

STUDENTS' KNOWLEDGE AND PERCEPTIONS OF CAREER PROSPECTS IN JEWELLERY AND METALSMITHING

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ABSTRACT

This study investigated the knowledge and perceptions of career prospects among jewellery and metalsmithing students at Kwame Nkrumah University of Science and Technology (KNUST), Ghana. Using a descriptive survey design, data were collected from 87 undergraduate students via online questionnaires. Findings indicate that while a majority (62%) rated their knowledge of career opportunities as good or excellent, a significant portion (37.9%) felt less informed, with awareness varying across different career paths like Jewellery designer, entrepreneur, and gemmologist. Lecturers and coursework were primary information sources (69%), followed by online research (60.9%). Despite the general optimism about job prospects among students, (59.7%) viewing them as promising or very promising), major concerns included high startup costs for entrepreneurship (62.1%), lack of industry recognition in Ghana (55.2%), and limited job opportunities (46%). Financial benefits (69%) and passion for the field (54%) were key factors influencing career decisions. While most students (82.8%) felt their education positively influenced their perceptions, a strong demand for more industry exposure (83.9%), business training (59.8%), and career guidance (55.2%) emerged. Notably, 63.2% would consider careers outside jewellery and metalsmithing, citing financial constraints, skill/support deficits, and job security. This study highlights the need for strengthened industry engagement and clearer career pathway communication within jewellery and metalsmithing programmes to address gaps in students' perceptions of professional opportunities in the field.

Keywords: Career, entrepreneurship, jewellery, metalsmithing, passion, prospects.

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INTRODUCTION

Jewellery and metalsmithing is one of the many fields that fall under the umbrella of art and design, and has a wide range of career possibilities in craft, industrial design, education and entrepreneurship. Institutions like Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Asansra University College of Design and Technology, Accra and Dr. Hilla Limann Technical University, Wa in Ghana have a significant role in training students with technical and creative skills required for professional practice. However, the extent to which students understand and perceive job prospects in this field remains a subject of interest. Some students may think successful careers involve being an independent artisan, designer or manufacturer while others might be worried about employability and industry demand. Rothwell and Arnold (2007), Vanhercke, *et al* (2014) and Donald, Ashleigh and Baruch (2018) opined that employability is the ability to obtain employment, keep the job one has or get the job one wants. It is also the possibility of securing and keeping a job. Rifat and Sony (2025) state that “career aspirations, preparedness and skills development are important factors in the transition from school to work”. Although jewellery and metalsmithing programmes are technically based and teach students art skills, there is ambiguity over what students can do after they graduate. Many students may lack sufficient information about job opportunities, industry trends, and entrepreneurial possibilities in the sector. Additionally, societal perceptions of careers in jewellery and metalsmithing may influence students’ confidence and willingness to pursue them. Pirzada, *et al* (2021) said that religious beliefs tend to hinder the pursuit of professional careers in art and design in Pakistan. Interpersonal factors such as encouragement from personal relations like family and friends also act as a factor when considering careers (Willis *et al*, 2009).

Without a clear understanding of job prospects, students may struggle with career planning, leading to underutilization of their skills or a shift to unrelated professions. In considering careers, students may look at long-term remuneration, job security, promotions and pensions, something which they may not see in art and design related careers. Many students of art and design are of the view that they may have to set up their own businesses after completion which may be expensive, earn less and with doubtful professional scope therefore diminishing their interest in pursuing it (Pirzada *et al.*, 2021).

This study aims to investigate students’ knowledge and perception of job prospects in jewellery and metalsmithing. The objectives of the study are to:

1. Assess the level of knowledge of students and their perceptions of career prospects in Jewellery and Metalsmithing.
2. Identify factors that influence students’ career aspirations and decision-making in jewellery and Metalsmithing.
3. Examine the influence of their education in KNUST on career aspirations.

