



Conceptual Article

Service learning as a means to understanding the socio-economic privileges and inequalities of individuals who are deaf or hard of hearing

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Complexities surround the social inclusion and socio-economic independence of people who are deaf and/or hard of hearing (DHH). The socio-economic challenges faced by the DHH have been exposed globally over the years and their experience of socio-economic discrepancies in Nigeria as well as other countries in Sub-Saharan Africa is well documented in literature. Although government and non-governmental agencies have made some effort to alleviate the socio-economic challenges faced by the DHH, such effort has not yielded the desired results. Leveraging on the assumptions and principles of social learning theory, this intellectual piece advanced service learning as a socio-learning approach to ameliorate the socio-economic challenges and eliminate the social inequalities faced by the DHH. It was expected that the model presented in this study would respond actively to the goals of the Nigerian National Policy of Education and further enthrone a sustainable inclusive society where the DHH could lead an economically independent life. Implications for policies and research were presented in the paper.

Keywords: Service learning, deaf and/or hard of hearing, socio-economic challenges, social inequalities

1. Introduction

The sense of hearing is an important organ of the body which facilitates awareness of sound stimuli within one's immediate environment. An effective hearing system is an important factor that strengthens social cohesion, especially in circumstances where there is a need for the exchange of verbal communication. Lamentably, there are millions of individuals whose sense of hearing is non-functional for the ordinary purpose of life (Mba, 1995). Global evidence estimates that over 360 million persons are living with hearing loss, and about 136 million of these are from Africa (WHO, 2017). In a 2020 report by the African Academy of Sciences (2020), Olusanya et al. (2005) aver that about 6 per 1,000 babies born in Africa are born with congenital hearing impairment (Olusanya et al., 2005 as cited in African Academy of Sciences, 2020). A 2021 report on hearing by the WHO further estimates that 39.9 million Africans have moderate to profound hearing loss (WHO, 2021), and the population of Africans with hearing loss is lamentably projected to rise to about 332 million by the year 2050 (WHO, 2021). The term, 'Deaf and/or Hard of hearing' (DHH) has been used to describe individuals with a hearing disability that is significant enough to prevent them from acquiring or accessing relevant oral information through the organ/sense of hearing (Adigun, 2022; Andersson & Adams Lyngbäck, 2022). As the DHH have difficulties with responding to verbal cues, they have devised alternative ways to engage in communication within their communities with similar characteristics and within those communities without hearing challenges (Adigun, 2019).

Adigun (2022), and Andersson and Adams Lyngbäck (2022) indicate that while some groups of DHH may benefit from using assistive listening devices such as hearing aids, others depend largely on sign language as their means of communication. The DHH experience significant challenges with auditory-verbal communication, irrespective of their means of communication, and these remain a unifying factor for these persons with hearing disabilities. In other words, the

DHH have significant challenges coping with the demands of verbally loaded interactions and relationships. They thus fail to benefit from incidental learning opportunities in addition to the extended challenges that they routinely experience in their comprehension potential and interpretation (Hyde et al. 2003). Lexical and syntactic complications have been identified as the main challenges experienced by the DHH, and this is coupled with slower development of an age-appropriate vocabulary. The DHH may have significant difficulties understanding words with multiple meanings, and unusual language and communication structures. They may also experience a partial understanding of events around them, and they find it difficult to maintain social relationships. Additional studies note that the DHH's hearing disabilities also have a potential negative impact on their emotional and psychosocial stability, family concerns, learning potential, quality of life, resilience, and their social competencies (Adigun, 2020; Akellot & Bangirana, 2019; Su et al., 2020).

Other studies admit that the DHH's academic and social expectations in various undertakings often fail to match up with those of their non-DHH peers (Adigun & Nzima, 2020; Akellot & Bangirana, 2019; Hrastinski & Wilbur, 2016). Johnson et al. (2018) therefore aver that the DHH are conspicuously and regularly exposed to various risk factors as a result of their lag in communication and lack of adequate social skills and this ultimately leads to impaired self-efficacy. Interestingly, while communication challenges seem to be a major challenge faced by the DHH, challenges in terms of their responses to verbal communication with non-DHH communities extend beyond communication issues to include social issues (Garg et al., 2021; Kent et al., 2022; Ziadat, 2020). Such social issues include but are not limited to academic and social inequalities, socio-economic disadvantages, and hindered potential for social mobility and economic independence. Past studies have acknowledged the perceived risks of deafness as a condition and related them to the DHH's experiences of social inequalities, unequal economic potential, learning outcomes and social mobility, and the sustenance of social capital (Adigun et al., 2022; Greene-Woods et al., 2020; Holcomb et al., 2019; Jones, 2002).

