is conceptualizing it [50]. The term has undergone metamorphosis and is still changing beyond the ability to read and do numeracy (Mmasa & Anney, 2016). Roberts (2005) further contends that literacy has moved beyond its traditional meaning of being thought of as having mere skills for reading and writing; rather it has moved to cover issues such as capacity to appreciate communication in the form of printed text and the spoken word. Similarly, the Department of Education and Skills (2011) adds that literacy includes the capacity to appreciate different forms of communication such as digital media, spoken language and printed text. In addition, reading literacy involves understanding, reflecting and usage of written text, while mathematical literacy deals with understanding the roles of arithmetic operation in the world (OECD, 2009b). Thus, the application of these skills in either the informal sector or formal organizations, cannot be overemphasized. Even illiterate or semi-literate persons apply them daily in transactional operations such as selling, depositing money in banks, filling in cash books, recording in ledgers, negotiating businesses and other activities. The formal sector is not an exception in the application of literacy and numeracy.

Due to the paramount importance of acquiring these skills, some countries all over the world under the auspices of the Organisation for Economic Co-operation and Development (OECD) mounted a program known as Programme for International Student Assessment (PISA) which was established in 2007. Basically, the PISA, in every three years, measures the extent to which students can apply knowledge of reading, mathematics, and science literacy to real-life situations and societal involvement [52]. This test is essential because it gives insights into the quality and efficiency of school systems across the globe [53]. The ultimate purpose of such assessment is to help establish to what extent basic life skills, which are critical in having useful living or capacity to further higher learning, has been achieved. This serves as assurance that education is producing the desired output. Commenting on what education should achieve, Mkumbo [54] noted that if education cannot fulfil the purpose of preparing individuals to have the ability to read, write and solve arithmetic problems, such education should be described as a failure.

In other words, such educational system has failed in making the affected children worthwhile individuals in terms of having education for useful living, which functional education is meant to achieve in the context of this study.

In Malaysia, Chew [55] conducted an empirical study on literacy among 5,635 secondary school students drawn from across the country. The findings showed that overall basic literacy stood at 95.2%, while the critical literacy rate was 71.2%. It was further affirmed that Malay language literacy was better than the rate for English and Mathematics. Vignoles [56], in a study on the economic value of literacy and numeracy, found that a significant percentage of personnel lacks the required skills for topmost jobs, so training to bridge the gaps is required. However, the study also showed that those who have strong parental background displayed higher levels of skills. Thus, parental background tends to have an influence on the levels of both numeracy and literacy skills. Tanzania is no exception. Kumburu [57] revealed that the government of Tanzania began to pay greater attention in 2009 to improving reading and writing skills, but an assessment of reading abilities in 2010 showed that the reading abilities of children in the early grades were very poor. Children from low socioeconomic environments were found to have no literacy support and as a result, there is a risk that their reading and writing skills may not develop proficiently as expected. This may be owing to abject poverty of parents who struggle for survival daily and as a result are encumbered from offering literacy support, the consequences of which are obvious.

In addition, Ntshuntshe [58] investigated literacy practices with English as the language of learning and teaching in a grade nine classroom in South Africa. The study adopted qualitative methods which involved personal narratives, interviews, and learner portfolios. Statistics showed that the performance of English learners in reading and writing is not below par compared to other nations in Africa. The findings revealed that literacy practices in the country are not adequate to prepare learners for future academic tasks, and as a result, learners are still being confronted with the problem of acquiring basic reading and writing skills. Ngussa [59] also employed a cross sectional study to find out the parent, teacher and pupil factors influencing low literacy in South African primary schools. A simple random sampling technique was employed in selecting 150 pupils from five selected schools, and snowballing was used to reach 150 parents/guardians for the study. Then, 42 teachers were purposively selected from those directly concerned with pupils' literacy matters. Data were collected through questionnaires and document analysis. Descriptive statistics were used to answer all the research questions and binary logistic regression was used to assess pupil-based factors affecting literacy. The results showed factors influencing low literacy among pupils to include poor

interaction with teachers, lack of support with pupils' homework, inadequate facilities, high pupil-teacher ratio, and poor follow-up on pupil's academic progress. Results of the binary logistic model revealed that truancy, limited coverage of reading materials and gender-based factor, mostly among girls, are affecting literacy. This supports other findings that literacy remains a critical issue in Africa, and Nigeria, in particular; requiring more attention than it is currently receiving.

