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Taking a Retrospect Look at our Sandwich Education: Quality or Quantity?

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Abstract

The current study investigated the outlook of sandwich programmes from the lenses of students, based on the acceptability of the programme, quality of the teaching and learning process as well as the challenges sandwich students face. With a survey research design, 250 sandwich students answered questions on the three constructs. At the end of the study, the researchers found evidence that there were no significant differences in the acceptability of sandwich programme, quality of sandwich programmes, challenges of sandwich students, based on gender as well as age. Males and females as well as older and younger students provided similar responses. Secondly, there was a significant difference in the three constructs, based on programme of study. Students offering different programmes provided different information. Thirdly, out of the three constructs, the challenges that sandwich students face had a significant difference in terms of their employment status. Students who were employed and those who were not employed gave different responses. Fourthly, there was a strong positive correlation among the three constructs. Finally, age, quality of sandwich programmes, and challenges of sandwich student's constructs were good predictors of the acceptability of the sandwich programmes. The researchers recommend that there should be a close look at the age of students, the quality of teaching and learning process, and the challenges of sandwich students in order to determine the sustenance of sandwich programmes.

Keywords: *Acceptability of Sandwich Programme, Quality of Sandwich Programmes, Challenges of Sandwich Students, Sandwich Students, Distance Education.*

Introduction

The need to provide access to majority of students at the tertiary level in our Ghana has called for several interventions. Chief among these interventions is the rolling out of sandwich programmes to provide enrollment opportunity for those who would, otherwise, have been denied of university education. The sandwich programme was originally introduced to create opportunity for students to be exposed to the practical training on the job-market (Bowes & Harvey, 1999). Christou and Chatzigeorgiou (2019) add that the main purpose of this sandwich idea was to blend the theoretical aspect of the teaching and learning process with practical industrial training. Jackson (2015), in her study on the employability skill development in work-integrated learning: barriers and best practice, reported that what students experienced during the placement as well as the problems faced should be a matter of concern to the developers of the sandwich programme. In the wake of dealing with the possible challenges that usually confront such students, Blackwell et al. (2001) report that students could learn meaningfully when the curriculum of higher education is designed to ensure that students always have the opportunity to reflect on their own learning. This assertion was one of the pillars that underpinned the sandwich programme.

Unlike the British conception of the sandwich programme to expose students to the industrial experience, the sandwich programmes in Ghana is an intervention to provide quality and meaningful tertiary education for students. Sandwich mode of learning has been construed in Ghana as a kind of interaction between lecturers and students outside the regular academic year with less focus on practical skills in comparison with the British model. With this conceptualization of the sandwich programme, courses that should have been studied for the twelve to sixteen-week semester period are shortened to three to six weeks with similar number of contact hours. For example, there are graduate programmes that are offered ten hours a day for three consecutive weeks of which the fourth week is the end of session examination.

Statement of the Problem

The enrollment at the tertiary education level in the country continues to soar to the extent that many of the qualified students fail to get access to the various institutions of higher learning in the country. This trend becomes opportunity for investors in the tertiary education, both public and private to attract more students. In the attempt of these institutions of higher learning to enroll as many as possible students has given rise to the use of other modes of learning besides the traditional two semester period of learning within the academic year. The distance and sandwich modes of learning have come to stay. It looks like there are no modalities regarding how institutions should run the distance and the sandwich learning modes in spite of the fact that the National Accreditation Board moderates the running of these programmes. This assertion is evidenced in the disparities in the qualification of lecturers, approved lecture halls and other supporting facilities, duration of programmes, mode of certification, among others.

In spite of the ease of use of the sandwich mode of learning, Yorke (1998) reports that a good number of students could not graduate from this mode of learning, which was caused by the nature of educational system, policies of the institutions and the students themselves. Bowes and

Harvey (2000), in their study on the impact of sandwich education on the activities of graduates six months after graduation, report that regular students were more likely to complete their programme of study than the sandwich students. Akande (2011) reveals another dimension of issue confronting the sandwich programme. In his study on the use of computer and internet facilities in the programme, he reports that majority of the students in one of the Nigerian universities, running a sandwich programme, did not have the requisite knowledge in Information and Communication Technology (ICT). This deficiency impacted negatively on their performance.

In order to make sure universities and university colleges offering sandwich programmes live up to this dream of consistently offering quality and meaningful tertiary education for the sandwich students, there is the need to pay close attention to how the sandwich programme is organised in the lens of the students. Students are always the direct beneficiaries of the educational choices. For this reason, collecting data on how the sandwich programme is organised as perceived by the students will bring to the fore the serious concerns confronting the programme as well as the need to address them with the urgency that it deserves.

