

# Students' Career Aspirations and Pedagogical Experiences in Ghanaian Universities

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## ABSTRACT

In this 21<sup>st</sup> Century, the role of higher education (HE) has shifted from the dominance of knowledge transmission to the development of relevant skills for national development and for solving society's problems. This study therefore explored students' career aspirations and their pedagogical experiences during their university education in selected private and public Ghanaian universities. To gather data for the study, interviews were held with 10 lecturers and one focus group discussion with six students in each of the eight departments selected from both the public and private universities. Using thematic analysis, the data reveal that students go to university with high expectations of acquiring skills that would make them marketable, and in some cases, entrepreneurial to enable them to establish their own businesses. However, while in some private universities and specific academic programmes, manageable class sizes and learning resources allow for participatory and practical activities, large classes in public universities and certain programmes lend themselves to the dominance of theoretical approaches and knowledge transmission. Thus, there are identified gaps between students' expectations and actual pedagogical experiences in higher education institutions. This may suggest that the type of university and academic programme one accesses determines the skills one acquires, and one's employability in Ghana. Accordingly, we suggest that Ghanaian universities focus more on creating the kind of teaching and learning environments that will foster the use of participatory and practical approaches and the development of students' critical thinking, innovative and problem-solving skills.

## KEYWORDS

students' aspirations, career, critical thinking, problem-solving skills, Ghana, universities, pedagogical experiences

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## Introduction

Globally, the higher education (HE) sector has been cited as the gateway to knowledge and skills capital for developing individuals, communities, and countries. In developing countries, including Ghana there have been national and higher education policies toward educating university graduates to be useful to the economy (McCowan et al., 2022). These policies have resulted in expansion in the HE sectors, especially in Sub-Saharan Africa (SSA). However, there is evidence that students' participation in HE is insufficient for developing skills, knowledge, and attitudes needed for the job market (Wang et al., 2014). In Ghana, higher education is an avenue through which individuals embark on a transformative journey, seeking not only to gain knowledge but also to nurture their career aspirations. Ghana has witnessed remarkable developments in its higher education sector in recent years, marked by increased access and diversity in the fields of study (Owusu et al., 2018). This expansion has brought a diverse group of Ghanaian students to universities, each with their own unique career aspirations (Amissah et al., 2020). These aspirations are not only personal but also crucial to the socioeconomic development of the nation.

The array of career aspirations that students bring with them to university spans various disciplines, ranging from the sciences, and technology to the arts and humanities (Gore et al., 2017). However, the alignment between students' career aspirations and the academic experiences they encounter within Ghanaian universities has become a subject of increasing concern. Employers consider practical skills such as problem-solving, and critical thinking skills as important attributes of university graduates (Cruz et al., 2020; Pearl et al., 2019). In addition, students also have high expectations of developing marketable and entrepreneurial skills that would enable them to establish their businesses (Amissah et al., 2020). This means HE institutions should have the right resources and appropriate pedagogical approaches to count towards the development of knowledge and skills needed to produce the right human resources for the job markets.

While many public institutions rely on university graduates for employment, other labour markets see university graduates as ill-prepared for the job markets (Kwarteng & Mensah, 2022; Lisá et al., 2019). Many university graduates in SSA lack generic and discipline-specific skills needed in the job market (Tran et al., 2020). Despite the burgeoning aspirations of Ghanaian university students, there is a compelling need to examine whether the pedagogical approaches employed by universities effectively prepare students to achieve their career aspirations. A disconnection may exist between the career aspirations of students and the skills they acquire during their academic journey. This disconnect could potentially hinder their ability to make meaningful contributions to their

chosen professions and, in turn, impede Ghana's progress towards socio-economic development. Furthermore, the role of lecturers in promoting the acquisition of skills directly relevant to students' career aspirations remains a critical, yet underexplored, dimension of higher education in Ghana (Damoah et al., 2021).

A research study with such orientation in the HE landscape carries significant implications for multiple stakeholders. Firstly, it addresses the concerns of students by illuminating whether their educational experiences align with their career aspirations. These insights can empower students to make informed decisions about their academic pursuits and to bridge any skill gaps. Secondly, this study contributes to the ongoing discourse on the effectiveness of pedagogical approaches in Ghanaian universities. Universities and lecturers can benefit from a deeper understanding of how their teaching methods promote skill development and career readiness. Lastly, policymakers and educational institutions can use the findings to contribute to the growing debate about curriculum design, faculty development, and educational policies that enhance the quality and relevance of higher education in Ghana, ultimately facilitating the nation's pursuit of socio-economic development (Atuahene, 2014).

The following research questions guided the study:

1. What are Ghanaian university students' future career aspirations?
2. What skills do students think they need to achieve their future career aspirations?
3. To what extent are university lecturers promoting the skills students require to achieve their aspirations?