Despite several calls for social inclusion (Juvonen et al., 2019; UNESCO, 2008; Woodgate et al., 2020), it is appalling to note that Nigeria's DHH still lack the appropriate opportunities to secure: (a) A free and democratic society; (b) A just and egalitarian society; (c) A united, strong and self-reliant nation; (d) A great and dynamic economy; and (e) A land full of bright opportunities for all citizens, irrespective of any disabilities. This is despite the fact that these goals are stated clearly in the National Policy of Education [NPE] (Federal Government of Nigeria, 2004). The NPE projected that the five afore stated goals (FGN, 2004) could be achieved through: (a) the development of persons into sound and effective citizens; (b) The full integration of the persons into their communities; and (c) The provision of equal access to educational opportunities for all citizens of the country. However, evidence-based research from Nigeria by Adigun (2020); Jaiyeola and Adeyemo (2018); and Kent et al. (2022) has shown that the goals of the NPE (FGN, 2004) are yet to be achieved fully in respect to the provision of equal socio-economic privileges, the removal of barriers that foster inequalities, and the achievement of unhindered social mobility of persons who are deaf and/or hard of hearing.

The existing studies in Nigeria by Adigun (2020); Jaiyeola and Adeyemo (2018); and Kent et al. (2022) advocate for systemic changes in the government's provision of social services to the DHH. Unfortunately, however, the government's efforts in this regard have not yielded the expected positive results. This intellectual piece deviates from the suggested approaches and examines the implications of 'service learning' from a theoretical perspective. It examines service learning as a construct that can inform the government, non-governmental agencies, and the students of higher learning institutions about the plight of the DHH with respect to their socio-economic challenges, inequalities, and lack of social mobility. It can inform these parties on how service learning can be used to bridge the existing lacuna in the socio-economic potentials, inequalities, and social mobility that exist between the DHH and their non-DHH counterparts.

This intellectual piece leverages on secondary (theoretical and empirical) data and adopts an in-depth analysis of existing literature on the concepts relevant to this paper. Further, focusing on the

expected role of the various institutions of higher learning in Nigeria, the paper provides an exposition of the socio-economic dynamics among the DHH, their issues of inequalities, and their lack of social mobility. This conceptual paper leverages on the assumptions of the social learning theory (Bandura, 1977). This provides the theoretical lens with which to examine the implications of service learning, and its use as a means to understand the issues surrounding the socio-economic privileges and inequalities among the DHH. It is assumed that carefully structured service learning programmes directed at Nigerian students within the higher education spaces will lead to an inclusive society where the DHH will live in a free, democratic, just, and egalitarian society. This will result in a united, strong, and self-reliant nation that is full of great opportunities for all citizens and has a dynamic economy, as is espoused in the NPE (FGN, 2004).

1.1. The Socio-economic Potentials and Inequalities among the Deaf and Hard of Hearing in Nigeria

According to a United Nations' estimation, Nigeria's population is expected to hit 223.8 million in 2023 (Ologunagbe, 2023). Unfortunately, the estimate by the United Nations does not stipulate how many people in the country are DHH. Although there is no current data on the population of deaf people in Nigeria, Haruna (2017) reports that the Nigerian National Assembly (www.nassnig.org/nass/) stated in 2013 that there were about 20 million people with hearing loss in Nigeria. The foregoing estimate was based on the following reports:

1) Mba (1995) stated that one in every one thousand people has a serious hearing problem in Nigeria.

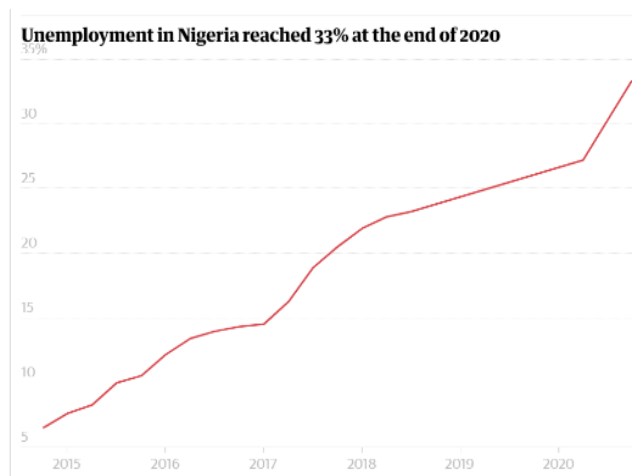
2) Olusanya et al. (2005) averred that about six in every one thousand babies are born with congenital hearing impairment in Africa.

3) The World Health Organization and World Bank (2011) indicated in their world report on disability that about 15% of the world's population experiences some form of disability, and that the disability prevalence is higher in developing countries.