MATERIALS AND METHODS (METHODOLOGY)

Research Design

A descriptive survey design was adopted for this study. This allowed us to assess students’ knowledge and perceptions through structured data collection. Sirisilla (2023) defined descriptive research design as the collection of data on a topic without attempting to make inferences on cause-and-effect relationships but providing an accurate picture of the phenomenon or population under study and describing the relationships, patterns and trends that exist within the data.

Sampling Techniques and Procedure

The target population for this study was Jewellery and metalsmithing students in KNUST. The convenient sampling technique was used to select undergraduate students at various levels of their study (levels 100 – 400). This was to ensure representation of all groups. Convenience sampling is a non-probability sampling method where units are selected for inclusion in the sample because they are the easiest for the researcher to access. This can be due to geographical proximity, availability at a given time, or willingness to participate in the research. Sometimes called accidental sampling, convenience sampling is a type of non-random sampling (Nikolopoulou, 2022). There was a total of Two Hundred (200) students at the metals section comprising the following numbers. Level 100 – 50 students, Level 200 – 51 students, Level 300 – 49 students and Level 400 – 50 students.

1. Age Range
87 responses

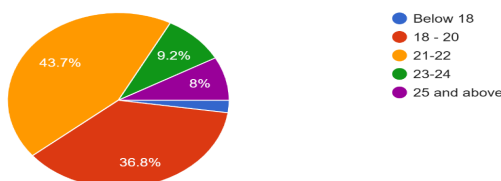


Figure 1. Age distribution of respondents

The age range of 21–22 years formed the largest group, making up 43.7% of the respondents, followed by the age range of 18–20 years old with 36.8%, 23–24 years old accounted for 9.2%, 25 and above represented 8%, which may be made up of mature undergraduates (Figure 1).

Data Collection Method, Procedures and Analysis

Questionnaires were administered through google form. The link was sent to each classes' WhatsApp platform through their course representatives for class members to fill. Once the responses stopped coming in, the form was unpublished. There were 87 responses out of a population of 200, giving us 43.5% sample size. Data from the google form was linked to google sheet, transferred to Excel, coded and analysed. Certain portions of the data were analysed using chi-square to establish relationships between variables.

RESULTS AND DISCUSSION

Participant Demographic Characteristics

Below 18 was the smallest segment at 2.3%, indicating very few younger participants. A great majority of respondents (80.5%) fell within the 18–22 age range, which is an indication of a typical undergraduate population.

2. Gender
87 responses

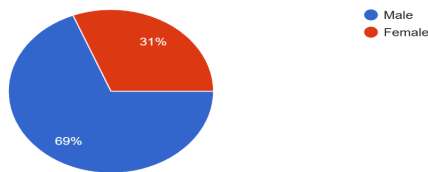


Figure 2: Gender of respondents

From figure 2, the data revealed a gender imbalance among the respondents as the proportion of males was significantly ($p < 0.001$) more than that of females. With more than twice as many males as females, the trend mirrors broader national or institutional gender patterns. According to

the United Nations Education, Scientific and Cultural Organisation (UNESCO) (2018) and Akounjom, *et al* (2024), the number of women enrolled in TVET programmes in Nigeria is only 34%. Adams and Baddianaah (2023), also indicated a 51.6% gender gap in enrolment in TVET over the past five years.

3. Level of study
87 responses

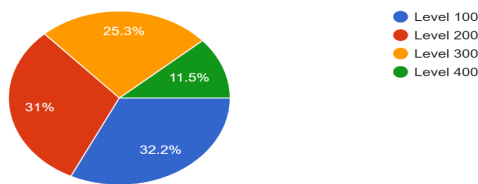


Figure 3: Respondents level of study

Over 63% of respondents were either in Level 100 and 200. These students were just beginning the programme and were likely still forming their perceptions about career prospects. Their responses may be shaped more by expectations and course introductions than by practical experience or industry exposure. Levels 300 and 400 gave a combined 36.8% of respondents, which was slightly smaller than the combined total of Levels 100 and 200, but still represents a reasonable 1/3 of the sample.

This upper-level students have had more advanced technical training, internships, and industry exposure.

Their responses may reflect a more grounded and informed understanding of job prospects, entrepreneurship, specialization options, and challenges after graduation.