Objective of the Study

The main objective of the study was to identify the outlook of sandwich programmes from the lens of students, based on the acceptability of the programme, quality of the teaching and learning process as well as the challenges they face as sandwich students. The specific objectives are as follows:

1. to find the difference in the acceptability of the programme, quality of the teaching and learning, and the challenges of sandwich students, based on gender, age and programme.
2. to identify whether there is difference in the three variables, based on the level of education.
3. to find the correlation among acceptability of the programme, quality of the teaching and learning process, and the challenges facing sandwich programmes variables.

Hypothesis

H₀: Age, quality of sandwich programmes, and challenges of sandwich student's variables are not good predictors of the acceptability of the sandwich programme.

H₁: Age, quality of sandwich programmes, and challenges of sandwich student's variables are good predictors of the acceptability of the sandwich programme.

Literature Review

Quality and Quantity of Sandwich Education

Sandwich education is generally seen to be of low quality in many facet due to issues like unavailability of learning resources, poor academic background of students, inadequate teaching time and resource persons including tutorial staff used in some of these programmes. Meanwhile, there has not been a conscious effort to document the impact of these issues on students' performance. Education is a key driver of change in any society and has the knack to cause and direct socio-economic development. The general purpose of all forms of education is to modify the character of citizens as well as equip them with skills and intellectual competencies to solve

societal problems (Harring, Jagers & Matti, 2020). This requires quality in the system of education aimed at improving all aspects of education, ensuring excellence and measurable learning outcomes; especially in literacy, numeracy and essential life skills (UNESCO, 2015). Although notions of education quality find a common ground in ensuring the cognitive development of learners; building attitudes, skills and values that are likely to enable individual well-being and social development; there is still much focus on quantitative aspects of education. Quality indicators appear difficult to uncover. The major argument put forward by the Global Monitoring Report for improvement in education quality is through school effectiveness, strong partnership among government departments responsible for education (Connolly, James & Fertig, 2019). Literature contains recurrent references to various components of quality education that form a useful analytical framework for any study. These components which receive different degrees of emphasis from different authors are identified as effectiveness, efficiency, equality, relevance and sustainability (Unterhalter, 2019).

Effectiveness refers to the degree to which the objectives of an education system are being achieved (Harris, 2019). External effectiveness refers to the degree to which the education system meets the needs of individuals and society as a whole while internal effectiveness is most properly applied to the functioning of institutions (Chitty 2002; Harris, 2019). Whereas effectiveness is concerned with outputs of education, efficiency looks at the inputs required to meet those outputs. These inputs may be measured in monetary or non-monetary terms but whichever is used, efficiency refers to the ratio of outputs to inputs. That is, efficiency measures the extent to which we make best use of inputs to achieve our educational goals (Harris, 2019). Equality as another key component of educational quality commonly arises from a position that takes a “quality education” as a human right (UNESCO, 2000). Equality builds on the relationship of education to human development based on poverty reduction, social cohesion, social diversity and peace (North, & Longlands, 2019). A key element in the discussion of equality in education is the identification of groups that are disadvantaged in terms of access and achievement and most importantly analyse each context and understand both the sources of disadvantage and their complex interaction (North, & Longlands, 2019; UNESCO 2000). A tension between concerns over efficiency and equality appear in the literature (Unterhalter, 2019), often in relation to the high costs of bringing education to disadvantaged groups such as those in remote areas. Consideration of the relevance as a quality of education inevitably ignites the discussions of the relationship between education and development and the central question of the purposes of education. The priorities of quality education in terms of national development change with respect to countries. For instance, low income countries talk of relevance of education by looking at access to primary education while high income countries will look at competencies, responsibility and lifelong learning as relevance of education (Mayo, 2019). The last element when it comes to quality education is sustainability and it is probably the least addressed, both in terms of its meaning and how it is to be achieved. Sustainability essentially implies that all of the considerations in relation to the other elements must bring in thoughts not just of the present but of the future (UN 2003). Indeed, quality education emerges in the context of the obligation to

establish and sustain the conditions for each and every individual, irrespective of gender, ethnicity, race, or regional location, to achieve lifelong learning and valued outcomes. As such quality education is given in building human capacity not only for employability, but for broader lifelong learning as well as for adaptive and coping livelihood strategies in a fast moving and complicated world (Mayo, 2019).

Data from the Basic Statistics for the 24th graduation of students (see Table 1) shows an increasing trend in enrollment on the sandwich and distance programmes for the past ten (10) academic years.

Table 1. Quantity of Sandwich and Distance Education in UEW from 2009 to 2019

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Sandwich	4582	8636	6948	10409	10182	10447	7061	6483	6122	6793
Distance	17001	23740	20218	15564	13256	14416	17713	18757	18821	21497
Total	21583	32376	27166	25973	23438	24863	24774	25304	24943	28290

The increasing trend in enrollment can be attributed to the increasing demand for university education and thus necessitating the institution of the sandwich and distance programmes for applicants who for various reasons, cannot enroll on full-time programmes. As shown in Table 1, sandwich and distance enrollment accounted for 10% and 31% of total enrollment in 2018/19 academic year respectively.