Lamentably, the non-availability of accurate statistics on the population of DHH in Nigeria may have exposed those experiencing hearing loss to extreme neglect and structural violence from the government. In fact, Nigeria is yet to present specific statistical proof of the unemployment levels among persons with disabilities and those who are DHH. It is saddening that the recent report on the rate of unemployment in Nigeria has revealed a steady increase and it reached a peak of about 33% at the end of 2020 (See figures 1 and 2). While those under 35 years of age are mostly affected (Akinwotu, 2021; National Bureau of Statistics, 2021), the data from the National Bureau of Statistics (2021) has failed to indicate the percentage of the persons with disabilities who are unemployed. Based on the existing literature on societal attitudes towards the DHH and the perceptions of people about the employability of the DHH (Kent et al., 2022; Oyewumi & Ogunwale, 2013), it may be safe to say that there is a large population of the DHH who are currently unemployed in Nigeria. There is thus an ever expanding socio-economic gap between the non-DHH and the DHH.

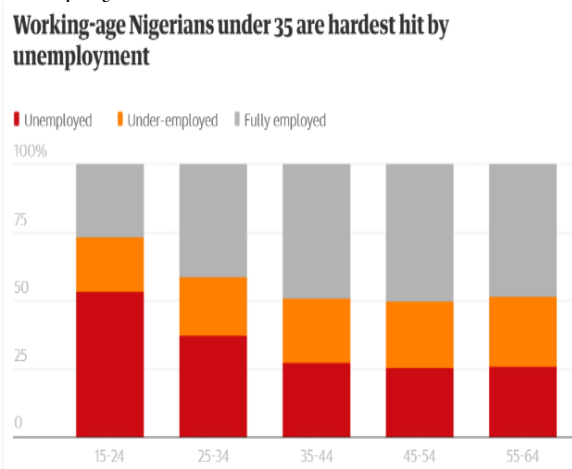
It should be noted that DHH individuals are only deficient in their capacities to respond to auditory-verbal stimuli. This means that the DHH are individuals who may have complex sets of skills which may be put to use for their development of self and the acquisition of economic gains. However, the difficulties arising from the usage of two-way auditory-verbal communication put them at somewhat of an economic disadvantage (Kent et al., 2022), especially when socio-economic transactions require oral communication, and the isolation of the DHH may thus be pronounced. According to Joutsalainen (1993), various superstitious beliefs and disparaging attitudes towards the DHH have created wide gaps in the socio-economic achievement of deaf people vis-à-vis their restricted access to education, work, and livelihoods. Recent studies have established that individuals who are Deaf and/or hard of hearing are associated with substantial socio-economic burdens (Kim et al., 2021; Ramsey et al., 2018).

Figure 1
Unemployment in Nigeria at the end of 2020



Note. Source: National Bureau of Statistics (2021)

Figure 2
Working-age Nigerians who are mostly affected by unemployment



Welsh (1991) has admitted that deaf people are comparatively under-employed, have greater tendencies to experience poor long term employment conditions, earn substantially less wages and salaries (Kim, Byrne & Parish, 2018), and have significantly less opportunities for vertical or horizontal occupational mobility (Meager & Higgins, 2011) than their non-deaf colleagues. Cruz and Calimpusan (2018) have associated such aforementioned experiences to stereotyping and recurrent discriminatory attitudes toward deaf applicants/employees despite their level of professionalism. The assertion of Cruz and Calimpusan (2018) is reinforced by reports by Capella (2003); MacLeod-Gallinger (1992); and Welsh and MacLeod-Gallinger (1992), who indicate that the potential of deaf people for gainful employment and occupational mobility is influenced to a great extent by their minimal level of educational attainment. This accounts for the over representation of the deaf in various low skilled occupations in comparison to their non-deaf counterparts.

Ramsey et al. (2018) assert that research studies have discussed the issue of social inequalities between deaf people and their non-deaf counterparts for more than three decades. These authors confirmed the socio-economic disparities within the population of persons with deafness, particularly adults, when they conducted their study on DHH and non-DHH patients in Korea. Ramsey et al. (2018) conducted their study to address the issues of the socio-economic disparities between 5,857 DHH patients and 23,428 non-DHH patients. These patients were selected from the members of the Korean National Health Insurance Service health scheme from 2002 to 2015. When analysing their results, Ramsey et al. (2018) used the Gini coefficient and the concentration index and found increased socio-economic inequalities among the DHH cohort studied. Another three studies by Hualand and Allen (2009); Luft (2015); and the National Deaf Children's Society (2014) reiterated the challenges faced by the DHH in their attempts to secure economic independence and stability. The study by Hualand and Allen (2009), the research commissioned by the World Federation of the Deaf (2009), and the study commissioned by the National Deaf Children's Society (2014) have all identified that DHH people experience employment challenges and earn less than their non-DHH counterparts.

