# Tertiary Education, Career Preparation, and Job Prospects: An International Perspective

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## Introduction

There is a widespread belief that tertiary education in Ghana can meet the needs of national development and, as such, higher education leaders should consider the needs of the labor market to ensure alignment between college offerings and workforce needs (Bingab, Forson, Mmbali, & Baah-Ennumh, 2016; British Council, 2016; National Council for Tertiary Education, 1998). For this reason, it is of great interest to understand the relationship between tertiary schools and the Ghanaian workforce and labor market. Understanding labor market outcomes for Ghanaian college graduates is also of great benefit to Ghanaian students who hope to enter the workforce with increased economic gains after graduating from college.

Tertiary education in Ghana is positioned to support the development of broad national needs, such as social, health, economic, and infrastructure needs. Given the young history of liberated Ghana, there is not a large enough workforce educated with the skills or knowledge needed to maintain or develop their own infrastructure. The history of education in pre-liberated Ghana, under colonial rule, consisted of learning low-level skills or professions in order to create a dependency on importing highly-skilled professionals to maintain the country's infrastructure (as well as maintaining dependency on colonial rule), according to Nat Nunoo Amarteifio, former mayor of Accra (N. Amarteifio, personal interview, March 16, 2019). Currently, according to Amarteifio (2019), the mission of tertiary education is to develop a workforce that can maintain or develop infrastructure. This is evident in programs like University of Ghana's Transform My Community and Ashesi University's Leadership Seminar series, where students identify community needs and collaborate with the non-educational sector to develop infrastructure (N. Amarteifio, personal interview, March 16, 2019).

This paper conducts a review of the available research on Ghanaian tertiary education. Tertiary education in Ghana is relatively new, compared to other tertiary education systems, with the first university established in 1948 (Atuahene & Owusu-Ansah, 2013). Ghana has seen many developments in higher education since its establishment but, like with any other system, Ghanaian tertiary education is evolving to the needs of Ghanaians and Ghanaian society (Atuahene & Owusu-Ansah, 2013).

As a relatively new educational system, the mission of Ghanaian tertiary education has focused greatly on economic advancement of Ghanaian graduates and therefore the Ghanaian workforce. This research paper will review the role of Ghanaian tertiary education in the career development and economic opportunities of its students by considering how academic programs are selected, what type of career support students receive, and what work prospects students have upon completing college.

## Research Methods

This paper pairs existing research with observations from my one week visit to Ghana during spring of 2019. During the visit to Ghana, I interviewed students and administrators at several colleges, universities, and tertiary education organizations. Interviews include constituents from University of Ghana, Central University, Ashesi University, University of Cape Coast, Accra Institute of Technology, as well as the Association of African Universities. Recurring themes observed throughout review of the research and my interviews include the availability of academic programs and the way students enter particular programs, how students are prepared for entering the Ghanaian workforce, and what it is like

to navigate the Ghanaian workforce upon completion of a tertiary degree.

I visited Ghana with a diverse group of over 20 master's students from a large, private, research university. Before visiting, we read many articles about Ghanaian life, culture, and customs as well as research on Ghanaian tertiary education. While we felt prepared to engage with Ghanaian students and educational professionals during our visit, it is unclear whether we were prepared to process the information we were collecting and whether we were prepared to make meaning of this information. This being said, it is important to recognize the potential for this research to include assumptions or expectations that are based on my engagement with American higher education. Efforts have been made to ensure any claims or connections made throughout this paper are based on scholarly research by Ghanaians or Ghanaian tertiary education experts as well as the thoughts and opinions of the Ghanaian students and educational professionals who so willingly shared with our visiting group.

Another important aspect of my research relates to my role as an insider and outsider as I conducted my research. Bourke (2014) explained the importance of positionality in conducting research of groups of people with different social and personal identities than that of the researcher. At times I felt like an insider, sharing similar personal and social identities as some of those with whom I interviewed (Bourke, 2014). As a first-generation college student from a low-income background, who also desires increased economic opportunity as the result of my studies, I felt a connection with many of the students with whom I spoke. As an aspiring higher education administrator, I also felt a connection with many of the educational professionals we interviewed. However, I also recognize my status as an outsider was probably the most evident to those we interacted with as I was a foreigner from a prestigious globally recognized university with the resources to participate in a study abroad trip. My role as an outsider, however, may have contributed to an excitement and eagerness to share on behalf of the students and staff with whom we interacted (Bourke, 2014). Many students were excited to share about their educational experiences, staff were eager to share what worked (as well as what didn't work as well) within their schools, and many administrators expressed pride in the institutions that make up Ghanaian tertiary education.