## **Literature Review**

### **Career Aspirations of Students**

Student career aspirations are values and beliefs regarding future plans in terms of education or/and employment (Khattab, 2015). Students' career aspirations are significantly shaped by the quality of their educational experiences. Positive experiences, like engaging with effective teaching methods and encouraging teacher-student connections, can provide students with the confidence to pursue challenging objectives (Hussain et al., 2013). Negative experiences, such as failures in school or a lack of support, might cause goals to be updated or even reduced (Al Nasser et al., 2014). There are empirical studies that point to some professions or job titles students at university aspire to obtain in the future. For example, a longitudinal study by Gore et al. (2017) in New South Wales, Australia explored students' aspirations using students' background and school-level factors. The study that surveyed the views of 6,492 students indicated at least one occupation of interest. It revealed that more than 30% of the students aspired for professions

in the arts (Actors, dancers, musicians, photographers, visual artists, craft, teachers) compared to 12% who wished to be in science-related professions such as Agric, forestry, chemists, civil engineering, industrial, mining, and ICT. This was followed by 3.6% who wanted to be in the medical profession while nursing (42%) was the largest job aspiration.

The studies of Etmanski (2019) in the USA and Khattab (2015) in the UK also looked at students' aspirations and academic behaviours. These studies which drew on the U.S. National Research Council's (NRC) 2006 Assessment of Research Doctoral Programs and data from a longitudinal study of young people in England (LSYPE) respectively found that students cited their aspirations in the sciences, and ICT-related professions while a few cited arts and humanities professions. It is pertinent to note that these studies were conducted in developed contexts with conditions or other socio-economic factors that could influence students' choice of careers, and therefore, the findings may vary in a developing context. Some studies in developing countries including those conducted in Ethiopia (Zewude & Habtegiorgis, 2022) and Nigeria (Nwajiuba et al., 2020) have also looked at students' career aspirations. The study in Ethiopia which surveyed the views of secondary school students for example, found that majority of the students (46.7%) had the aspiration of being in a health and science-related field, followed by business-related field (13.4%). However, the Nigerian study looked at factors that influence the choice of university students' future careers. Although the Nigerian study was carried out in higher education institutions, it concentrated on the link between industry and university education. These studies reveal a gap in the literature on university students' career aspirations and whether universities can provide the necessary skills for students to achieve these aspirations.

### **Required HE Skills for Achieving Future Aspirations**

Students who possess a wide range of skills will be better equipped to accomplish their career goals in a global world that is always changing (Unterhalter et al., 2019). Examples of these skills include cognitive skills; communication and collaboration skills; digital literacy and technological proficiency; emotional intelligence and resilience. A large-scale international study, the Global Skills Gap in the 21st Century (Strachan, 2019), reports that the skills most relevant to employers globally are problem-solving, teamwork, and communication. That report describes a gap between the skills that graduates have and those that employers expect graduates to have when they enter the workforce. Another study in Slovakia (Lisá et al., 2019) which involved 27 employees in the financial sector and 534 university students cited generic skills such as teamwork, communication skills, organizing, planning. Also, discipline-specific skills such as skills in Engineering, Law, social work, and personal attributes were cited as skills employers need from university graduates.

Other studies have cited critical thinking and problem-solving skills as major skills that university graduates should possess to be employable in a growing knowledge economy (McCowan et al., 2022; Nwajiuba et al., 2020).

In addition, students must be technologically proficient and digitally literate as technology is rapidly incorporated into a variety of industries (OECD, 2016). According to Fraillon et al. (2019), digital literacy includes the capacity to use and analyze digital information critically. Utilizing digital tools and platforms efficiently to streamline work and solve problems is a requirement for technological proficiency (Kateryna et al., 2020). These abilities are essential for students' capacity to keep up with technological developments and to remain competitive in the employment market.

Despite the importance of these skills for university graduates, there are concerns especially in SSA, that university graduates do not possess these important skills needed to achieve their career goals, hence increasing graduate unemployment in many developing countries (Adu-Yeboah, 2022; Nwajiuba et al., 2020). For example, a longitudinal study (McCowan et al., 2022) in Ghana, Botswana, and Kenya that tracked students' critical thinking skills development for 3 years of university education revealed students' low critical thinking skills development at the end of their university education. Adu-Yeboah's (2022) study in Ghana and Nwajiuba et al. (2020) in Nigeria corroborate these findings as they also found inadequate skills such as problem-solving, effective communication, and data analysis skills among university graduates. What is lacking in the literature reviewed is whether universities in SSA are adopting the appropriate pedagogical approaches that promote the development of skills necessary for students to fulfill their future aspirations, which this study addresses.

### **Pedagogical Practices that Promote the Development of Required Skills for Future Aspirations**

The purpose of higher education goes beyond the impartation of knowledge; it also includes developing the skills that enable students to realize their aspirations. Lecturers are essential to this process because they facilitate the development of the skills students will need to succeed in their chosen professions (Cruz et al., 2020). Researchers (Nteere & Namusonge, 2012; Schendel, 2015) highlight the significance of pedagogical techniques that emphasise skill development in addition to content delivery. Students are given opportunities to exercise critical thinking, problem-solving, and teamwork by lecturers who use active learning methodologies, problem-based learning, and project-based assessments (Prince, 2004; Saxena, 2021). These techniques foster an atmosphere where students interact with actual problems, preparing them for the complexity of their future careers.