Hearing impairment was similarly found to be associated with a lower income level, decreased employment and a lower education level among DHH adults studied in the United States by Emmett and Francis (2015). Lee et al. (2015) also established the higher likelihood of a low-income level for persons with hearing loss than for their peers without hearing loss in South Korea. The study by Ziadat and Al Rahmneh (2020) among 105 DHH who were resident in the Balqa'a governorate of Jordan confirmed that DHH people face extreme socio-economic challenges and they have a higher potential for greater expenditure for services required, such as making payment for sign language interpretation services, despite their lack of finances or financial support. Ziadat

and Al Rahmneh (2020) did note a variation between genders; in that DHH men receive higher incomes than DHH females. This corresponds to earlier results by Moore (2002); Welsh and MacLeod-Gallinger (1992), and Winn (2007), as they also found that DHH men receive higher incomes than DHH females. Irrespective of these gender differences, the DHH are at a greater risk of economic and institutional marginalisation and discrimination which exposes them to further socio-economic disparities and challenges.

In a survey conducted by Action on Hearing Loss (2007), about 55% of employed DHH stated that they experience and feel social exclusion and isolation at work, while about 26% of their study respondents reported cases of workplace harassment. This has caused many DHH people to leave their jobs prematurely thereby placing them at at-risk economically. The number of DHH people who are susceptible to a high rate of economic exclusion and poverty thus seems to be high. Over the last two decades, studies by Kent et al. (2022); Mbada et al. (2021); Muhammad et al. (2022); Ofuani (2011); and Parish et al. (2009), among others, have explored and established links between disability conditions and poverty. Nigeria is a multi-cultural and multi-ethnic society and as such, persons with disabilities are viewed from different perspectives (Abang, 1988). According to Abang (1988), such perspectives inform the observed societal attitudes (*laissez-faire*, positive, or negative) towards persons with disabilities and how such individuals can be assisted towards independent living and socio-economic survival. For instance, the Hausa tribe of Northern Nigeria displays a positive attitude toward persons with disabilities by constantly giving them alms, irrespective of their hearing abilities. This attitude is based on the Islamic religious belief/ideology of Sadaqah¹ or Zakat² (Muhammad et al., 2022). A similar attribute is found across tribes and religious beliefs in the country but despite this belief/ideology, the state of the socio-economic empowerment of DHH people and other persons with diverse forms of disabilities is not encouraging. This is due to their lack of opportunities for personal development and skills acquisition, and their inability to secure jobs for self-sustainability.

It is lamentable that many persons without disabilities in Nigeria regard those with disabilities as pitiable individuals rather than as persons who can contribute meaningfully to socio-economic development. Even when such persons with disabilities have the potential and capacity to add economic value to society, most of them are prevented from doing so due to the stigmatisation and discrimination directed at them by members of society. The DHH are consequently expected to rely on the benevolence of charity groups, family members and well-wishers for their livelihoods. Several efforts have been made by diverse international organisations and donor agencies (Eleweke, 2013), and government and non-governmental agencies (McKenzie & Ohajunwa, 2017; Ofuani, 2011; Smith, 2011) to eradicate the DHH and other persons with disabilities' 'pity-party' and their reliance on alms or begging. In other words, efforts have been made to eradicate the socio-economic challenges and dependencies of the DHH and other persons with disabilities in Nigeria so as to improve their living conditions. However, it seems that the efforts of these stakeholders towards the development of self-reliant and economically abled DHH are yet to achieve their desired results. There is thus a need to redirect the social orientation geared towards the socio-economic viability and eradication of the socio-economic inequalities among the DHH. This intellectual piece espouses service learning as a potential strategy for social re-engineering and the promotion of socio-economic inclusion for individuals who are Deaf and Hard of hearing in Nigeria and beyond.

1.2. Service Learning: An Exposé and Overview

Although the concept of service learning is not new in the field of education, the application of the concept of 'service learning' in the field of deaf studies and deaf education is yet to be understood fully. Essentially, studies have established that DHH people are prone to socio-economic challenges and inequality, and the implication of service learning as an escape route out of poverty

¹ This refers to voluntary charity or the giving of alms, and the amount given is at the benefactors' discretion.

² This is one of the five pillars of Islam. It is also a form of almsgiving, often collected by the Muslim Ummah.

is expanded on in this study. This segment of this theoretical paper provides an exposé and overview of the concept of service learning in order to provide an understanding of the concept. This presents to readers, students, professionals, and stakeholders the true and in-depth meaning of the term 'service learning'. The term 'service learning' has been examined extensively for over three decades and it has been used to describe the various activities that provide linkages or connections between the four walls of the classroom and the civic responsibilities of students across all levels of education (basic to higher education). Basically, service learning is based on the need for community engagement through high-impact pedagogy.