Gender and Sandwich Education

The issue of gender inequalities (gaps) in education is not a new phenomenon, despite efforts by government's interventions in addressing it. Equal representation in education, especially in higher education, is an important part of broader gender equity empowerment (Njaya, 2015). Gender imbalance in education is not a new issue; and Ghana is no exception. In fact, this has been the subject of an ongoing debate for years throughout the world. In spite of free education policy at all levels of schooling in all countries and with progress in recent years, equal participation of women in education still remains unattainable (UNESCO, 2015). Indeed, this concern has been echoed around the world, especially in African countries, depending on a decrease in women's access to employment and educational opportunities (UNESCO, 2013). The conservative school system is in reality challenging for women in achieving equal access to education in many countries due to their social, economic, cultural, and geographical circumstances. sandwich education therefore comes to the forefront as an effective tool that enables the women to overcome such barriers and to pursue their educational goals. sandwich education largely has a flawless philosophy that seeks to eradicate obstacles to education for all, and enables learners to study what, when, and where they want.

The literature has enough evidence emphasizing the importance of sandwich education in dealing with the unacceptable gender gap in education (Babu, Ferguson, Parsai & Almoguera, 2013; South Africa Institute for Distance Education, 2012). Njaya, (2015) indicates the advantages of a sandwich learning system for Nigerian women focus primarily on empowerment strategy in education and social work. She emphasizes several classes of women in Nigeria, thus full time housewives, religionists, conservatives, and working women. Njaya (2015 suggests sandwich education is an alternative because it affords these categories of women access to quality education on any field of their choice without any of the barriers associated with the conventional system of education. Similar research findings emphasize the role sandwich system of education in reducing gender disparities in education and assert that it is also beneficial for women that participation extends beyond entry to successful completion (Ningakun, 2013).

Age and Sandwich Education

A primary data on the growth of sandwich education suggests that it provides flexibility and allows students to take classes at the locations and times they prefer (Sun & Rueda, 2012). According to Wyatt (2011), there are two primary groups of students who comprise the majority of student enrollment in higher education: These groups are the traditional or young students (18-24 ages) and nontraditional or adult students (25 years and above). Adult students are defined by some authors as those between the ages of 25 and 50 (Park & Choi, 2009); attend college part-time, are financially independent and may have dependents (Wyatt, 2011). Sandwich learning affords adult learners a flexible schedule and saves travel costs while providing them the opportunity to update job related skills and knowledge (Park & Choi, 2009). According to Sun and Rueda (2012), sandwich education provides adults learners with myriad benefits such as convenience, flexibility and opportunities to work and school at the same time.

Ke and Xie (2009) posit that sandwich education offers flexibility and thus suits adult students who have to arrange their classes around work and family responsibilities. Also, research indicates that adult's students who are at risk of non-completion of their degrees due to work and family commitments show a significant preference for the convenience and flexibility of sandwich education (Pontes, Hasit, Pontes, & Sieftring, 2010; Wladis, Wladis & Hachey 2014). Wladis et al. (2014) state that since distance education programmes provide students with more convenient and flexible class schedules, adults' students who have time constraints which prevent them from enrolling in a regular programme may be more likely to enroll in distance education programmes. Cercone (2008) concludes that due to their busy schedules, many adults want to take advantage of sandwich education programme to achieve their academic ambitions. The non-traditional or adult students (25 years and above) study through the sandwich mode than the younger ages. Besides the obvious reasons like employment and flexibility, researchers could investigate how sandwich programmes can be tailored to the needs of the adult learner.

Challenges faced by Sandwich Students

Education has the potential to contribute to both social and economic development of society. It is an important and indispensable part of national development around the globe (UNESCO, 2000). The mandate of sandwich education is to meet the educational needs of those who missed the chance of regular education opportunities for any reason or those who are unable to continue their education through a traditional system of education (UNESCO, 2005). Sandwich education gained acceptance in communities on the basis of its reach, productivity, and acceptance; and it is generally acceptability as an alternative to the conventional education system (Niwaz, Waqas, & Kamran, (2019). UNESCO (2004) declared sandwich learning as a global strategy to provide universal access to education. Indeed, situational, attitudinal, psychological and pedagogical challenges confront sandwich education which many a time influence prospective applicant's choice of selection (Kankam, 2020; Kimotho, 2018). According to Kankam (2020), socio-cultural, institutional relevant and mode of instruction are the challenges sandwich learners' experience. Kimotho (2018) on the other hand, opines that situational, institutional and dispositional as three major challenges of distance and sandwich students. Similarly, Westwood (2018) highlights a poor learning environment and time deficiency as two major situational challenges. Lack of time management skills on the part of the learner also leads to problems like balancing demands of home, work, social commitments and study (Burden, 2020). Other challenges like getting the study materials on time, engagements at social/economic levels and weak learning support have also been reported (Burden, 2020). Once the challenges are identified and reported, there is the need for a follow-up study to identify the extent to which these challenges have been tackled over the years.