According to the Horn et al. (2023) and Wiggins and McTighe (2005),

integrating cross-disciplinary skills into academic programmes at universities is becoming increasingly recognized as an essential component of ensuring that students are ready for their future aspirations. By bridging the gap between academic disciplines, lecturers help students to develop skills that go beyond the confines of certain topic areas (McIntyre, 2005). Practical pedagogical approaches such as field work, project-based learning, and group work for example, have been found to develop critical thinking and problem-solving skills (Baird & Parayitam, 2019). Participatory pedagogies are often advocated for because they create active, collaborative, and stimulating environments where students feel valued as key stakeholders in the teaching and learning process, which contributes significantly to improving their learning experiences and achievements (Guerriero, 2014; Tadesse, Manathunga & Gillies, 2020). Scholars like Giroux (2012) also advocate the use of critical pedagogy where local context is leveraged to engage students on global issues. Here, learning in the classroom is not separated from society, but rather intertwined with broader societal issues in a transformative manner, underscoring learning as a social phenomenon (McArthur, 2010).

There are however challenges that have been cited in some SSA countries about lecturers' adoption of rote memorization approaches to teaching due to large class sizes. For example, the study by McCowan et al. (2022) in Ghana, Kenya and Botswana found that while some elite private universities applied problem-based learning, many public universities still relied on traditional methods of university teaching. Nwajiuba et al.'s (2020) study in Nigeria found that public universities in Nigeria mostly relied on traditional lecture method due to poor internet connectivity, lack of modern libraries and large class sizes. According to Song (2016), lecturers' dedication to advancing skills in higher education is demonstrated by the alignment of their assessment methodologies with skill development. The degree to which lecturers prioritize skill development is shown through formative evaluations that offer feedback on skill proficiency and summative assessments that call for the application of skills (Niedermeier & Pohlenz, 2016; Postareff et al., 2007). Despite the challenges with skill development in universities, some universities are implementing active learning approaches to promote the development of problem-solving and critical thinking skills among students.

It is important to note that sprawling through the literature in the higher education landscape in SSA, very limited studies exist on how universities are developing the most important skills that help students to achieve their aspirations after graduation. It is against this backdrop that this current study sought to unravel the connection between students' aspirations and how the required skills for achieving them are being developed.

## Methods

This study draws on qualitative case study design to collect data from 3 public and 2 private universities in Ghana. More specifically we draw on one-on-one interviews with 10 lecturers with two lecturers each in each institution. These lecturers were selected conveniently from eight departments, with the help of the heads of departments, from the five institutions which were involved in the study and who had a minimum of 5 years of university teaching experience. Two departments each from the three public universities, and one department each from the two private universities were purposively selected based on their programmes of study. We had one focus group discussion (FGDs) with six students in each group in each university.

### Instruments

There were two research instruments used for the data collection. Interview guide for lecturers and focus group discussions guide for students. There were three sections of the interview guide; background information for the lecturers such as sex, age, qualification and teaching experience. The other sections were about their university teaching experiences and the last section was on what skills students required to possess to achieve their future career aspirations. The focus group discussions guide had questions about students' experiences of teaching and learning in the university, challenges and aspirations. Some of the questions in the FGDs were 'what are your future aspirations of enrolling in the university?', 'what kinds of jobs do you hope to secure after graduation?', 'how do lecturers tend to facilitate class?' and 'what skills do you think that you need to learn during university in order to achieve your future aspirations'. For the lecturers' interview protocol, questions such as 'what are the most skills students should learn during university?', 'how are these skills being developed in your teaching?'. In all, there were 4 field visits to each of the universities for the data collection. These items were developed based on the research questions and the review of literature.

### Participants

Participants for the study were lecturers and final year undergraduate students from geography and rural development, planning, business, education, integrated studies, allied science, and social sciences departments in the selected universities. In the public universities, lecturers and students were from the geography and rural development, planning, business, education and integrated studies, social sciences while business, computer science were from the private universities. Students were selected conveniently based on their willingness to participate in the focus group discussions. In each of the FGDs, there were three males and three females all offering the same programme.

With regard to the lecturers, there were four females and eight males. All

the lecturers had a minimum of a PhD qualification except one lecturer who was still on a PhD programme. The lecturers' areas of specialization ranged from Planning, Computer Science, Social Sciences, Education, Engineering, Information Technology to Geography. The teaching experience of the lecturers ranged between five to 18 years.

### **Procedure**

An ethical review of the study was obtained from the Institutional Review Board of the University of Cape Coast. Following this, permission was obtained from the heads of departments of the selected universities. All participants gave informed consent prior to data collection. The purpose of the study was spelled out to participants, and they were assured of anonymity and confidentiality of their responses. Data was collected in the middle of the second semester of the 2019/2020 academic year. Participants were assured of their right to withdraw from the study anytime they wished. Each interview lasted a maximum of 45 minutes while the FGDs lasted a maximum of 60 minutes. All the interviews and FGDs were audio recorded with the consent of the participants and transcribed. To increase the validity and reliability of the findings, the study adopted the guidelines of Morrow (2007) for enhancing trustworthiness of data from a qualitative study. First, a follow-up interview was conducted with selected participants to ensure that the themes that were identified were consistent with what they had expressed during the previous interviews. Second, peer debriefing was carried out through sharing the themes/codes along with transcripts and getting feedback on the congruence between themes and selected quotations in the transcripts.