As a pedagogical approach, service learning is a combination of progressive knowledge acquisition and pragmatism to meet both community, individual and societal needs. Service learning may thus be described as the learning process that takes students through social experiential learning experiences on a theoretical basis. It emanates from the classroom and progresses through volunteerism and community engagement to reach a stage of personal or group reflection of the web that exists between social dynamics and theories to deepen students' understanding of their societal frameworks. According to Jacoby (2014, pg. 2), the term 'service learning' is used to describe "any form of experiential education in which students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired learning outcomes". Jacoby (2014) assumes that active and organised service learning may cause radical changes in social reality. In other words, Jacoby (2014) is of the belief that service learning emerges from a formal and structured educational approach in which the educational activities expect participating students to apply their knowledge gained in a service-oriented manner. The foregoing implies that service learning is based on a philosophy that expects or requires students to showcase learning outcomes as they apply their knowledge to provide solutions to societal problems.

As expressed by Jacoby (2014); and Preradović and Mažeikienė (2019), service learning is informed by the combination of cognitive and emotive domains. This further implies that service learning is a platform where learning/knowledge and intellect meet with students' passion for engagement in activities that seek to provide solutions for real societal problems. According to Salam et al. (2019), service learning is an approach that seeks to develop civic knowledge, responsibilities and skills in students through a well-structured course based on programmes where students can express their thoughts and reflections via class presentations, group discussions, and self-directed writings.

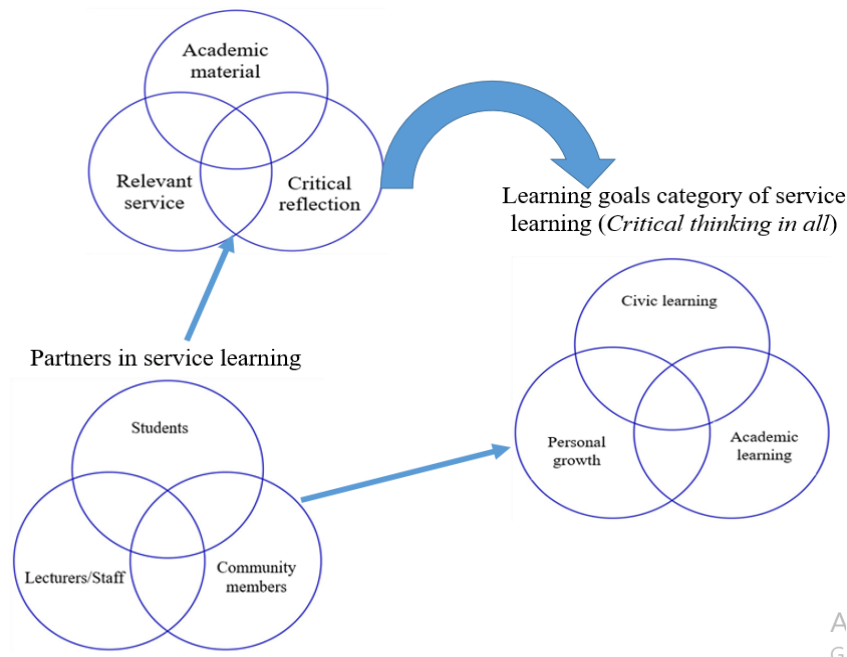
The application of service learning within the higher education space may represent a process used by a university or other post-secondary institution to link their goals and philosophy through students' active involvement in community projects to address the needs of the community (Aramburuzabala et al., 2019). Aramburuzabala et al. (2019); and Preradović and Mažeikienė (2019) state that during the process, participating students are able to gather knowledge and develop the critical thinking and interpersonal skills that are useful for critical analysis of the individual and community needs, for the purpose of providing possible solutions to issues of social inequalities. While Preradović and Mažeikienė (2019) view service learners from the perspective of experiential learning that incorporates community service into the curriculum, the duo of Preradović and Mažeikienė (2019) aver that service learning is comprised of two fundamental elements; that is, service and learning. According to Bringle et al. (2006); and Preradović and Mažeikienė (2019), these two basic elements of service learning must be balanced in order to gain adequate understanding of the course content, and to develop an appreciable level of knowledge about the discipline in relation to societal needs, towards improvement of the students' sense of civic responsibility.

Felten and Clayton (2011) describe service learning using the Ash and Clayton model shown in Figure 3 (Ash & Clayton, 2009). The model elucidates the objectives of service learning as a means to develop knowledge/skills, understand civic responsibilities and develop personal growth, and this is achieved through definitive teamwork and intercultural activities. Felten and Clayton (2011) clearly state that the development of critical thinking is the ultimate goal of the application of

service learning within the higher education space, and this is achieved through intercultural learning. Like Bringle et al. (2006); and Preradović and Mažeikienė (2019); Felten and Clayton (2011) also state that social change is expected following the application of the service learning approach, but they add that this is only possible if there is an equilibrium at the intersection between learning and service/community engagement. Felten and Clayton (2011) expand on this and state that there are complexities such as attitudes, beliefs, and cultural/personal orientations which may make the implementation of service learning a challenging task.