Acceptability of Sandwich Graduates

Many countries over the years have made efforts to empower and strengthen institutions of higher learning to provide off-campus programmes alongside the traditional and conventional programmes of study (Mohan, 2019). The increased demand for and access to sandwich learning is evident when examining the escalating number of sandwich programmes now available. Many universities have established open education units awarding diplomas, bachelor and master degrees through sandwich education mode in a variety of disciplines (Rumble & Harry, 2018). Indeed, sandwich education has become one of the important alternatives for those who could not attend or enroll in conventional universities. However, despite the increased public interest in sandwich education, there is a common belief that on-campus degrees are better than off-campus degrees for many reasons, such as residency in the university, real face-to-face experience, interaction among students, interactions between students and instructors, in addition to the accessible resources that could be in the learners' hands any time (Raj & Al-Alawneh, 2010). For that reason, many employers, families, and students may feel reluctant to accept sandwich education as a formal alternative to conventional face-to-face education. Therefore, many students may enroll in, and often withdraw from sandwich education programmes. According to Mohan (2019), students' cultural backgrounds and perceptions toward sandwich education degrees have

a high effect on their willingness and ability to participate in distance education programmes and their concerns can be traced back to the issue of acceptability as an employment credential. Fincher and Finlay (2016) opine that graduates who hold sandwich degrees are not judged as having qualifications that are equal to graduates who earned their degrees via a face-to-face programme when seeking employment.

The issue of acceptability has been a thorny area when considering sandwich education. Adams and DeFleur (2010), for example, in their study, indicate that despite the rapid growth in sandwich education, some educators and employers cast doubt on the quality of these modes of education and whether the learning experience and outcomes that take place in these modes are equal standard to those occurring in traditional academic settings. Adams and DeFleur (2010), find that there are some problems associated with the acceptability of sandwich degrees when students apply to traditional postgraduate programmes or faculty position in public universities. Adams, DeFleur and Heald (2007) also establish that degrees earned via sandwich modes “by no means as acceptable as traditional degrees, and that they can be regarded as suspect when used as a credential in a hiring situation” (p. 297). In addition, Adams, Lee & Cortese (2012) after a thorough empirical review of numerous studies on the perceptions of employers toward sandwich degrees, find that potential employers gave many reasons for not accepting sandwich degree credentials. Among the reasons are lack of rigor, lack of face-to-face interactions, academic dishonesty, reputation of the degree-granting institution, and appropriate level and type of accreditation. Since the sandwich mode of education has come to stay, there is a dire need for researchers to investigate the circumstances that encourage employers to discriminate between regular graduates and the sandwich graduates.

Sandwich mode of Learning

Teachers’ professional development takes various forms ranging from pre-service in training institutions, in-service training in school, district, regional and national levels, distance and on-site sandwich education programme in teacher training universities (Tamanja, 2016). The increasing demand for university education has called for the institutionalization of the sandwich programmes for applicants who for various reasons, cannot enroll in full-time programmes (Tamanja, 2016). Sandwich teacher education refers to education where learners move into institutions of study during vacation when the regular or full-time students are not in residence and teachers themselves are on holidays (Kankam 2020). In the case of teacher professional development, sandwich education programmes offer opportunities for teachers to continue their development while remaining in the classroom (Kankam 2020). This is because they will only move to the campuses of study during school vacation holidays, since the programme is sandwiched between the end of academic year (second semester) and the first semester of the following academic year. During this period, institutions of higher learning are on break and teachers can participate in the programmes and return before the next academic year begins.

In the University of Education, Winneba (UEW), the duration of the sandwich varies, depending on the programme of study (Adu-Gyamfi, & Otami, 2020). Post-Diploma and other

higher degree programmes are organised two times within an academic year while Diploma programmes are organised once in every academic year. These arrangements have several advantages for the education system and the teacher. First, the teacher remains in the classroom and does not have to be replaced. Second, the teacher does not need to physically relocate (especially when school is in session) in order to participate in further education programmes (Adu-Gyamfi, & Otami, 2020). However, these advantages have several consequences that constitute demerits to sandwich education. The duration is usually short and learners are made to learn chunks within short periods of time. What is learnt during a semester of sixteen (16) weeks, when on the regular programme, is learnt within eight weeks during the sandwich period. Nevertheless, it is necessary for teachers who for various reasons, cannot avail themselves for the regular programmes (Tamanja, 2016). They are able to teach in their schools while upgrading themselves during school vacation, with minimal effects on their classroom teaching task.