### 1.1.3. Civic/Citizenship Competence

Citizenship education is designed as a means of engaging students to meaningfully learn what can make them to be informed about society through active teaching strategies, so as to make them politically and socially responsible individuals [60]. The proactive strategy of teaching civic/citizenship education from primary and post-primary institutions within the four walls of a classroom remains a great way of inculcating political values and norms into students who, ultimately, will become active citizens once they exit into the broader society. In a similar manner, Eurydice [61] views citizenship education as a form of education that seeks to make young citizens active and responsible individuals who will contribute to their own personal wellbeing and, ultimately, develop the society in which they are members. The gains from introducing citizenship education into the school curriculum are affirmed in a study by [62]. The authors contend that the direct outcomes of civic education are evident in terms of political literacy, critical thinking, and values that citizens exhibit after graduating from schools to society. Effective civic education empowers young ones to have a thorough understanding of politics and the economy and their challenges. It also helps to know how to contribute to social discourse, and to be actively involved in civic responsibilities.

Isac et al [62] also studied a comprehensive educational effectiveness model in relation to students' civic knowledge. Multilevel analysis was applied on the dataset of the Civic Education Study [63] which was conducted among junior secondary-school students. The dataset of 28 countries, 4,136 classrooms, and 93,565 students was incorporated in the analysis. The results showed that opportunities for civic learning offered in classrooms influenced students' civic knowledge and individual characteristics. The analysis established the correlation between civic knowledge and educational effectiveness. Thus, for learning effectiveness to be achieved among students, the place of civic knowledge should be given its rightful place and space. Similarly, Cubero and Pérez [64] analyzed Spain's educational policies in the area of emotional, social, and civic competencies. It was revealed that for educational policies to be effective, the country had to overcome a double challenge that related to the practical implementation of competence-based curricula and transversal competencies assessment. Just like Spain, the Nigerian government has introduced civic education into

the curriculum recently to bring about civic competence among secondary school graduates. This further attests to the prime place of civic knowledge in our educational system, particularly for secondary graduates to be able to function effectively in the society.

## 2. Theoretical Framework

The origins of functionalist theories of school and society are traceable to the French Sociologist Emile Durkheim's (1858-1917) general sociological theory. Durkheim sees education as a social fact that serves the general needs of a social organism [65]. That is, education functions to maintain society by supplying the necessary knowledge and skills demanded by the labour market and helping to socialize individuals living in that society to build cognitive capacities. According to Sever [66], Functionalists use an analogy that likens society to the human body that possesses organs with specific functions. For instance, the human body has a heart that pumps blood, lungs that take in oxygen, and so on. If any organ is not functioning well, others are affected. In the same vein, some functionalists view society as a system with interrelated parts with each part having a specific function to perform for the whole society. Thus, education is an important part or organ of society; it is a social institution and part of a social organism that is connected to the economy, the family, and political system [66]. Education remains an important part of society with essential functions that help lubricate the wheel of progress for the public good. Functionalists are, therefore, concerned about the role of education and training in shaping society through economic related roles such as socialization, allocation and vocational training [67].

Functionalists further contend that to attain a society that is well functioning, schools should be able to socialize students and sort them according to their talents and competencies [65]. This implies that educational programmes and curricula need to be designed to advance society. The functionalist perspective about educational role in society is similar to the central functions of education as noted by [41] who contend that an educational system will be adjudged as well functioning, if its graduates can demonstrate to have obtained relevant skills, if learning can be attested to have taken place and students are sorted out in accordance with their competencies and talents, and if civic consciousness of the individuals who had gone through such a system is optimized. Many United States of America educators and reformers fashioned their reform recommendations on this approach of schooling [65].

### 2.1. Statement of the Problem

The country that has functional education will yield increased opportunities, lift its citizens out of abject poverty, and promote sound citizenship. Functional

education essentially enhances human development [23]. Thus, education would only be adjudged to be well-functioning if graduates of different levels, including secondary education, are well prepared with relevant skills for labour market opportunities [41]. In spite of the role secondary education plays in the society, the current crises in Nigeria suggest that this level of education is at a crossroad because the objective of developing literacy, numeracy and communication skills through secondary education seems to have been defeated [68]. This has made stakeholders in the education sector such as policy makers, government officials, parents, and the civil society raise concerns on the dysfunctionality of education being offered by secondary institutions as not sufficiently relevant to make its recipients productive in the world of work and society.