Students and staff were eager to share both the good and bad sides of their experience. The good seemed to come from a sense of pride for the hard work of individuals as well as the collective efforts of institutions and the country's educational governance. Sharing of negative experiences at times seemed to come with an expectation for acknowledgement and validation (of their negative experiences), such as when students at Accra Technical University led me on a tour of their science labs and highlighted the lack of resources they had available. Sharing of negative experiences at times also came with an invitation to offer support and advice. For example, when staff and administrators spoke of enrollment issues, they also invited us to stay in contact to become partner schools. It is my hope to elevate and encourage further study of the many areas of opportunity within Ghanaian tertiary education within this paper as identified through these interviews and review of the literature.

## Entering an Academic Program

Ghanaian institutions of tertiary education are caught in a balancing act of both providing a high-quality curriculum and educational setting for students while also contributing to local and regional development (Abukari & Corner, 2010). This has implications for the types of programs and services available to students, particularly when the focus of Ghanaian tertiary education is guided by Ghanaian social and structural needs. As a relatively new nation, having gained its independence in 1957, much of the nation's primary focus has been on developing social needs, such as providing healthcare or structural needs like developing roads and public utilities. It is evident that even the development of Ghana's tertiary education system is based on meeting these social and structural needs, as will be reviewed in the following paragraphs.

*Academic Subjects in Ghanaian Tertiary Education*

Tertiary schools in Ghana offer a diverse range of academic subjects. The University of Ghana houses colleges of Health Sciences, Basic and Applied Sciences, Humanities, and Education (University of Ghana, 2018). Ashesi University offers various degrees within their departments of Humanities and Social Sciences, Business Administration, Computer Science and Information Systems, and Engineering (Ashesi University, n.d.). The University of Cape Coast lists over 100 undergraduate programs through six different colleges (University of Cape Coast, 2019). Various other institutions increase the diversity of academic subjects available in Ghana.

Research and policy on academic programs in Ghana's tertiary schools, however, places a great amount of focus on STEM (science, technology, engineering, and mathematics) programs. Ghana has a national target of enrolling students into science and humanities programs at a ratio of 60:40, respectively (Owusu, Essel-Anderson, Kwakye, Bekoe, & Ofori, 2019). However, in the 2012-2013 academic year, the ratio was at 32:68 at public universities and 28:72 at private universities (Owusu et al., 2019). One reason for this mismatch is the general belief in Ghana that the science field does not pay well (Owusu et al., 2019). Additionally, parents and other educators perpetuate this belief and encourage young students to pursue business careers as they pay better (Owusu et al., 2019). The mismatch between desired and actual enrollment trends within STEM majors means greater efforts should go towards making these programs more accessible, rigorous, and well-enrolled.

Ghanaian interest in increasing STEM programs and graduates is evident in the development of tertiary schools with a primary focus on STEM. The Kwame Nkrumah University of Science and Technology (KNUST) was one of the first universities to be established with an obvious focus on science and technology. Between 1961 and 1992, KNUST was one of three tertiary school options available in Ghana (Atuahene, 2014). Other science- and technology-focused universities include the University of Mines and Technology and the University for Development Studies (Atuahene, 2014). In 1993, the University for Development Studies was charged with the creation of academic programs that functioned to develop the agriculture and industry sectors (National Council for Tertiary Education, 1998).

Many other universities have seen the development of technical and STEM programs alongside the government's priority of increasing graduates with STEM degrees and technical training. Collaborations between universities and outside industries in the form of curriculum development have been encouraged in order to align academic programs with industry needs. These collaborations have led to development of such technical programs as insurance, tourism, and the book publishing industry, which require more technical and task-specific knowledge (National Council for Tertiary Education, 1998).

*Polytechnic Institutions*

In addition to the establishment of new STEM focused universities, existing polytechnic institutions faced an accreditation change to meet the need for STEM graduates. Polytechnics were originally considered institutions of vocational training until the Polytechnic Law of 1992, which established that polytechnic institutions can officially grant college degrees (Mohamedbhai, 2017). The development of polytechnics into official degree-granting colleges is another reflection of governmental interest in developing a workforce with a greater background in STEM. Eventually, in 2016, a majority of the polytechnic colleges in Ghana were converted into universities. These schools focus on professional studies, including technical- and middle-level management, and serve technical education to meet the needs of Ghana's workforce (Mohamedbhai, 2017).