Different versions of Distance Education

The world tends to use distance education mode as a means of educating people at large with easy accessibility (Tamanja, 2016). According to Sadeghi (2019), many governments at the global level have shifted from campus-based to distance learning model. Distance education has a long history, but its popularity and use has grown exponentially as more advanced technology has become available (Sadeghi, 2019). The University of London was the first university to offer distance learning degrees, establishing its external programmes in 1858 (Bhowmick, 2019). Distance education in Ghana began with the establishment of a department in the University of Ghana, Legon, known as The Department of Extra-Mural Studies. However, it was from 1991 that the Ministry of Education (MoE) conducted a survey on distance education in the country (Adzahlie-Mensah, 2014), which gave it the necessary impetus. As a result, four public universities, that is University of Ghana (UG), University of Cape Coast (UCC), University of Science and Technology (KNUST) and University of Education, Winneba (UEW) started preparations for this new model of educational delivery. Of these four universities, only UEW was able to start its programme in 1996 as a result of assistance from the then British Overseas Development Administration (ODA), now Department for International Development (DFID) (Adzahlie-Mensah, 2014).

One of the first forms of distance education was correspondence learning. Correspondence learning is an educational process within the purview of Distance Education under which instructional materials are printed and sent to the aspiring students by post, sometimes the materials are provided by mail or electronic transmission (Sadeghi, 2019). Correspondence learning took advantage of the then new rural free delivery of mail to deliver course material to students (Bhowmick, 2019). Open University is another system of providing distance education. It functions in the grass root level with a motive to eradicate illiteracy and expand educational facilities all over the nation (Sadeghi, 2019). This open school is open to all who have the minimum qualification for admission. It provides educational opportunity to school dropouts, working class who do not have any formal education, unemployed adults and housewives, children from weaker

socio-economic families and individuals who wish to pursue continuing education (Bhowmick, 2019). Open University is the latest innovation in the field of distance education. In the field of distance education, it has the widest coverage of area in terms of providing education to the masses. It keeps its door open to those who have the desire to learn and acquire academic qualification. In short, this is a university for all. The idea of Open University was born in England in 1963 (Bhowmick, 2019). The Open University of England was established in 1969 and this paved the way for other several countries to initiate a new concept in making higher education more accessible, flexible and innovative (Sadeghi, 2019). In as much as the educators want to reduce the course duration but at the same time ensure that the students learn meaningfully, there should be serious research on the best methods and strategies that would be developmentally appropriate for short sandwich programmes.

Technologies used in Sandwich Education

Information Technology spreading throughout the world in a lightning speed has revolutionized each and every sphere of human activity (Lai & Bower, 2019). Information Technology is meant for storing, processing, and manipulating data, knowledge and information. Ultimately all these are meant for the benefit of society. The fundamental characteristic of such a society is its dynamism and unending progress. Lifelong learning is essential for the unending progress of society (Avgerou & Walsham, 2017). Traditional classroom learning is not possible and not at all desirable for the lifelong learning. Moreover, traditional methods of teaching and learning fail to provide efficient and effective learning. Information Technology application is the only possible way to improve the quality of higher education through distance/sandwich mode (Lai & Bower, 2019). With the advancement in communication technology a variety of audio-visual media, radio, television broadcast, video cassettes, video compact disc, video text, CD, computer and other innovative techniques are used for effective transmission of knowledge to the learners at a sandwich learning system (Belsare, 2019).

ICT is a potentially powerful tool for extending educational opportunities and also facilitates access to experts, resource persons, researcher, professionals, mentors, and peers- all over the world (Belsare, 2019). For developing countries like Ghana, ICT has the potential for increasing access to and improving the relevance and quality of education. ICT, for the purpose of this study, is defined as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information (Atuahene, 2019). These technologies include computers, the internet, broadcasting technologies (radio, television) and telephony (Lai & Bower, 2019). This may include all types of learning technologies such as print, audio, video and the computer. The use of computers in sandwich education has provided new pedagogical strategies in sandwich learning as well as giving more autonomy to the sandwich learners. Technology indeed has become a part of humans' life on campus, at home, and in the office. The modern technologies used in sandwich learning are telephone tutoring, teleconferencing, audio graphics, video conferencing, computer conferencing, drill and practice, fiber optics, teletext, and videotext, multimedia and hypermedia, CAI, e-books, the Internet, the World Wide Web (WWW),

or the Information Super Highway on-line database, on line discussion, call-in course- on demand, satellite, talk-back TV, etc. Indeed, all of these technologies have a place in the knowledge base of expert teachers and they are potentially useful framework for organizing such a knowledge base for different generations of sandwich education (Atuahene, 2019). The idea of ICT in sandwich learning is to provide multimedia-based education content to students utilizing standard data networking, protocols and infrastructure. The main advantages of using technologies in distance education are cost effectiveness, independence of time and place, quality of education access resulting from the mass production of course materials, teaching a lot of students simultaneously, and finding a lot of educational resources (Atuahene, 2019). Due to the influx of different technologies that are available to the classroom teachers, there seems to be confusion in terms of the specific technologies that would be more appropriate for sandwich programmes as compared to the regular ones.