### **Data Analysis**

Three steps were taken in the thematic analysis of the focus group and interview data. First, the transcripts were examined to have a general understanding of the participants' responses. Using MAXQDA 20 software, coding was done in the second step. We used a hybrid strategy that incorporated both inductive and deductive coding (Fereday & Muir-Cochrane, 2006). To understand the participants' perspectives on the issues raised in the interviews, concepts that were not included in the predetermined procedure were identified through deductive coding utilizing keywords from the interview sub-themes. Themes were formed by combining codes in the third step, taking into account the differences and similarities in participants' views. After the analysis was completed, we combined the results and narratively presented them (Creswell et al., 2006).

### **Findings**

In this section, we first present findings related to students' future career aspirations. We then proceed to present students' and lecturers' perspectives on the



skills that students need to acquire in the university to enable them to pursue their aspirations. The section concludes with a look at whether universities are promoting the skills students need to achieve their future career aspirations. Abbreviations are used to represent the participants ('S' for 'students' and 'L' for 'Lecturers').

### Students' Future Career Aspirations

The students involved in this study expressed a wide range of ambitions for their future career aspirations, spanning from realizing their ideal jobs to venturing into entrepreneurship. The students' aspirations are categorized into the following broad aspects: public and civil service-related jobs, science and ICT-related jobs, engineering-related jobs, and private businesses/entrepreneurship. Some students remained undecided about their future career aspirations (See Table 1 for a detailed breakdown).

**Table 1: Students' Future Career Aspirations**

<i>Employment sector</i>	<i>Sub category</i>
<i>Public and Civil Service-related jobs</i>	<i>Military, Teaching, Law</i>
<i>Science and ICT-related jobs</i>	<i>Computer network programmer, Computer scientist</i>
<i>Engineering-related jobs</i>	<i>Geologist, Cartographer, Climatologist</i>
<i>Private Business/ Entrepreneurship</i>	<i>Fashion Designer, personal business</i>
<i>Others</i>	<i>Some students were undecided, and others were open to any jobs that would come their way</i>

The following excerpts are from students who described their future careers once they graduated from the university:

*For me immediately I finish with this degree I will be pursuing law. I want to be a lawyer. I have passion for it so much. So immediately I complete my first degree I'll be aspiring to be a lawyer. (S1)*

*I am doing B.Ed. Education, so right now I am looking at being a teacher. (S7)*

There were other students who were undecided about their future careers but believed their programme would enable them to branch into any field of their choice. This echoed in the following remark:

*From an engineering perspective, I think we are basically learning problem solving skills, so with the skills acquired I could venture into any other sector and then end into business. (S4)*

Other students were not certain about their future careers as they kept

changing regularly. This is noted in the comment below:

*For me, I don't really have a specific thing. It's like for me, every month I change what I want to (S4)*

*I think as at now I don't have anything in mind. I came in with the idea of going into electrical engineering after school but I think due to the system here we are exposed to different things like programming like design and entrepreneurship. So now, I am not sure what I will be doing after here. (S3)*

The students' views seem to agree with Brown and Jones (2016), and Martin et al.'s (2019) assertion that positive experiences in university provide students with the confidence to pursue challenging objectives, which may include future endeavours such as careers aspired to, while negative experiences might cause goals to be updated or even reduced. The subject of how the students' experiences in the university influence their decisions about their future careers is explored later in this paper.

### **Skills Students think they need to acquire in University**

The students and lecturers identified some skills that they find important for students to acquire to fulfill their future aspirations. These skills are categorized into the following themes: critical thinking and problem-solving skills; communication skills; technology proficiency; and interpersonal skills.

#### ***Critical Thinking and Problem-solving Skills***

Critical thinking and problem-solving skills emerged as paramount for students to thrive in their future aspirations. Both students and lecturers expressed similar views on the important role of these skills in thriving in this increasingly complex and ever-changing society. They emphasized the need for students to develop the ability to analyze issues, find solutions to problems, and make informed decisions.