Notwithstanding the concerted efforts to reform the educational system since Nigeria gained its independence in 1960, it has not always produced the desired results as would have been expected. These failures have been reported to have stemmed from the ill-planned educational reforms/policies over the years and the mismanagement of resources in almost every area of the system [69]. Garba [11], too, attributes the current state of education to the direct consequences of underfunding and inconsistent policies. Although, there are other issues that inhibit access to functional education, the quota system of admission, unaffordable cost of schooling, gender inequality, cultures, and armed conflict appear to be chiefly affecting securing placements for secondary education in Nigeria [70]. The current state of affairs has prompted stakeholders to demand those who are saddled with education responsibilities to produce secondary graduates with functional education who would be able to make use of their hands, head, and heart.

Previous studies cited [1,71,72] have examined the functionality of education at different levels and different academic disciplines. However, in the functionality of secondary education literature, there is still a dearth of studies investigating the current level of literacy, numeracy, and civic/citizenship competence skills. It is against this background that this present study sought to fill this gap by investigating the current level of functionality of secondary education (functional literacy, functional numeracy, and functional civic/citizenship) competence in rural communities of Southwestern Nigeria.

### 3. Materials and Methods

#### 3.1. Methodology

##### 3.1.1. Study Design

Today, research has gone beyond disciplinary boundaries; resulting in demands for methodological pluralism. This has necessitated seeking for alternative

methods that can produce synergy between quantitative and qualitative approaches. This has also given birth to MMR [73]. Teddlie and Tashakkori [74] view designs in MMR as parallel mixed designs, also termed concurrent designs, which are those with both qualitative and quantitative approaches that run simultaneously but independently addressing research questions. Thus, triangulation can strengthen conclusion of findings. Relatedly, this study employed a convergent parallel design in the collection of data to get useful information about the current level of functionality of secondary education in rural communities of Southwestern Nigeria. In summary, both numerical and textual data collected complemented each other in generating key information on the current level of functionality of secondary education in rural communities of Southwestern Nigeria.

##### 3.1.2. Sampling and Sampling Procedure

The multi-level mixed methods sampling technique was used to select samples for this study from the three sampled states in Southwestern Nigeria. At the first stage, the researchers used the purposive sampling technique to select three states with the most rural demography that make up 50% of the six states in the region, namely, Oyo, Ekiti and Osun. At the second stage, a cluster-sampling method was used to select each local government area with the most rural demography across the three senatorial districts of each state from the zone. At the third stage, simple random sampling was used to select a secondary school from each local government area of the senatorial district. Lastly, the proportionate sampling technique was used to select 467 (90%) secondary school graduates from the selected schools. In selecting participants for qualitative component of the MMR, Kumar [75] opines that a researcher should purposively select 'information-rich' respondents for qualitative research so that appropriate and right information could be provided to establish the true understanding of the phenomena being studied. Thus, six participants which include principals and Teaching Service Commission (TESCOM)/Ministry of Education senior officials who are familiar with phenomena being investigated were selected and interviewed.

#### 3.2. Data Collection Instruments and Procedures

The reliability of the instruments was determined through trial testing on the teachers and secondary school graduates from school not included in the study. Then, technique suggested by [76] was used, who state that correlation can be used in two forms to conduct reliability testing in quantitative analysis namely split-half technique and Cronbach's alpha known as alpha coefficient. Hence, this study adopted Cronbach Alpha ( $\alpha$ ) reliability test for the instruments for this study. This researcher employed the use of group administration to administer questionnaires in this study. Questionnaires for each school



were taken physically to the sites, and a group administration survey method was used for the secondary school graduates. The group administration method was used for Secondary School Graduates' Aptitude Test (SSGAT) which evaluated the extent of functionality of secondary education in rural communities of Southwestern Nigeria.

The interview guide was developed by the researcher and validated by experts in test and measurement. Thus, the interviews were conducted using interview guide for the key informants such as Secondary School Principals and TESCOM/Ministry of Education senior officials at the Planning, Research and Statistics (PR&S) Department. These senior personnel were interviewed because they are representatives of governments in various selected states and schools that make decisions on policies and administrative issues. This form of interview was preferred because it provides an opportunity for conversational engagement between the interviewer and the interviewees on secondary school education.

**3.3. Ethical Consideration**

The current study followed all the ethical requirements as contained in the Postgraduate Guide of the University of Fort Hare. Thus, the researcher sought ethical clearance from the University of Fort Hare's Research Ethics Committee (UREC). The researcher further sought and obtained permission from the TESCOM, participants and Ministry of Education of Ekiti, Oyo and Osun States in Nigeria.