Prior Knowledge in Jewellery and Metalsmithing and Family ties in Jewellery and Metalsmithing.

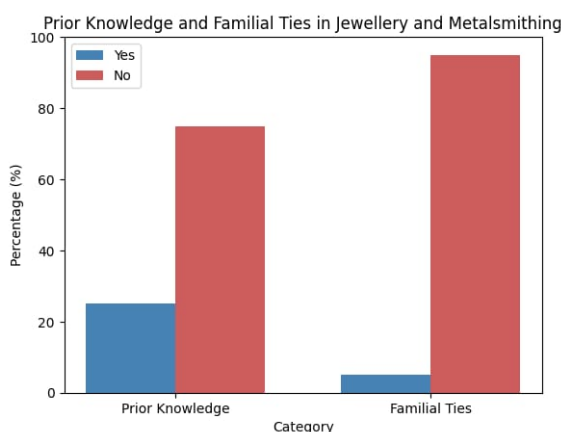


Figure 4: Prior knowledge and familial ties in jewellery and metalsmithing

Respondents were asked about their prior knowledge of jewellery and metalsmithing before joining the programme at KNUST. The results indicate that majority (75.9%) of respondents had no prior knowledge of the field before enrolling into KNUST with only a small portion of respondents having prior knowledge (Figure 4). This presents an opportunity for the department in question to embark on outreach programmes in senior high schools to introduce prospective students to the field before university admission. An overwhelming 96.6% of respondents had no family members or relations in jewellery and

metalsmithing industry. This is an indication that jewellery and Metalsmithing is not a legacy or inherited profession for most students in KNUST. This contradicts sharply with Baù *et al.* (2020) and Suhi *et al.* (2021) who said that parents often encourage and motivate their children to inherit their careers. Moakler Jr and Kim (2014) were also of the view that students usually follow the career paths of their parents.

Knowledge of Career Prospects in Jewellery and Metalsmithing

Section B: Knowledge of Job Prospects in Jewellery and Metalsmithing. 6. How would you rate your knowledge of career opportunities in jewellery and metalsmithing?
87 responses

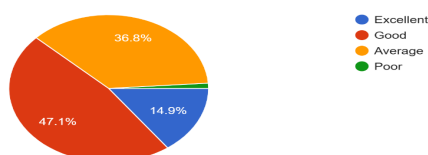


Figure 5: Knowledge of career prospects in jewellery and metalsmithing

Rating their own knowledge of career opportunities in jewellery and metalsmithing, 14.9% (13) of respondents rated their knowledge as excellent, nearly half of the respondents 47.1% (41) rated their knowledge as good, and a combined 37.9% (33) of respondents rated their knowledge as either average or poor. While a significant number (62%) of students are confident of their knowledge of career prospects in jewellery and metalsmithing, about a third (37.9%) may lack clarity on career paths in the field. This is an indication of the need to engage more with

those reporting limited knowledge to improve career awareness. This is in line with Pirzada, Gul and Mahmood (2021) who recommended that state institutions be involved in raising awareness of art and design students on the career prospects in their field.