In the opinion of the lecturers, critical thinking skills permeate all these aspects:

*Critical thinking for me is important because every activity that we undertake every day in our lives involves critical thinking - whether it is with regards to taking the right decisions... ability to criticize, analyze, discuss, and evaluate issues to be able to arrive at a solution. [L2]*

Other lecturers echoed these views. They identified various skills, but the one that stood out for them was students' ability to gain a better understanding of complex issues, and this depends on the development of critical thinking. They expressed further that although students needed to study and pass their exams, university education should focus more on building students' capacity to be analytical, and this goes beyond just passing exams, to critically analyzing

situations, proposing solutions, and applying knowledge. These views are contained in the following excerpts:

*I think a graduate after passing through the university should come out as a totally different person from the way they came in. The way they view the world and analyze situations must be different. It must not just be that they are able to sit and pass exams. I think this is relevant, but if a student is not analytical it would be very difficult for them to succeed out there ... I believe critical thinking is important.[L4]*

*The skills are many but I'd think of their ability to look for information that'd help them understand issues and their ability to apply this knowledge which they're able to acquire to solve human problems. All these demand critical thinking [L8]*

*The essence of university education is to train the mind of students by making them analytical, not just take things as they are but they should be able to analyze critically and come out with solutions. [L3]*

Justifying why problem-solving skills are crucial, some of the lecturers intimated thus:

*The most important skill is problem-solving...if they are taught how to solve problems outside the scope of a particular course, then that is what I think is the best for university students to gain. We expect them to develop some problem-solving quality. [L7]*

*Considering the way our world is heading, we require problem-solving skills to confront challenges that are endemic in society. So I think students should be introduced to problem-solving skills. [L9]*

*Education is all about building students up to a point where they will be able to analyze information and use it well to solve the needs of society because the role of university is to solve a problem, and if the students are coming here, they must be built up to fit into that kind of framework... [L11]*

The student participants shared similar perspectives on the role of critical thinking and problem-solving skills in achieving their future aspirations. For instance, participant S14 highlighted the role of critical thinking, recounting a specific lesson from the previous semester that focused on this skill. She believed this skill should be taught to students as it can have a substantial impact on their progress:

*I would say critical thinking because I do remember very well that we were taught something last semester about critical thinking and how to critically*

*analyze situations, and come out with the evidences by way of critical thinking and by that I seriously believe that all those things should be inculcated in us because they will affect us.[S14]*

Indeed, some of the student-participants confirmed that certain situations compelled them to apply some of the skills they had acquired in university, and found the skills beneficial. Participant S2 for example, cited how he benefitted from the application of critical thinking skills learned in class to real practical situations:

*I'd use myself as an example because there have been several cases in which I had to apply some of these things that I was taught in class and when it was being applied, it worked effectively.*

Similarly, Participant S27, a science student, expressed the valuable role of critical thinking despite it not being taught as a course at his university. He emphasized that critical thinking is required when confronted with options to identify the most effective ways of addressing problems:

*From my science background, critical thinking is outside the books but I will say it is important...[because] when thinking about a solution to a problem or how to do something, you need to think critically about the most clever and simplest way of doing that.*

The above excerpts suggest that applying critical thinking and problem solving skills in everyday life and achieving ones career aspirations emerged as one the most important skills university graduate should possess.

### **Communication Skills**

Clear and effective communication was also identified by both students and lecturers as an important skill for life and employment. This skill was particularly emphasized by students aspiring to enter the teaching and legal professions.

Participant S6 highlighted the essential role of communication skills for lawyers, stressing that 'to be a lawyer, you must be someone who knows how to communicate very well'.

Participant S9 who also aspired to become a teacher indicated that the most important skill needed to succeed as a teacher was communication skills. She emphasised that teachers are expected to be competent communicators to be able to convey ideas clearly and effectively. According to her, a teacher 'should be the kind of person who can speak well'. She further indicated: 'If you can't, I don't think you can be a teacher'. She believed that one would not succeed as a teacher without this important skill.

Some lecturers also shared the belief that the ability to communicate clearly was key to students' success in their future aspirations. As expressed by Participant L8, the fundamental skill required to thrive in one's job is effective communication. She believes that regardless of one's intelligence, failing to communicate

effectively, verbally, in writing as well as in body language, could be detrimental to students' aspirations:

*The basic skills to survive in the work world is how to communicate. It is so important how to communicate you can be a smartest person if you don't know how to communicate you are in so much trouble. How to communicate of course like oral communication, written and body language. [L8]*

Participant L2 expressed similar sentiments by acknowledging that 'skills like competence in written and oral communication is important'

Besides, participant L11 stressed the universality of communication skills, indicating that these skills are essential irrespective of students' specific future aspirations. 'Knowing how to communicate in a very clear and articulate fashion is critical for all', he emphasised.

### **Interpersonal Skills**

Closely linked to communication skills was the need for students to also gain interpersonal skills. Many of the lecturers and students stressed the significance of interpersonal skills in students' future aspirations. Being a "people person" who can effectively interact and connect with others in the workplace and society as a whole was identified as essential as expressed by participant S15 that, 'you should be kind of a people person, someone who can interact with all people. If you can't do that, then I don't think you can achieve much.'

Interpersonal skills were deemed fundamental for various career fields, as students would need to learn to interact with people regardless of where they would find themselves. Across all focus group discussions, all the students involved unanimously expressed the importance of interpersonal skills, recognizing these skills as valuable to students' success, regardless of their specific future aspirations.