Figure 3

Framework for Service-Learning



Note. Source: Ash and Clayton (2009b, as cited in Felten & Clayton, 2011).

One of the complexities of service learning highlighted by Felten and Clayton (2011) is that students may view the community, individuals or organisations that they are expected to serve as 'laboratory specimens'. It should be noted that these entities are complex and thus not mere 'laboratory specimens' for learning purposes as they are significant members of any service learning project and as such inform the personal growth and critical thinking abilities in students. While the aim of service learning is problem solving, the development of positive interpersonal human interactions also constitutes an integral part of the process.

Several research studies have been conducted on the implications of service learning for various aspects of psychological and social constructs, with diverse outcomes. For instance, Astin et al. (2000) used a mixed method approach to investigate the influence of service-learning on academic performance, career plans, the intention to engage in service after graduation, leadership, self-efficacy, and values among about 22,000 students across various universities in the United States. The findings of this longitudinal study by Astin et al. (2000) revealed that students' active participation in community service through structured service-learning programmes had a significant and positive correlation with all of the variables examined. Specifically, Astin et al. (2000) noted that service learning fostered the leadership potential and self-efficacy of all the study participants significantly. A follow-up study on these same participants by Astin et al. (2006) showed that the service learning and other community-based experiences acquired in 2000 by these participants contributed to their interest in active engagement in long-term political and community service.

A host of other studies, such as those by Bernacki and Jaeger (2008); Conner (2010); Conner and Erickson (2017); Fenzel and Dean (2011); Geller et al. (2016); Jacoby (2014); Rutti et al. (2016); Salam

et al. (2019); and Wilson (2011) have established positive associations between service learning and a host of variables. For instance, greater sensitivity and empathy (Bernacki & Jaeger, 2008); social responsibility and civic leadership (Rutti et al., 2016); an improved attitude towards persons with colour blindness (Conner & Erickson, 2017); and improved commitment and obligation to social justice (Wilson, 2011). However, other studies (Erickson & Santmire, 2001; Hollis, 2004; Sperling, 2007) have found deficiencies with the application of service learning among students of higher educational institutions. Sperling (2007) adds though that it is likely that these studies failed to record positive findings because of the way they structured and implemented service learning as a pedagogical approach.

The extensive research (empirical and theoretical) evidence reviewed so far in this intellectual piece has revealed a paucity of research on the implications of service learning for the educational and psychosocial wellbeing of DHH. This conceptual paper therefore theorises service learning as a concept that can improve community engagement with persons with deafness as well as a socio-cognitive approach to the establishment of the social inclusion that is expressed in the NPE (FGN, 2004) and in the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006).

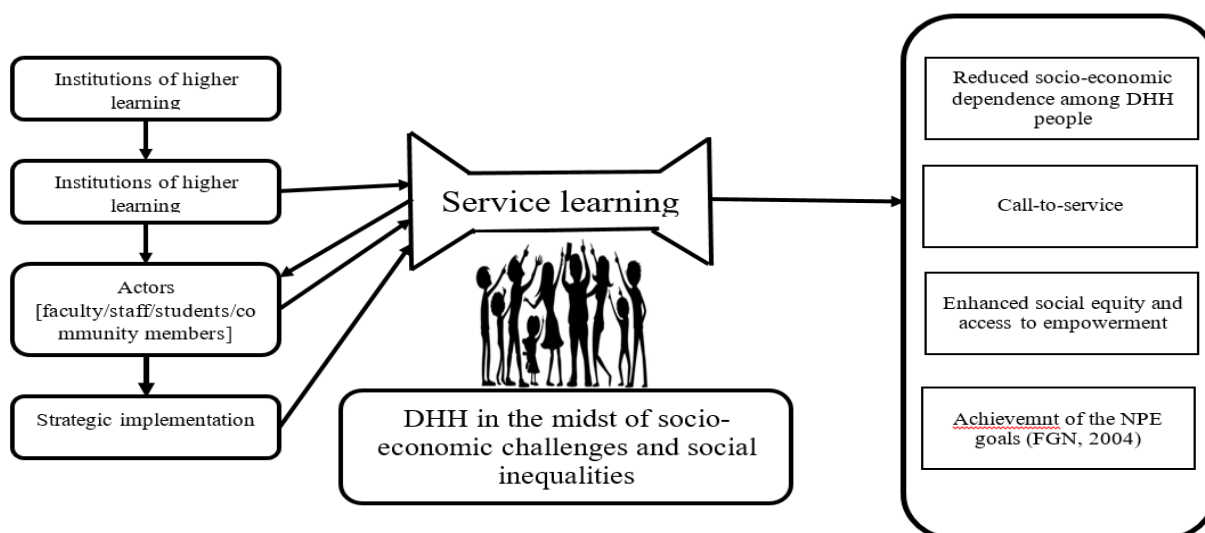
1.3. Service Learning as a Socio-learning Approach towards Securing Just, Egalitarian, and Sustainable Socio-economic Equality for all