Methodology

Research Design

The objective of the study was to identify the outlook of sandwich programmes from the lens of students, based on the acceptability of the programme, quality of the teaching and learning process as well as the challenges they face as sandwich students. The researchers used descriptive survey research design to collect data and analyse them. Survey research design was appropriate since it gives opportunity for researchers to ask what, which, who, when, etc. questions.

Population

The researchers used a total of 250 sandwich students from the three different programmes. The total number of sandwich students was 280, who were contacted to be part of the survey. Sandwich students were used since the information needed to answer the research question lies with them.

Sample Size

Since the number of sandwich students was smaller, the researchers created opportunity for all students to be part of the study. This was done by sharing a link with the students on their WhatsApp platform. Thus, all the sandwich students had access to the link and were informed of the availability of the link as well as how to complete the questions. At the end of the survey and screening, 250 sandwich students were used in the study.

Instrument

The instrument for data collection was a questionnaire. The instrument was designed by the researchers. It had four sections. The first section was on demographics (gender, age, level of education and programme of study). The next three sections (acceptability of sandwich education, quality of sandwich education, and challenges of sandwich education) were on a five-point Likert scale from strongly disagree (1) to strongly agree (5) on the three constructs indicated above.

Data Analysis Tools

The researchers used Microsoft Office Excel and the Statistical Package for Social Sciences (SPSS) applications to analyze the study. The Excel application was used to screen the data as well as recode variables as needed. The SPSS, on the other hand, was used to run descriptive and inferential statistics based on the research questions and the hypothesis. To test the reliability of the three variables, Cronbach alpha revealed 0.84, 0.94 and 0.81 for acceptability of sandwich education, quality of sandwich education and challenges of sandwich education' variables respectively.

Results and Discussion

Demographics

The researchers collected data on sandwich students' age, gender, programme of study, and employment status. The first demographic information analysed was the age of the respondents. After the researchers ran the simple frequencies in the SPSS, there was a mean age of 34.2 years with 6.9 years as the standard deviation. The finding seems to suggest that the average age of sandwich students is higher (at least above the traditional university students' age) with a little younger as well as very old students. The details of the frequencies of the three main age categories (19-30 years, 31-37 years, and 38 and above years) are presented on Table 2. A close look at the three categories indicates that ages 31-37 category has the highest number of respondents with the other two age groups almost a split. No wonder the mean age indicated above is found within this age group.

Table 2: Age of the Respondents

Age	Frequency	Percentages
19-30	74	29.6
31-37	103	41.2
38 and Above	73	29.2
Total	250	100

Source: Field Survey, 2020

The gender of the respondents was of great interest to the researchers. After running the descriptive statistics, there were 147 males, representing 58.8% with 103 female respondents, representing 41.2%. From the finding, the difference between the male respondents and the female respondents was 44. Though the males were more than the females, yet it is important to add that more females are attracted to the sandwich mode of learning than the regular mode, based on the rate of the percentage. Below is the Table 3 with details on gender.

Table 3: Gender of respondents

Gender	Frequency	Percentages
Male	147	58.8
Female	103	41.2
Total	250	100

Source: Field Survey, 2020

From the public university where the data were collected, there were three main programmes run during the sandwich period. These were Diploma in Education, Diploma in Environmental Health and Sanitation, and Master of Education in Agriculture Education with specialties in crops and animals. The descriptive statistics indicated that there were 70 Diploma in Education students, representing 28%, 81 students from the Diploma in Environmental Sanitation, representing 32.4% whilst the Master of Education sandwich students composed of 99 respondents, representing 39.6%. The reason for the largest number of students among the masters was that the data were collected from two cohorts (two batches) of the Master of Education sandwich students. The Table 4 has more.

Table 4: Programme of Study of Respondents

Programme	Frequency	Percentages
Diploma in Education	70	28
Diploma in Env. Health	81	32.4
Master of Education	99	39.6
Total	250	100

Source: Field Survey, 2020

The researchers wanted to find the number of sandwich students who were employed already before enrolling in their various sandwich programmes. The descriptive statistics indicated that the sandwich students, who had employment, were almost four times the size of the students who did not have job. The numbers were 198 against 52 for students employed and those that were not employed respectively.