The lecturers agreed with the students' perspectives. For instance, Participant L8 claimed that the education that students receive in their first degree extends beyond the acquisition of knowledge, to include life skills and character development, the ability to cordially live and relate with others in the society:

*First degree is not where you amass a lot of knowledge in my opinion. First degree is where you build character and where you learn skills for life...where you learn to live and work with other people in society... So I think this is an important skill for undergraduate students. That is my belief. [L8]*

This viewpoint was echoed by another lecturer who underscored the need for students to learn social skills. He pointed out that some challenges require collective thinking and linking up with others to identify solutions to such problems:

*As I said earlier on, it is all geared towards solving a problem. Some problems usually need thinking through in order to solve them... There are others that you need to collaborate with others. In some cases, the solution you might be looking for may be with others. Thus, you need to join forces with others in order to solve them. So, I think learning social skills is also needed. [L11]*

Participant L10 also stressed the significant role of interpersonal skills, highlighting its role in relating to people and sharing challenges with them. 'I think the interpersonal ones are very important. How to relate to people, how to share your problems with others', she expressed. Thus, the lecturers support the students' belief that university education goes beyond knowledge acquisition, to equipping students with interpersonal skills to enable them collaborate in finding solutions to problems and relate effectively with others in society.

### ***Proficiency in Technology***

Students and lecturers recognized the role of technological skills in thriving in the current digital world. They stressed the need for students to develop proficiency in various technological areas, including coding, data collection, and analysis.

For those aspiring to enter Engineering and its related fields, acquiring technological skills in their field was vital. They believed that such skills would enable them to carry out field activities, collect data, and produce maps:

*For the cartographic aspect of geography, you need to learn IT skills. For instance, going to the field to take data and samples myself, come back, and produce a map without anyone helping me requires knowledge in IT. [S6]*

*I want to know how to work with seismic. I want to know how to pick seismic lines.... I have never used a stereo-plotter, so right now that is what I want to learn. [S9]*

*You know geography deals with surveying of lands. I need skills to use machines. Now If I don't have this skill how do I work? I would become a white elephant in that sector which is very bad. [S2]*

For Participant S21 who had the ambition to become a computer network programmer, coding skills were central to his success in the field. Thus, he expressed the desire to learn these skills:

*For me, as I said earlier, I will like to base on computer networking but then coding is my problem... every aspect of coding I don't even know how to apply it. So it is something I have to learn [S21]*

Some of the lecturers echoed the sentiments expressed by the students. Technological skills in all areas, they emphasized, were critical in preparing students to tackle complex problems in the future, as claimed by participant L3, for example, that 'It is a skill that every student needs to have to be able to solve

complex problems’.

### **How Universities are Promoting Skills Students need to achieve their Future Career Aspirations**

Regarding the extent to which students were gaining the skills described earlier in their various universities, both students and lecturers expressed varied opinions. While some of them, mostly those in private universities, believed that universities were effectively equipping students with these skills, others expressed different opinions.

The students who expressed satisfaction claimed that certain courses provided practical experience for them to build such skills. For instance, for those who aspired to become teachers, the Curriculum Studies course offered an opportunity for them to learn how to prepare lesson notes. They found this skill to be applicable in their future teaching role:

*I'd say some are helping us to acquire such skills. In some education courses like curriculum studies, we learnt something like how to prepare lesson notes. We did it. It was a topic in the course which is very practical. [S7]*

She was therefore confident that she would excel in the teaching field if employed after graduation. Participant S3 expressed a similar opinion as follows:

*In the university, especially the education courses we do help us a lot. The psychology, the sociology, and those educational courses help us...They help us to know people and their behaviour and understand them.*

According to him, courses such as sociology, educational research, and psychology contribute significantly to students' skill acquisition. Similarly, participant S8 expressed contentment with the skills imparted to students by her university and was confident in the university's ability to provide the necessary skills for future success.

*I think I have everything I need... for me, what I need is here. This university has made me see that there is nothing like impossible...so I don't think there is something I will need outside my university. For now, I think I am good. [S8]*

She cited an example to support her claim by indicating that ‘talking about educational research, if I am given a project I would know how to prepare questionnaires and how to relate with the people when I am taking answers from them’.

Some lecturers expressed similar satisfaction about the way the universities were promoting skill development in students. They agreed that the universities were training students to know how to evaluate evidence and think critically, which they believed were critical to allow students to analyze complex issues and

provide innovative solutions in the real world of work. In this connection, Participant L1 claimed that he does this during his teaching by asking thought-provoking questions. He stated, 'I don't just say okay to everything my students say. I ask a lot of "why and how questions" and that really brings out the critical thinking in the person.'

Others believe the core purpose of university education should be to equip students with the ability 'to evaluate and use evidence to solve a difficult real-world problem' (L9) and once students are able to do that, they can solve real-life problems in their various places of work. This was a position also shared by participant L4:

*I think university education should equip the individual to be able to find solutions to our everyday problems in the community. If after university you cannot think through and then find solutions to our everyday challenges, then it proves that your education falls short.*

He explained further that he does this by engaging his students in projects, practical learning activities, case studies as well as encouraging them to take up leadership responsibilities.