Careers in Jewellery and Metalsmithing that Students are aware of

7. Which of the following career paths are you aware of in jewellery and metalsmithing? (Select all that apply)

87 responses

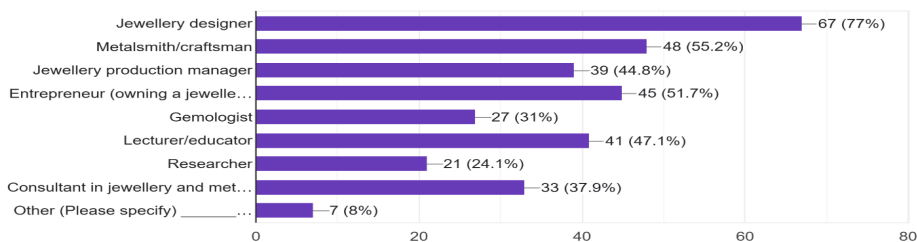


Figure 6: Career options in jewellery and metalsmithing

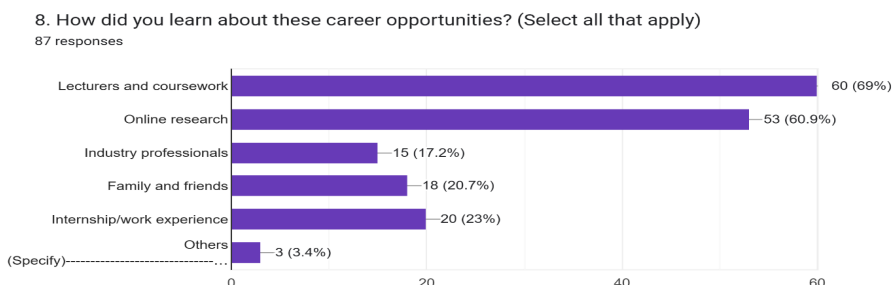
A list of career options in jewellery and metalsmithing was provided for students to select all that they were aware of. A Chi-square goodness of fit was used to test the hypothesis that the proportions of knowledge of career paths were the same across the different career paths. A summary of the test results is as follows. The result of the test showed that there was a statistically significant ($p < 0.001$) difference in awareness across the various career paths (Table 1). This means that

students' knowledge of the different career paths were not equal. While some career paths were widely known by most students, other paths were less known. From Figure 6, careers such as Jewellery designer, Metalsmith and Entrepreneur are far more recognised than careers such as Gemmologist and Researcher. The null hypothesis that awareness of careers is evenly distributed across all career paths is therefore rejected.

Table 1: Chi-square goodness of fit test statistics

Attribute	Chi-square	Degrees of freedom	Probability
Knowledge of career paths	65.15	8	<0.001
Learn about career opportunities	92.55	5	<0.001

How Students learnt about Career Opportunities

**Figure 7: How students learnt about career opportunities**

There was significant difference ($p < 0.001$) in the proportions of the sources from which students learned about career opportunities jewellery and metalsmithing (Table 2). The results indicated that Lecturers and coursework were the most common source, meaning formal education plays a major role in shaping awareness of career paths. Online research (60.9%) followed closely, suggesting students were actively seeking information independently via the internet (Figure 7). Internships/work experience (23%) showed experiential learning contributed though less accessible or emphasized. This is so because formal internship organised by the university for students happens in the second semester of third year. Since the study was conducted in the first semester, and only level 400 students among all the respondents had undergone formal internship, it could explain why only a few (23%) students mentioned internship/work experience as a source of information about career opportunities. Family and friends, and Industry professionals were less

common, hinting that informal or direct industry exposure is limited. This calls for more collaborations between industry and academia.

Association between Variable

A chi-square test of association was conducted to find out any significant statistical relationship between any pair of the following questions:

1. How would you rate your knowledge of career opportunities in jewellery and metalsmithing?
2. Which of the following career paths are you aware of in jewellery and metalsmithing?
3. How did you learn about these career opportunities?

The summary of the test results is presented in Table 3.

Table 2: Knowledge rating vs Career Path Awareness

Career Path (Item 7)	Chi2 Stat	p-value	Significant?
Consultant	159.44	0.0018	Yes
Entrepreneur	4.57	0.206	No
Gemmologist	2.74	0.434	No
Jewellery designer	3.57	0.312	No
Jewellery production manager	4.13	0.248	No
Lecturer/educator	3.00	0.392	No
Metalsmith/craftsman	1.57	0.667	No
Researcher	3.61	0.307	No
Other	0.35	0.950	No

Only awareness of the “Consultant” role was significantly associated with students’ knowledge ratings. This could indicate that

students who considered themselves more knowledgeable were more aware of the Consultancy career.

Table 3: Knowledge rating vs Sources of awareness

Learning Source	Chi2 Stat	p-value	Significant?
Family and friends	89.93	0.027	Yes
Industry professionals	1.11	0.773	No
Internship/work experience	10.24	0.017	Yes
Lecturers and coursework	7.25	0.064	No
Online research	1.12	0.773	No
Others	3.53	0.317	No

There was a significant association between higher knowledge rating and Family and Friends and Internship/work experience as learning sources.