Polytechnics have often been considered inferior to universities, given the decreased amount of academic rigor and academic standards for admission. The degrees granted at Polytechnics were considered sub-degrees, further contributing to the move towards converting them to degree granting

institutions and then universities (Mohamedbhai, 2017). The concern with changing and potentially eliminating this institutional type is the fact that the newly converted Polytechnics are no longer producing technicians or middle management supervisors. Mohamedbhai (2017) referenced a ratio of engineers to technicians as 1:1, whereas the desired ratio is 1:5, indicating a saturation of graduates in advanced technical fields, leading to underemployment of these graduates.

*Admission to Programs within Ghanaian Tertiary Education*

While academic programs receive a great deal of attention, student services seem to be less of a priority at a policy level or at an institutional level. Based on observations, academic advising and career advising was spoken of little during visits to various universities in Ghana by either administrators or students. This is supported by the limited published and available research on either services. In a study of online distance learners enrolled through the University of Ghana (with over 700 online students surveyed from four regions in Ghana including Ashanti, Greater Accra, Northern, and Central), over 70 percent of students disagreed or strongly disagreed that their academic advisor provided information regarding how their degree can lead to a particular career field (Arhin, Wang'eri, & Kigen, 2017). Students in the study perceived that academic advising was not accessible and not relevant in supporting them with their challenges (Arhin et al., 2017). Similarly, advisors and counselors perceived they did not have enough time to provide adequate student support (Arhin et al., 2017).

With minimal support from academic advisors, many students entering tertiary schools in Ghana who do not know what they want to study are often times placed into an academic program that is determined by the school itself (British Council, 2016). Although, even when students identify a field of interest, they are often pushed into other programs because their original program of choice had been filled. This was evident through interviews with students in Ghana who expressed feeling a lack of choice when applying for schools when the likelihood of being accepted into their desired program was low despite their qualifications. These students also expressed disinterest in the courses in which they ultimately enrolled, but felt the need to continue in these classes in order to receive a college degree. Many students at the prestigious and preferred University of Ghana talked about how they were not accepted into their top choice program and felt forced to enroll in whatever program the school assigned them. One student said "the alternative would be to try to get into the program [that is my top choice] at a different school" (University of Ghana Student, personal interview, March 18, 2019). Such an alternative may not be feasible given the limited number of college choices available and the limited number of colleges with the same level of prestige as the University of Ghana.

Mr. Emmanuel Baidoo, secretary of College of Basic and Applied Sciences at University of Ghana, explained this student was referring to University of Ghana's admissions policy where programs are prescribed based on first, second, and third choice programs (E. Baidoo, personal interview, March 18, 2019). Students whose top choices coincided with the university's most popular programs (business, law, medicine, dentistry, engineering, biochemistry, or nutrition and food science) might be reassigned to, and thus have to settle for the university's least popular programs (history, languages, archeology, religion, or sociology) or be faced with the decision to attend a less prestigious school where they can be accepted into their top choice (E. Baidoo, personal interview, March 18, 2019).

Due to the challenges in being accepted into their desired program, Ghanaian students would benefit from having a better understanding of which academic programs they can or should pursue prior to applying for tertiary school. Learning about academic programs earlier on can increase the likelihood of students entering the program they are most interested in by being more prepared for the application process. For those who are uncertain of what to study, it could be helpful to learn earlier on the implication of selecting any particular program of study on their direct job prospects after graduating. This implies the need for greater college preparation at the secondary level as students need to be certain of their program of study before ever having access to academic advisors or career

counselors at the tertiary level. For Ghanaian students, the stakes are high when it comes to picking an academic program as it can have strong implications on their economic opportunities after graduating. It can also have implications on every other aspect of students' college experience, especially if they are subject to studying an academic program in which they are not strongly interested. This leads to the following section regarding career advising and preparation for Ghanaian students.

## Career Advising and Preparation

Institutions of tertiary education are encouraged by government policy to collaborate with professionals in outside industries to be best informed regarding the needs of those industries and how to prepare students to enter those industries (National Council for Tertiary Education, 1998). This is particularly important given the high rate of unemployment among university graduates due to a misalignment of academic programs and job availability (National Council for Tertiary Education, 1998). A common theme in visiting with various administrators in Ghana was the need to provide academic programs that would be aligned with the needs of the workforce. Ebenezer Oduro Owusu, vice chancellor of University of Ghana, said "we cannot be an island, operating in silos," referring to a need for collaboration with other sectors (Ebenezer Oduro Owusu, personal interview, March 18, 2019).