**4. Results**

**Research Question 1:** What is the current level of functionality of secondary education (functional literacy, functional numeracy, and functional civic/citizenship competence) in rural communities of Southwestern Nigeria?

The results from the secondary school graduate aptitude test (SSGAT) administered among secondary school graduates are presented in Tables 1, 2, 3 and 4. In answering this research question, the secondary school graduates' scores were grouped into three functionality values ranging from 0-3 (Low), 4-6 (Moderate) to 7-10 (High) as shown below.

**Table 1.** Level of Functional Literacy

Level	Frequency	Percentage
Low (0-3)	235	50.3
Moderate (4-6)	139	29.8
High (7-10)	93	19.9
<b>Total</b>	<b>467</b>	<b>100.0</b>

Table 1 shows the level of functional literacy of secondary education graduates in rural communities of Southwestern, Nigeria. The Table 1 reveals that the level of functional literacy of secondary education graduates in rural communities of Southwestern Nigeria was mainly at the low level (50.3%) as well as at the moderate level (29.8%) while only 19.9% of the rural secondary school graduates showed a level of functional literacy.

**Table 2.** Level of Functional Numeracy

Level	Frequency	Percentage
Low (0-3)	214	45.8
Moderate (4-6)	148	31.7
High (7-10)	105	22.5
<b>Total</b>	<b>467</b>	<b>100.0</b>

Table 2 shows the level of functional numeracy of secondary education graduates in rural communities of Southwestern, Nigeria. The Table 2 reveals that the level of functional numeracy of secondary education graduates in rural communities of Southwestern Nigeria was mainly at the low level (45.8%) as well as at the moderate level (31.7%) while only 22.5% of the rural secondary school graduates showed a high level of functional numeracy.

**Table 3.** Level of Functional Civic/Citizenship Competence

Level	Frequency	Percentage
Low (0-3)	60	12.9
Moderate (4-6)	284	60.8
High (7-10)	123	26.3
<b>Total</b>	<b>467</b>	<b>100.0</b>

Table 3 shows the level of functional Civic/Citizenship competence of secondary education graduates in rural communities of Southwestern Nigeria. The Table 3 reveals that the level of functional Civic/Citizenship competence of secondary education graduates in rural communities of Southwestern Nigeria was mainly at the moderate level (60.8%) as well as at the high level (26.3%). Only 12.9% of the rural secondary school graduates were low in terms of functional civic/citizenship competence.

It is noteworthy that based on the mode values of the results in Tables 1, 2, and 3 among graduates, the level of functionality of secondary education graduates in rural communities of Southwestern Nigeria was low in terms of functional literacy and numeracy while it was moderate in terms of civic/citizenship competence. Table 4 below shows the combined functionality results as demonstrated by the secondary school graduates in functional literacy, functional numeracy, and functional civic/citizenship competence in rural communities of Southwestern Nigeria.

**Table 4.** Overall Level of Functionality of Secondary Education

LEVEL	Frequency	Percentage
Low (0-3)	162	34.69
Moderate (4-6)	166	35.55
High (7-10)	139	29.76
<b>TOTAL</b>	<b>467</b>	<b>100.0</b>

Table 4 shows the overall level of functionality of secondary education graduates in rural communities of Southwestern Nigeria. The table 4 reveals that the overall level of functionality of secondary education graduates in rural communities of Southwestern Nigeria was mainly at the moderate level (35.55%) followed by the low level (34.69%). Only 29.76% of the rural secondary school graduates demonstrated a high level of functionality. This indicates that, overall, the functionality of secondary education oscillates between moderate and low levels at 35.55% and 34.69%, respectively. Interviews held with secondary school principals (**SSP**) and Teaching Service Commission officials (**TCO**) in order to know the current level of functionality of secondary education in rural communities of Southwestern Nigeria generated the following responses:

**SSP1 revealed:** *Our students nowadays just want to have a certificate without studying (working) for it. They don't want to study, not enough preparation. As a result, they find means of passing the examination. At the end, some of these certificates are useless. In my school here, there are certificates with five distinctions (As), three credits, and so on and so forth lying fallow here. They don't bother to collect them. Some are not ready to collect it to further their education. Perhaps, they know the way they got the certificate, I don't know. And that is what is happening all over. If you ask them when we are preparing for the end of year programme that after secondary education, what next? You will be told; "I have been learning this trade (such as hairdressing)" or that "I can plait or sew". That is what I want to pursue. In this Onire local government area, parents and students don't attach so much value or importance to education. Secondary school is their final destination. We have to pet and appeal to them about the value of education.*