It may practically not be possible to separate the principles of service learning espoused by Preradović and Mažeikienė (2019) from the assumptions and tenets of the social learning theory of Albert Bandura (Bandura, 1977). Bandura (1977), in his social learning theory (SLT), is of the view that learning occurs through a systematic process of imitation, modelling, and observation and it is influenced by factors such as attentiveness, attitude, emotion, and motivation. Hammer (2011) states that the SLT provides an explanation for the observable interaction between cognitive and environmental factors and their impact on learning experiences and behavioural responses. In other words, issues within the environment (physical, social, or psychological) may be drivers that motivate learning experiences. This intellectual piece leverages on Bandura's (1977) social learning theory and exposes the issue of the socio-economic challenges, lack of resources, and inequalities among the DHH. It presents service learning as a social learning approach that can be upheld in various institutions of higher learning for the purpose of achieving the DHH's social inclusion.

This conceptual paper presents a structural model (Figure 4) that can be used to foster the socio-economic development of the DHH and ensure their socio-economic equity through a strategic network of cognitive, environmental, and social determinants. Service learning as a social learning approach model identifies institutions of higher learning as the creators of knowledge for the purpose of teaching and learning geared towards the development of mindsets that are independent, self-reliant, and capable of the creation of wealth and distribution of the same. In other words, the authors are of the belief that higher learning instruction should be constructed in a manner that responds to societal demands and vice-versa. Studies have shown that educational systems within the higher education space are continually faced with the need to undergo revolving reforms and evaluation so as to meet the demand of the knowledge economy (Bleiklie & Powell, 2005; Maphalala & Khumalo, 2021; Ondari-Okemwa, 2007; Vienni Baptista & Vilsmair, 2022). While those revolving reforms in the various institutions of higher learning across the globe are geared towards achieving the Sustainable Development Goals stated by the United Nations (2015), it is also important for such institutions of higher learning, particularly the universities in Nigeria, to shine a light on developing a new curriculum or re-directing the existing curriculum to respond to the socio-economic development of persons with special needs. The curriculum must particularly be geared towards social re-orientation of the abilities and capacities of individuals who are Deaf and/or hard of hearing.

Figure 4

Adigun's service-learning model as a social learning approach (Source: Author, 2023)



Advances in curriculum design continue to inform dynamic changes in students' orientation and the impact of service learning, despite the plethora of challenges facing curriculum development and implementation in Sub-Saharan Africa (Maphalala, 2012; Maphalala & Khumalo, 2021). In line with the submission by Maphalala and Khumalo (2021), universities and other tertiary education institutions must approach curriculum modification in a manner that incorporates service learning which responds to the socio-economic needs of deaf people. The approach must incorporate the comprehensive multitude of learning perspectives and students' didactic self-assessments. These can be obtained through structured reflective opportunities, as this is a derivative of the instructive-educational process. It is imperative that service-learning-enabled-curriculum modification take the four mediational processes into account. These are attention, retention, reproduction, and motivation. This is because it is assumed that such mediational processes will help societal behaviour modification towards DHH people and further enthrone social equality. It is equally important that institutions of higher learning, in their bid/effort to incorporate service learning into the curriculum for the socio-economic development of deaf people and to further improve social inclusion and equity, approach such effort with consciousness of the education, psychological and social characteristics of deaf people (Adigun et al., 2021; Kent et al., 2022)

Development and/or incorporation of knowledge of the potential attributes of the DHH should be approached carefully. In other words, the foregoing should not be done in isolation of all the relevant actors or stakeholders which include, but are not limited to, faculty members/lecturers, students, non-teaching staff of the institutions, members of the community and above all, the community of DHH people. It is believed that each member of the afore stated team must contribute to what should be embedded in the service-learning curriculum, as well as how the structured service-learning-enabled-curriculum should be implemented for the achievement of greater productivity and efficiency, societal and individual responsiveness, and enhanced application of knowledge and skills by all actors, which also include the university system. The inclusion of several stakeholders in this process further underscores the statement by Ondari-Okemwa (2007) that new knowledge creation is not the sole responsibility of the universities. Comprehensive knowledge that can provide sustainable solutions to the dynamics of the socio-environmental problems involved requires input from many actors; from various organisations (government and non-governmental), think-tanks, industries, and civil-based organisations, among others.