However, as indicated earlier, not all the participants felt that university education adequately prepared students with the skills necessary to secure a job after graduation. They noted that some courses, especially those that demanded practical exposure, were primarily taught theoretically, leaving them with theoretical knowledge but lacking practical experience. These students highlighted the need for universities to incorporate more practical elements into their programmes:

*We are not exposed to it practically. Most of the teachings that are supposed to be practical, they rather make it theoretical. So at the end of the day you only know the concepts. This is what I'm supposed to do but practically you don't know how to do it. So that is one of the major problems we find in acquiring such skills. [S1]*

*We need more practicals. [S18]*

*I like the course [cartography] but the lecturers don't make it so practical ... in our case, we have to learn more on our own. [S12]*

Participant S13 who aspired to become a Geologist lamented that from the training she was receiving from her department, she did not feel confident to attend interviews for her aspired job after completion. She lamented, 'I am afraid my department won't give me the full potential. I am not confident I would go for any interview after I leave here'. Apparently, for these students, the universities need to do more, particularly in the practical aspect.

Participants who identified critical thinking skills as key to securing their



future dream jobs expressed that they were not well equipped to apply this skill in the future. They claimed that during assessment, they were often restricted to providing answers based on already prepared materials provided by lecturers, impeding their ability to critically analyze and examine issues beyond the already prepared course materials:

*During lectures when the lecturer asks a question and we the students answer. He will still expect the answer to be within the handouts he has given us. [S5]*

*The assignments do not involve something that you actually have to search and really apply what you've learnt in class[S15]*

Similarly, some of the lecturers recognized the importance of helping students build the necessary skills for their future. However, they believed the universities were not creating the enabling environment for this to materialise, as lamented by participant L6 for example that:

*'Although students need analytical skills, we [lecturers/universities] are not helping students to get it. Most of the time, we don't help them to use their brains, to read a lot, analyze situations, discuss it, and be able to let things out. That is, for the students to think outside the box'*

He emphasized that 'as lecturers, we need to really hammer on that. How to make students to critique some of the theories and the concepts they are learning... to come out with something on their own.'

Other lecturers appeared to concur with this view that the universities were not creating conducive environments for students to be able to connect what they are taught in class with realistic life problems. However, they attributed their inability to do this to the large class size coupled with inadequate resources as expressed variously in the excerpts below:

*My first biggest challenge is the class size and my area of teaching is very practical. Also, we lack tools to work with...Tools like map to teach with and needed materials required in this course...Students must know these materials, but the university doesn't have these materials. [L5]*

*Presently, I have about hundred and eighty [students]. Thus, how to satisfy the needs of all the students becomes difficult...and also marking and assessing students is a problem because you would want to have it on an individual basis as possible but because it is a large class you have to treat them as a mass... In such cases what do you do? You just have to push them. [L8]*

*There are so many impediments like the large class size. A typical level 100 class is about 430 students. In Level 200, I have about three hundred and something students. Though my work is practical work, I can't do that effectively...Another problem is some of the tools to work with. We lack tools to work with. [L11]*

In such environments, the lecturers claim they become overwhelmed and are not able to meet the needs of all the students, including monitoring their progress and assessing them in a manner that will equip them with the necessary skills. Whiles some students thought the skills they are acquiring during studies at the university especially those from private universities are enough to achieve their aspirations others especially from public universities thought universities are not really giving the skills they needed to achieve their aspirations.

Overall, the findings underscore the importance of universities in equipping students with the skills necessary for their future careers. Both students and lecturers believe critical thinking and problem-solving skills, communication skills, interpersonal skills, and proficiency in technology are crucial for students to acquire in university to fulfill their future aspirations. Critical thinking and problem-solving skills is needed not only to enable students to analyze issues, and find solutions, but also to make informed decisions. Communication skills, particularly clear and effective communication, are deemed critical for the teaching and law professions. Interpersonal skills are identified as essential for interacting and connecting with others in the workplace, while proficiency in technology is recognized as indispensable in this digital age. While some participants expressed satisfaction with the skills acquired through university courses, others highlighted areas for improvement in skill acquisition. The students felt that practical exposure in particular is lacking, hindering their ability to apply theoretical knowledge to real-world situations. The lecturers, on their part, acknowledged challenges such as large class size and inadequate resources but recognised the need to create conducive teaching and learning environment for skill development.

## **Discussion**

This study aimed to explore university students' future career aspirations and the skills that they think they require to achieve their aspirations. The students in this study indicated future career aspirations such as science and ICT-related jobs, engineering-related jobs, public/civil service-related jobs and self-employment. The future aspirations of these Ghanaian students are similar to other students' aspirations in other studies (Khattab, 2015; Lisá et al., 2019). Etmanski (2019) for example reveals that student in the USA and Australia (Gore et. al., 2017) aspire to be in the sciences, ICT-related jobs, law, and other fields in the humanities. Our

study also revealed that a few of the students wanted to enter arts-related fields, such as acting, dancing, music, photography, and visual arts. One tentative reason for only a few of the students aspiring to be in the performance industry could be the low wages and job insecurity in a developing context like Ghana. Also, many Ghanaian parents would like to see their children in the noble professions for a better life, and to belong to certain high social classes (Sanka et al., 2019).