**SSP2 commented:** *Although some of them can perform, the graduates we are churning out are less competent in terms of quality compared with the past. In my own case, I started teaching with a secondary school certificate after my secondary education. I can compete with my teachers. In my Form 5 then, I sat for an external examination in the West African School Certificate (WASC) with my Agricultural Science subject teacher. I got a distinction grade while he got credit. The social media too has affected students wrongly as they are channeling their energy in wrong ways.*

**SSP3 said:** *Some students find it difficult to cope in their academic work due to trekking of a long distance from their home to school.*

**TCO1 noted:** *The functionality of public secondary school education is being affected by the wrong attitude of parents who are mostly artisans. They don't spend on the education of their wards. They even prefer to put them where they can learn a trade, but functionality of private school is different and better.*

**TCO2 corroborated:** *Very few of them could gain admission to higher institutions. Some of them with very good results could not proceed with their studies. Many of them find it difficult to express themselves in simple English. They do not have the skills that could make them self-reliant.*

**TCO3 differs:** *There is a constraint of resources. They are not performing poorly despite low facilities. Given adequate resources, I am sure those who are in the rural communities (villages) would outperform their urban secondary graduate counterpart.*

The positions of all participants above except TCO3 are in line with the results of the level of functionality of secondary education graduates in Tables 1, 2, 3 and 4 which indicated that the level of functionality of secondary education has higher percentages in the low and moderate levels. Only TCO3 contradicts those positions and argued that eliminating resource constraints from rural communities, the story will be different in the functionality of secondary education. In summary, it can be deduced that the overall functionality of secondary education that oscillates between moderate and low levels is still not good enough. This implies that there is a need for improvement.

## 5. Discussion of Findings

The findings above generally reveal that the level of functionality of secondary education in rural communities of Southwestern Nigeria is moderate. However, based on the quantitative results from the secondary school graduate aptitude test (SSGAT) shown in Tables 1, 2 and 3, the level of functionality of secondary education in rural communities of Southwestern Nigeria was low in terms of functional literacy and functional numeracy, while it was found to be moderate in terms of civic/citizenship competence.

The qualitative results generated from the Key Informant Interview conducted among the secondary school principals and TESCOM officials equally corroborated the quantitative data on the level of functionality of secondary education in rural communities of Southwestern Nigeria. The interviewees believed the level of functionality of secondary education was low. They were of the view that the secondary school graduates being churned out are less competent in terms of quality compared with the past. They revealed that some secondary school graduates with very good results cannot proceed for further studies. They further contended that these secondary school graduates cannot express

themselves in simple English language. This justifies the result of the quantitative data that showed that functional literacy was low. The interviewees also contended that secondary school graduates do not have the required skills that should make them self-reliant. In addition, the respondents also revealed that secondary education is not functional as students nowadays who just want to have certificates without studying (working) for it. That is, they are not interested in useful skills. They corroborated this further in the qualitative data that there are certificates with 5As, three credits lying fallow, and so on, in schools, not being collected. However, one of the interviewees argued that secondary school graduates from rural areas are not performing poorly despite poor facilities and that eliminating resource constraint may bring about different results in which they may even outperform their urban secondary school graduate counterparts.

The implication of the above quantitative and qualitative findings is that the functionality of secondary education in rural communities of Southwestern Nigeria is low. This is at variance with the expectation of functionalist theory of education on which this study is predicated. Functionalists believe that to attain a society that is well functioning, schools should be able to socialize students and sort them according to their talents and competencies. This implies that educational programmes and curricula need to be designed to advance the society [65]. The outcome of this study on the level of functionality of secondary education is not consistent with the central functions of education as noted by [41] who contend that an educational system will be adjudged to be well functioning if its graduates can demonstrate to have obtained relevant skills; if learning can be attested to have taken place; if students are sorted out in accordance with their competencies and talents; and if civic consciousness of the individuals who had gone through such system is optimized. In the context of this study, it can be deduced that the central concern of this study, which is the functionality of secondary education, is poor across the selected rural communities of Southwestern Nigeria, which is the geographical scope of the study. In addition, the central idea of functionalism as a theory is how education basically serves societal needs and impact useful skills on the recipients, but judging by the results above, it can be inferred that this objective is far from being achieved in the Nigerian context.