Table 5: Employment Status of Respondents

Employment	Frequency	Percentages
Employed	198	79.2
Unemployed	52	20.8
Total	250	100

Source: Field Survey, 2020

The purpose of the current study was to identify the outlook of sandwich programmes from the lens of students, based on the acceptability of the programme, quality of the teaching and learning process as well as the challenges they face as sandwich students. The researchers had four research questions and two hypotheses. The findings are presented based on the research questions and the hypotheses.

Is there any difference in the acceptability of the programme, quality of the teaching and learning, and the challenges of sandwich students based on gender?

The researchers wanted to find whether there was any difference in any of these three variables, based on gender. After running the independent t-test statistical procedure, the results were $t(238) = -1.758, p = 0.80$, two-tailed, $t(237) = -.586, p = 0.59$, two-tailed, $t(238) = -1.528, p = 0.13$, two-tailed for acceptability of the programme, quality of the teaching and learning process and challenges of the programme constructs respectively. By implication, there was no significant difference in any of the three constructs based on the gender of the respondents. Table 6 has details of the statistics.

Table 6: Group Difference based on Gender

Variables	t-value	p-value
Acceptability of sandwich programmes	-1.758	.80
Quality of teaching and learning	-.586	.59
Challenges of sandwich students	-1.528	.13

Source: Author's Estimation, 2020.

Is there any difference in the acceptability of the programme, quality of the teaching and learning, and the challenges of sandwich students based on age?

The group difference in age of the respondents was another important research the researchers wanted to find. After running the analysis of variance with the post-hoc test of Bonferroni, the results indicated that there was no significant difference between any of three age groups in any

of the three constructs. The statistics were $F(2, 43) = 0.408, p = .67$, $F(2, 43) = 1.786, p = .17$, and $F(2, 43) = 0.633, p = .53$ for the three constructs respectively. These seemed to suggest that both the young and old sandwich students were more likely to provide similar information on the acceptability of the programme, quality of the teaching and learning process with similar identification of challenges faced by sandwich students.

Is there any difference in the acceptability of the programme, quality of the teaching and learning, and the challenges of sandwich students based on the programme of study?

As indicated earlier, the university where the data were collected had three programmes for the sandwich mode of learning. Therefore, the researchers wanted to know whether there was a difference in any of the three constructs, based on the programme of study. After running the analysis of variance statistical procedure, there were significant differences in the acceptability, quality as well as the challenges variables. The statistics for the three constructs were $F(2, 43) = 3.383, p = .04$, $F(2, 43) = 4.531, p = .01$, and $F(2, 43) = 2.976, p = .05$ respectively. From the findings, the sandwich students from the different programmes were more likely to provide different responses to the acceptability of the programmes, quality of the teaching and learning, and challenges facing them.

Is there any difference in the acceptability of the programme, quality of the teaching and learning, and the challenges of sandwich students based on employment status?

In terms of the employment outlook of the sandwich students, the researchers wanted to find whether there was any difference in any of the three constructs, based on the level of employment. After running the independent samples t-test statistical procedure, there was no significant difference in the acceptability of the sandwich programme as well the quality of teaching and learning. The statistics for the two constructs were $t(244) = -1.126, p = .26$ (2-tailed) and $t(244) = -0.981, p = .32$ (2-tailed). These results suggest that sandwich students would have similar choices when it comes to acceptability of the programme and quality of the teaching and learning process. However, there was a significant difference in the challenges of the sandwich students construct. The statistic was $t(244) = -2.459, p = .02$ (2-tailed). With this finding, sandwich students were more likely to have differences in opinion on the challenges confronting them based on their level of employment.

Table 7: Group Difference based on employment status

Variables	t-value	p-value
Acceptability of sandwich programmes	-1.126	.26
Quality of teaching and learning	-.981	.32
Challenges of sandwich students	-2.459	.02

Source: Author's Estimation, 2020.

Is there any correlation among acceptability of the programme, quality of the teaching and learning process, and the challenges facing sandwich programmes variables?

Finding the relationship among the three constructs was important to the researchers. After running the Pearson moment correlation, there was strong positive correlations in all the three constructs. The statistics were $r = 0.784$, $p = .000$ for acceptability of sandwich programmes and quality of teaching and learning, $r = 0.611$, $p = .000$ for acceptability and challenges of sandwich students, and $r = 0.607$, $p = .000$ for quality of teaching and learning against the challenges of the students. The results seemed to suggest that the more there was improvement in the quality of teaching and learning, there was a corresponding increase in the acceptability of the sandwich programme as well as the challenges faced by the students.