### *Career Services*

Participating in internships has long been considered an important part of training students to meet national development needs (National Council for Tertiary Education, 1998). Many universities throughout Ghana offer community programs where students are encouraged to live in communities other than their own for several weeks to make connections between theory and practice by applying their knowledge to issues in these communities. This collaboration between universities and communities can be helpful in strengthening students' understanding of their academic content as well as helps to develop those communities (Gyamera, 2015). The University of Development Studies' School of Medicine and Health Sciences (UDS-SMHS) in Ghana integrated community-based learning directly into their program curriculum to foster a relationship between students and their communities and to develop community partnerships that can potentially lead to more practical health care innovations (Amalba, Abantanga, Scherpbier, & van Mook, 2017).

The University of Ghana offers various programs and career services. Dr. Bridget Ben-Naimah, a counselor in the Career and Counseling Center at University of Ghana, mentioned the importance of these programs due to the fact that many students still do not have an understanding of what they want to do even after completion of their college diploma (B. Ben-Naimah, personal interview, March 18, 2019). Dr. Ben-Naimah (2019) highlighted various programs including Professional 360, which consists of semester-long course modules, including a Career Development Program and Leadership Academy that teach students necessary skills and knowledge to attain work or be a standout prospective employee (B. Ben-Naimah, personal interview, March 18, 2019). These programs are well known, easily accessible, low cost, and seemingly popular as students are generally interested in participating. The downside to this type of programming is that it only accommodates a small percentage of students due to limited capacity of the center (B. Ben-Naimah, personal interview, March 18, 2019).

### *Job Placement after Graduating*

Regarding job placement after graduating, Dr. Ben-Naimah (2019) said "it is not as easy as graduating and applying for a job and that's it… it is not enough to complete a degree." She was referring to students having to do extracurricular activities to stand out. The career center provided such extracurricular activities, including participating in Enterprise Zone and Dare 2 Start, which provide students the opportunity to identify business ideas that can develop into legitimate business proposals (B. Ben-Naimah, personal interview, March 18, 2019). Dr. Ben-Naimah explained how some students

create their own jobs by assessing community needs and finding ways to meet these needs. Job creation and community service are cornerstones of the Transform My Community program. Through this program, students live with a host family within a particular community where they can identify an issue or need and develop solutions which can then be pitched to businesses or other organizations that can sponsor the solutions they propose (B. Ben-Naimah, personal interview, March 18, 2019). This program places emphasis on entrepreneurship and innovation and celebrates students who are able to turn the extracurricular opportunity into employment.

When speaking with students, they seemed to understand and accept that completion of a college degree is not enough. They understood that it is necessary to explore leadership and entrepreneurship, particularly within other disciplines, in order to find employment. When discussing with a group of students and faculty at Accra Technical University, it was evident they were conscious that their college education would only provide part of what they need to gain economic prosperity. Students at Accra Technical University took pride in their hands-on education. When asked if they thought they were building the country's infrastructure and service centers, they all agreed that they were playing an important role in creating jobs or developing social services to address issues or needs within their communities. They explained that a large issue would be obtaining funding to implement their ideas but they were encouraged to build partnerships with outside organizations that can invest in the work they feel is needed to develop their country (Accra Technical University Student, personal interview, March 19, 2019).

An extensive conversation where students asked about networking, community partnerships, and how to begin establishing relationships with outside organizations indicated that these students were not learning much through their school regarding career preparation. College staff at this university, including guest faculty and administrator speakers, seldom mentioned student services and students themselves made reference to a lack of resources and student services outside of their academic courses. The existence of resources for Ghanaian students seemed evident in how they felt about entering the Ghanaian workforce.

## Entering the Ghanaian Workforce

There is a big concern in Ghana regarding the affordability and accessibility of tertiary education, especially for those from poor, farm-working backgrounds. Ghana's public universities simply cannot accommodate all those who are eligible to enter tertiary education, leading to a large increase in the privatization of tertiary schools. Even so, tertiary schools only serve approximately 300,000 students which is concerning given that secondary schools serve approximately one million students (British Council, 2016). Though this is a concern, it is also perhaps not in Ghana's best interest to drastically increase college access when many college graduates remain unemployed. It seems a greater concern than college access is increasing the utility and value of a college degree.