In addition, the findings of this study are not in consonance with the functionalist position of [67], which states that education has certain functions to play in creating harmonious and social cohesion in society. In contrast, this study reveals that recent Nigerian secondary school graduates are not interested in knowledge, skills and efficient learning but rather seek certification. In other words, they subscribe to the reductionist view of education, which is passing through schools and spending years without being proficient in skills such as literacy, numeracy, and civic competence which are the three key

elements of functionality in this study.

Furthermore, the findings of this study corroborate the current literature and, as noted in [54], also emphasize the fact that if education cannot fulfil the purpose of preparing individuals to have the ability to read, write and solve arithmetic problems, such education should be described as a failure. That is, such educational system has failed in making its children worthwhile individuals in terms of having education for useful living, which functional education seeks to achieve in this study. The quantitative data and positions of interviewees are also in agreement with this: that education at secondary level is failing and not producing the desired results through useful skills such as numeracy, literacy, and civic competence. Similarly, the findings of [77] are in line with those of the present study that despite the provision of libraries and personnel, students still lack practical knowledge obtained through information literacy and are deficient in reading skills.

The findings of this study are also in agreement with the study by [78] on factors influencing mastery of reading, writing and arithmetic among learners of primary schools in Ilala District, Tanzania, which revealed that school support services, pedagogy, and learner related factors were found to be significant contributors to pupils' mastery of reading, writing and arithmetic. In another related study in Tanzania by [57], which is equally consistent with the findings of this study, an assessment of reading abilities in 2010 showed that the reading abilities of children in early grades from low socioeconomic environments were very poor. This, the study suggests, may be due to the economic wellbeing of parents who struggle daily for survival, which is corroborated in this study by the qualitative data that these parents are mostly petty traders and peasant farmers. The results of the present study also conform with that of [79] who assessed factors influencing achievement of basic reading literacy outcomes in public primary schools in Nyeri County of Kenya. That study revealed that the implementation of literacy programmes influenced the achievement of basic reading literacy to a moderate extent, while other factors such as socio-economic status, inadequate resources, educational level of parents and individual student characteristics all affect reading literacy. Similarly, the findings of Ntshuntshe [58] on literacy practices in South Africa are consistent with those of this study and revealed that the literacy practices are not good enough to prepare learners for future academic tasks and, as a result, learners are still being confronted with problems of acquiring basic reading and writing skills.

A different study whose findings stand in stark contrast to the outcomes of this study, was conducted in Malaysia by [55]. Its relevance is found in that it shows that the converse of the findings of the current study may be found if conducive conditions and the functional education system, such as those in Malaysia, are present. Chew's [55] study, which was conducted on literacy among the secondary school students drawn from across Malaysia,

showed that overall basic literacy stood at 95.2%, while critical literacy rate was 71.2%. It was further affirmed that Malay language literacy was better than the rate for English and Mathematics. By contrast, the quantitative data in this study reveals that both functional literacy and functional numeracy are low. Even the respondents to the Key Informant Interview attested to this that many secondary school graduates in rural communities of Southwestern Nigeria cannot express themselves or write well. This is an indication of poor functional literacy. It also shows that the issue of literacy and numeracy remains a critical issue in Nigeria which requires more attention than it is being currently receiving.

The findings of this study are also consistent with that of [62] who affirmed the gains of introducing citizenship education into the school curriculum. Its visible benefits may be seen in terms of critical thinking, political literacy, and values that citizens exhibit after graduating from schools to society. Effective civic education also empowers young ones to have a thorough understanding of politics and the economy and its challenges. It also helps to know how to contribute to social discourse, even the controversial issues, and to be actively involved in civic responsibilities. This study is also in line with that of [62] on opportunities for civic learning offered in classrooms influencing students' civic knowledge and individual characteristics. The analysis established the correlation between civic knowledge and educational effectiveness. Thus, the place of civic knowledge is pivotal in learning in secondary schools and should be given a prime place for secondary school graduates to be able to function effectively in society.

## 6. Conclusion

In conclusion, this study found that the current level of functionality of secondary education in rural communities of Southwestern Nigeria needs to be addressed, especially in terms of functional literacy and functional numeracy; while it should be improved in terms of functional civic/citizenship competence. This current state of secondary education has also made the application of functionalist theory more imperative in the Nigerian secondary education.

## 7. Recommendations

Based on the findings of this study, government and development partners/non-governmental organizations should intensify efforts on special interventions that can remove barriers inhibiting access to functional secondary education in rural communities of Southwestern Nigeria. Policy makers and school administrators need to monitor what is being taught and how it is being taught so that secondary education can produce the required skills and

self-reliance demanded in the world of work.

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## Competing Interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

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