In this conceptual paper, it is believed that it is time to upscale the existing community-based rehabilitation programmes for DHH people proposed by Lagerkvist (1992); and Ye et al. (2021).

Strategic implementation of the intricacies incorporated in the structured service-learning-enabled-curriculum is thus of priority and is in line with Adigun's model of service learning as a social-learning approach (Figure 4). Strategic implementation of the action put forward by Rani (2019) refers to the process through which organisational aims and objectives, procedures, principles, and philosophies are implemented. In other words, the strategic implementation phase of the service-learning-enabled-curriculum and to eliminate the inequalities experienced by the DHH in the world of work must be implemented carefully through deliberate/real institutional actions that answer complex questions. The complex questions include: 'how to achieve the stated objectives?'; 'what should be included in the service-learning-enabled-curriculum?'; 'where should the service-learning-enabled-curriculum be implemented to best benefit the DHH?'; and 'when should the implantation phase occur?', among other relevant questions. There is no doubt that students who are at the centre of the service-learning process will base their reflective thinking around these afore-stated questions/prompts. It is imperative that all of the actors defined in Figure 4 be actively involved during the strategic implementation process of service learning towards the achievement of wholesome socio-economic viability and social inclusion of DHH. In other words, the whole process must ensure active collaboration and actors must work assiduously as a team.

It should be noted that the DHH are at the centre of service learning as far as this intellectual piece is concerned. It is our belief that the socio-economic dependence of the DHH will be reduced when the aforementioned processes defined in Figure 4 are well constructed and implemented. Previous studies that support this belief are those by Adigun (2020); Akellot and Bangirana (2019); Garg et al. (2021); Haualand and Allen (2009); Kent et al. (2022); Kim et al. (2018), Luft (2015); Mbada et al. (2021); Meager and Higgins (2011); Muhammad et al. (2022); the National Deaf Children's Society (2014); Ofuani (2011); Oyewumi and Ogunwale (2013); Parish et al. (2009); Ramsey et al. (2018); Su et al. (2020); Ziadat (2020); and Ziadat and Al Rahmneh (2020).

It is also our belief that this intellectual piece's approach to the concept of service learning as a means to understanding socio-economic privileges and inequalities in the model shown in Figure 4 will serve as a 'call-to-service'. More members of society will work together to achieve equality and improved socio-economic capacities for the DHH members within their communities. Information about the characteristics and needs of the DHH people and other persons with disabilities will become known to all as a result of the collaborative activities, and this will lead to positive collective socio-behavioural changes towards persons with disabilities. Most importantly, it will lead to empowerment of the DHH. Above all, it is expected that Adigun's service-learning model as a social-learning approach (Figure 4) will foster the achievement of the goals of the National Policy on Education (FGN, 2004). This model may further hasten the realisation of the DHH living in a free, democratic, just, and egalitarian society in a united, strong, and self-reliant nation. It is envisaged that such a nation will be full of great opportunities within a dynamic economy, and that the land will be full of opportunities for all citizens regardless of their status of hearing.

2. Implications for Policies and Research

Individuals who are Deaf and/or Hard of hearing form a relative minority of the entire population but they form a group of people who have experienced negative attitudes towards them by society. They regrettably also endure socio-economic challenges but it is believed that these can be eliminated with a carefully structured service-learning approach that is embedded in the curricula of institutions of higher learning, especially in Nigeria. This conceptual paper theorises service learning as a socio-learning approach and urges policy makers and various stakeholders within the higher education space to infuse service learning into the general curriculum for students from undergraduate to postgraduate level. Such concerted efforts should be backed by the appropriate legislation and Acts of parliament because service learning is a pedagogical approach that places emphasis on the principles of civic responsibilities. While this study advances Adigun's service-learning model as a social-learning approach (Figure 4), it also advises that the model be tested empirically using all research methods (such as qualitative, quantitative and mixed method

approaches) to ascertain the potency of the model. Research studies should also be instituted to measure or assess the behavioural implications of the actors involved in service learning. This must be done in terms of their perceptions, roles, and expectations of the implications of service learning towards the achievement of an improved socio-economic profile, social equity, and sustainable social inclusion of the DHH.

3. Summary and Conclusion

This conceptual/theoretical paper presented an understanding of the concept of service learning as a means to understanding and providing sustainable solutions to the socio-economic challenges and inequalities faced by people who are Deaf and/or Hard of hearing. The intellectual piece provided an insight into the issues of deafness and the challenges faced by the DHH. There was an exposé of the concept of service learning and Adigun's service-learning model as a social-learning approach was presented. It is believed that implementation of the model and a concerted effort by all to include the DHH will assist them to live socio-economically fulfilled lives. The National Policy of Education can then be achieved holistically.

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