### *Employment Prospects*

One of the largest issues related to Ghanaian tertiary education is the high rate of unemployment among college graduates. The rate of employability of Ghanaian college graduates is alarming when considering the unemployment rate of graduates is higher than the national unemployment rate (5.9 percent compared to 5.2 percent; Owusu et al., 2019). The rate of unemployment has been partially attributed to a high volume of students entering programs in the humanities (such as business, considered a humanities topic in Ghana) when the Ghanaian workforce demands science and technology skills (Owusu et al., 2019). A slow economy and weak economic growth is another reason for high rates of unemployment (British Council, 2016). In 2016, there were 200,000 unemployed college graduates, and with an estimated 71,000 new graduates every year, there is an oversaturation of college graduates in Ghana's workforce (British Council, 2016).

The Ghanaian labor market consists of approximately 10 percent formal sector jobs and 90 percent informal sector jobs. Informal jobs (such as street vendors) are not subject to taxes or government regulations resulting in job and wage insecurity and poor working conditions (British Council, 2016). While Ghanaian college graduates typically aspire to enter the formal sector, which is characterized by greater job security, only 2 percent of college graduates actually find employment within the formal sector (British Council, 2016). The decrease of college graduates in the formal economy, and the high levels of unemployment, might also be attributed to a mismatch between the skills and knowledge students are getting in tertiary schools and the skills needed by Ghana's economy (British Council, 2016).

Addressing high unemployment of graduates is critical in order to develop the skilled, talented, and innovating workforce that Ghana seeks and that its economic development needs. For those students who enter tertiary schools, complete rigorous programs, and leave college with a strong set of skills and competencies, they are often in a predicament where they are unable to obtain high paying work commensurate with the investment of time and money that went into developing their expertise. This inability of the Ghanaian labor market to absorb its own college graduates leads to the country losing these graduates to other countries where the students can find better economic opportunities; this is referred to as "brain drain" and is currently a large issue in Ghana (Effah & Senadza, 2008).

*Job Creation and Meeting Societal Needs*

While not frequently referenced explicitly by Ghanaian tertiary education administrators, meeting Ghanaian social and structural needs seems to be a priority based on the types of career services mentioned in the previous section, the encouragement of college staff and administrators towards entrepreneurship, and students' own inclination towards meeting needs in their communities. Since Ghanaian students are not easily absorbed by the current labor market, those who are able to create their own employment might be at an advantage. Job creation is mentioned in various policies as a desired skill or competency sought after by employers (British Council, 2016).

Many of the universities visited highlighted students who were able to take an internship or community project and turn it into employment. At Ashesi University, Abdul Mahdi, Dean of Students and Community Affairs, spoke about a particular student who developed a community service program through their Leadership Seminar Series (A. Mahdi, personal interview, March 22, 2019). This student created a program in collaboration with local secondary schools in Ghana where he found students who never used computers. This student taught programming through manipulating robots to secondary school students from rural areas. The student applied for a school grant from the Ghanaian government that equaled 1,000 US dollars. While the project ultimately did not move forward, the student gained very valuable knowledge that he could not have gotten through traditional coursework. This student later on went to apply for the equivalent of 20,000 US dollars in government funding for an agricultural program and now brings in a profit equal to 45,000 US dollars (A. Mahdi, personal interview, March 22, 2019).

Of all the tertiary schools visited, Ashesi University was the only school that explicitly referred to itself as a change agent. Dean Mahdi clearly stated that a goal for Ashesi University is to "transform this country" (A. Mahdi, personal interview, March 22, 2019). Dean Mahdi explained some of the needs of tertiary education in Ghana as well as some of the country's own developmental needs and how tertiary schools have the ability to address some of those needs. He recognized that the African continent is expected to double its population by 2050, which will lead to "bigger markets to sell to and an increase in need for human resources" (A. Mahdi, personal interview, March 22, 2019). This, according to Mahdi (2019), could be addressed only if tertiary education in Ghana "moves into the twenty first century."

Some staff at Accra Technical University also expressed a recognition that their students have a role to play in impacting Ghana's development but claimed students do not have the resources to

achieve the levels of innovation and entrepreneurship of other schools. Students at Accra Technical University conveyed an interest in creating their own employment via developing their own businesses, fashion, or medical innovations. One student, who was interested in health and was studying to become a medical technician, said he had an idea for a procedure that can organize the inflow of patients at a medical center, which could decrease wait times for patients (Accra Technical University student, personal interview, March 19, 2019). Many other students shared their ideas for projects or innovations that can help build systems, structures, or improve services. They all spoke about the need to create their own jobs rather than depend exclusively on being given a job after completion (Accra Technical University students, personal interviews, March 19, 2019).