Table 8: Correlation among the three variables

Variables	r-value	p-value
Acceptability/Quality	0.784	.000
Acceptability/Challenges	0.611	.000
Quality/Challenges	0.607	.000

Source: Author's Estimation, 2020.

Hypothesis: Age, quality of sandwich programmes, and challenges of sandwich student's variables are not good predictors of the acceptability of the sandwich programme.

To respond to this hypothesis, the multiple regression statistical procedure was undertaken. After running the test, the results indicated that the three variables explained 65% of the variability in the dependent variable with the statistics $R^2 = .65$, $F(3, 234) = 146.859$, $p = .000$. The three variables (age, quality of teaching and learning as well as challenges of sandwich students) significantly predicted the acceptability of the sandwich programme with $\beta = 0.125$, $t = 2.900$, $p = .004$, $\beta = 0.550$, $t = 13.735$, $p = .000$, $\beta = 0.223$, $t = 4.417$, $p = .000$ respectively. Since all three variables were significant predictors of the dependent variable, the researchers failed to accept the

null hypothesis that age, quality of sandwich programmes, and challenges of sandwich student's variables are not good predictors of the acceptability of the sandwich programme.

Discussion

In recent times, institutions of higher education are adopting different versions of distance education modes, especially sandwich programmes at a rapid pace in order to provide greater access to students as well as to meet job demands. Despite the common belief that regular students are more likely to be employed than part-time students, this current study uses descriptive research design to investigate whether sandwich education in Ghana is based on quality or quantity. The study revealed that there was no significant difference in any of the three constructs (acceptability of the programme, quality of the teaching and learning process and challenges of the programme) based on the gender of the respondents. This present finding is contrary to lots of research findings (Babu, Ferguson, Parsai & Almoguera, 2013; Njaya, 2015; Southern African Development Community-SADC, 2012). For example, Olakulein (2012) suggests sandwich education is an alternative because it affords these women access to quality education on any field of their choice without any of the barriers associated with the conventional system of education. Ningakun, (2013), also emphasizes that sandwich system of education reduces gender disparities in education and asserts that it is also beneficial to women participation that extends beyond entry into the programme to successful completion.

The study again established that both the young and old sandwich students were more likely to provide similar information on the acceptability of the programme, quality of the teaching and learning process with similar identification of challenges faced by sandwich students. However, this finding is inconsistent with number of studies. For instance, according to Park and Choi (2009), sandwich learning affords adult learners a flexible schedule and saves travel costs while providing them the opportunity to update job related skills and knowledge. Indeed, ample evidence indicates that adult's students who are at risk of non-completion of their degrees due to work and family commitments show a significant preference for the convenience and flexibility of sandwich education (Pontes, Hasit, Pontes, & Siefiring, 2010; Wladis et al., 2014). The study additionally revealed that sandwich students were more likely to have differences in opinion on the challenges confronting them based on their level of employment. Fincher and Finlay (2016) opine that graduates who hold sandwich degrees are not judged as having qualifications that are equal to graduates who earned their degrees via a face-to-face programme when seeking employment. Adams, Lee & Cortese (2012), also after a thorough empirical review of numerous studies on the perceptions of employers toward sandwich degrees, found that potential employers gave many reasons for not accepting sandwich degree credentials.

Lastly, the study rejected the null hypothesis because the findings suggested that age, quality of sandwich programmes, and challenges of sandwich student's variables were good predictors of the acceptability of the sandwich programme. Ke and Xie (2009) posit that sandwich education offers flexibility and thus suits adult students who have to arrange their classes around work and family responsibilities. Harring, Jagers and Matti, (2020) stress that the general purpose

of all forms of education is to modify the character of citizens as well as equip them with skills and intellectual competencies to solve societal problems. According to Kankam, (2020) and Kimotho, (2018), situational, attitudinal, psychological and pedagogical challenges confront sandwich education which many a time influence prospective applicant's choices.

Conclusion

The current study did not find any evidence on the differences gender and age among the constructs (*acceptability of sandwich programme, quality of sandwich programmes, and challenges of sandwich students*). However, in terms of the programme of study and employment status of sandwich students, students were more likely to provide different information. Again, The researchers also found a positive relationship among the three constructs. As the *acceptability of sandwich programme* construct goes up, the *quality of sandwich programmes* goes up. Further, age, quality of teaching and challenges facing sandwich students' constructs were the main determinants of the acceptability of the sandwich programme. As different institutions of higher learning embrace the sandwich mode of education, there should be a close look at the age of students, the quality of the teaching and learning process, and the challenges of sandwich students in order to determine the sustenance of the programme. When students are surrounded with different institutions and have opportunity to choose among the various institutions running similar programmes, the quality of the teaching and learning, and the nature of the challenges that current students face will indicate whether the sandwich programme will be accepted or not.

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