University graduates who possess a wide range of skills including 21<sup>st</sup> century skills can successfully navigate their chosen career paths to succeed academically (Khatab, 2015). Regarding the skills students need to acquire in university in relation to their career aspirations, our study findings revealed that skills such as critical thinking and problem-solving, communication, interpersonal and information communication technology are the most important skills students should possess to realize their career aspirations. This is in consonance with the reports of the Global Skills Gap that skills most relevant to employers are problem-solving, teamwork and communication. Furthermore, the OECD (2016) report indicates that students who are technologically proficient and digitally literate can fit in the rapidly growing technological world.

This study's findings also resonate with McCowan et al.'s (2022) study which found that critical thinking and problem-solving skills are the major skills that university graduates should possess to be employable in economies. In addition to critical thinking skills, Song (2016) also stresses that students should possess effective communication, interpersonal and teamwork skills in order to navigate their career paths. These skills identified by the students and lecturers are what employers look out for when employing graduates, without which, it is purported employers reject graduates (Lisá et al., 2019; Nwajiuba et al., 2020). It is also important to reiterate that even employees of organizations are supposed to possess these skills in order to rise through their career paths (Lisá et al., 2019). For lecturers and students to have identified these skills as crucial for university graduates to realise their career aspirations is as important as whether universities in Ghana are creating the environment for students to acquire these skills during their university education.

The purpose of university education is to impart skills and knowledge to students to be able to realise their potential or aspirations in contributing meaningfully to society. Our study finds that while few students think their university education has cultivated the needed skills for the job market, many believe they have not acquired the skills they need to achieve their future aspirations. This finding supports the studies in (McCowan et al., 2022; Owusu et al., 2018) that found that many university graduates complete their programme of study being ill-prepared for the job opportunities available. In most SSA countries,

several structural factors often impede the implementation of academic development programmes. These factors include the absence of clear and robust national regulations, a dearth of lecturers with heavy workloads that leave little time for professional development, and limited funding, which may stem from a general shortage of funds in higher education (Sellen, 2016; Dearn et al., 2002). Furthermore, other broader problems impede the advancement of university pedagogy in the area, including a strong focus on rote learning as the most reliable measure of quality (Schweisfurth, 2013) and a general deficiency of opportunities to put theoretical knowledge into practice (Unterhalter et al., 2019).

Lecturers admitted that students can develop their critical thinking and problem-solving skills through teaching methodologies that focus on practical training such as field work, project-based assignment and presentations. However, our study shows that especially in public universities, large class size impedes the implementation of practical pedagogies that promote problem-solving and critical thinking skills.

### **Conclusion and Implications**

For society to flourish, it is essential to understand the standards of teaching and learning in higher education as well as the underlying causes of these standards. In line with the sector's acknowledgment of the Sustainable Development Goals, Ghana, like many developing nations, views universities as essential to their progress toward prosperity and an improved standard of living for all (McCowan, 2019). Students' future career aspirations are as important as the pedagogical experiences they go through during their university education in order to achieve their aspirations. If students can achieve their career goals, they can contribute meaningfully to the growth and development of society and ultimately, help in reducing poverty and promote wellbeing in the society. Yet, the positive impact of university education on the Ghanaian society through learner-centred or transformative pedagogical experiences to solve societal problems is yet to be realised.

Even though, there has been significant increase in access to university education, this access has compromised quality in terms of developing 21<sup>st</sup> century skills such as critical thinking, problem solving, digital literacy among graduates to contribute meaningfully to the development of the society. This may be due to large class sizes, inadequate teaching and learning resources, and lack of funding for lecturers' professional development to improve their teaching. These and many others are limiting factors to lecturers' facilitation of practical teaching methods, and thus, making them stick to the traditional methods of university pedagogy. If students' future career aspirations are to be achieved, transformative pedagogical

experiences would have to take place in universities to prepare graduates with all the necessary skills to achieve their goals. However, this cannot happen in isolation, all the crucial issues must be addressed in a nuanced and holistic manner. We therefore recommend a pedagogical transformation involving all aspects of the functioning of the university and all its actors. Although such a process can seem daunting, there is hope inherent in the stories outlined here. Best practices in terms of practical pedagogical activities in other private universities could be adopted in institutions lacking these practical activities. Furthermore, Centres for teaching support could be established in universities to provide professional teaching experience for university lecturers. The tertiary regulatory body, Ghana Tertiary Education Commission could play a role in ensuring that 21<sup>st</sup> century skills are embedded in university programmes.

### Limitations

While this study illuminates findings that are crucial for the tertiary education landscape, there are limitations to the study. The findings could have been more robust if formal observations of taught courses within the universities were done to ascertain how teaching and learning go on in the universities. Furthermore, the findings from the sample used in this study could not be generalized to the larger university population even though these findings resonate with what happens in most universities in Ghana. A quantitative approach that reaches a lot more students and lecturers could be used in future research to come up with generalisable findings.

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