## Discussion and Conclusion

While the National Council for Tertiary Education, along with university administrators and many researchers, call for students to enter STEM programs (in order to be more employable and to meet national development needs), it is a difficult charge to meet when tertiary schools are not equipped to provide adequate, let alone rigorous, science and technology education (National Council for Tertiary Education, 1998). This is a similar concern at some secondary schools that also lack proper facilities, thus decreasing the amount of students who receive foundational science and technology training, and decreases the amount of students who then feel prepared and confident in pursuing advanced science and technology academic programs at the tertiary level (National Council for Tertiary Education, 1998). Furthermore, students who are not given the opportunity to study science at their secondary school are not likely to be accepted into science programs at the university (Owusu, Essel-Anderson, Kwakye, Bekoe, & Ofori, 2019). While the Ghanaian government depends on tertiary schools to produce a highly trained workforce, they would need to increase the level of funding in order to adequately train these individuals.

Given that Ghanaian secondary students are highly influenced by their secondary school counselors in identifying a potential career pathway (Amoah et al., 2015), it would be important for secondary counselors to be aware of the job prospects and that they are relaying that information to their students. Given the narrow window of opportunity to select an academic program in Ghanaian universities, and limitations in switching majors, it is crucial students are well informed about their career options while they are still in secondary education. This is especially important given the high rate of graduate unemployment due to a lack of jobs associated with certain academic fields. Furthermore, secondary education counselors, as well as teachers, can assist in carrying out government priorities around increasing the ratio of students moving into STEM related fields (Ministry of Education, 2012).

Collaboration between tertiary schools and secondary schools can potentially help increase students' understanding of academic programs and potential career fields. A study by Amoah, Kwofie, and Kwofie (2015) demonstrated the important role of secondary education counselors in helping Ghanaian students pick a career pathway. Three of the most important services secondary education counselors provided include guiding students into particular career pathways, helping students identify career goals, and providing information on career opportunities (Amoah et al., 2015). This finding aligns with findings from the National Council for Tertiary Education (1998) that found enrollment patterns were dictated by student demand which in turn is influenced by staff at their secondary schools. The National Council for Tertiary Education (1998) recommended that secondary schools be highly informed of labor market demands so university administrators can encourage students into academic programs at the tertiary level that are more likely to lead to employment.

It is important to note the disconnect between Ghana's tertiary education and its national development and governmental interests. Given the limited amount of government investment and developmental guidance, universities in Ghana have to balance meeting the needs of its students and Ghanaian society at large with meeting its own financial needs. At times, these universities act more like

businesses with more elaborate marketing strategies than student support or research development strategies (Abugre, 2017; Gyamera, 2015). Such is an apparent characteristic of westernization, a common trend among tertiary education in capitalistic societies, which draws attention away from national needs to individual institutional needs (Gyamera, 2015).

Referring to the balance Ghanaian tertiary schools have to find, especially regarding their role in internationalizing Ghanaian tertiary education, Gifty Oforiwaa Gyamera (2015) says "though money is essential to emphasise [sic] activities that will encourage intercultural learning, this economic aspect should not be the main goal [of the institution]" (p. 125). Ghanaian tertiary education serves to build the country in a way that tertiary education has served to build certain sectors or industries in other countries. With further financial investment, strategic planning, and addressing of some of the previously mentioned issues, Ghana's tertiary education system can serve as a role model to other African countries and as a shining example of community service and citizenry even in further developed countries.

Future research should continue to focus on the relationship between Ghanaian tertiary education and Ghanaian economic, social, and workforce needs. This is an area which could benefit from expanded research, as less recent research focuses on the link between policy and education (as noted in some of the older references used within this study). As Ghana strives to be an educational leader within Africa, it is important to conduct further research and gain a better understanding of student outcomes for those that participate within Ghanaian tertiary education. A particularly interesting topic to further research includes the relationship between Ghanaian tertiary education and Ghana's placement among other educational leaders across the globe. Furthermore, with a strong focus on STEM, it would be interesting to better understand Ghana's position within the ever-growing global information economy. Just as importantly, when considering all of these topics, is the need to understand student experiences, perceptions, and interests. This includes understanding which students are and are not represented within Ghanaian tertiary education, and how to increase equitable access and equitable student success outcomes.

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