Students with higher self-rated knowledge were significantly more likely to have gained that knowledge from family/friends and internship/work experience.

Perception of Job Prospects in Jewellery and Metalsmithing

Section C: Perception of Job Prospects in Jewellery and Metalsmithing. 9. How do you perceive the employment opportunities in the jewellery and metalsmithing industry?
87 responses

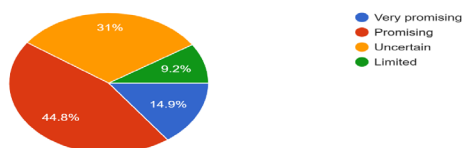


Figure 8: Perception of job prospects in jewellery and metalsmithing

The data shows that most respondents (44.8%) find the job prospects promising. This indicates a general optimism about finding employment in the field. A sizable 31% of respondents feel uncertain about job prospects in the field. These individuals may be unsure about career stability or growth opportunities. A smaller group of 14.9% see prospects as very promising, an indication that a minority number feel highly confident in their career outlook. A small number of 9.2% view opportunities as limited. This group may perceive challenges in securing jobs or advancing professionally. Overall, the sentiments of respondents lean towards hopefulness, as more than half (59.7%) of respondents view the industry's job prospects

as promising or very promising. However, with 31% uncertain and 9.2% seeing limited opportunities, there are concerns that may stem from economic conditions, industry competitiveness, or lack of clear career pathways. The figure presented slightly departs from the survey conducted by Rifat and Sony (2025) where their percentage shows a combined 49% of respondents indicating extreme confident and very confident of securing employment upon graduation while a combined 51% indicated moderately confident and slightly confident of finding employment after school.

Primary concerns regarding job prospects

10. What are your primary concerns regarding job prospects in this field? (Select all that apply)
87 responses

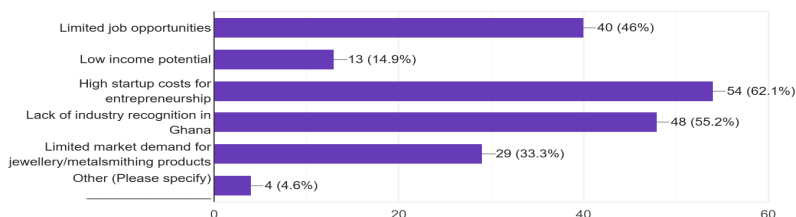


Figure 9: Primary concerns regarding job prospects

High startup costs for entrepreneurship (62.1%) was the most cited concern, with nearly two-thirds of respondents highlighting it.

This indicates a perceived financial barrier to entering the jewellery and metalsmithing profession independently.

This indicates that students are interested in entrepreneurship, but are deterred by the start-up costs such as equipment and materials, and setting up a brand or workshop. It also indicates a lack of funding support, loans or grants dedicated to creative/artisan based startups. According to research by Sulillari (2023) on start-up failure, it was revealed that 38 % of start-up companies admitted that the reason of failure was the inability to raise capital. Limited industry recognition in Ghana received the highest responses of 55.2%, with more than half expressing concerns about the lack of recognition of the jewellery/metalsmithing profession in the society and economy. This may be due to the lack of understanding of the local craftsmen in the mainstream business world. This points to the need for industry advocacy, public education, and institutional support to legitimize the field and create professional identity. Limited Job Opportunities had 46% of respondents selecting it. Almost half of respondents worry about the scarcity of formal employment options in jewellery and metalsmithing. This reflects a broader concern that career pathways outside of entrepreneurship are limited, especially in formal sectors like manufacturing, education, or design consultancies. It also signals a lack of structured career pipelines or apprenticeship programmes post-graduation. About 33.3% of

respondents cited limited market demand for jewellery/metalsmithing products. One-third of students fear that consumer demand is too low to sustain businesses. This may be due to the fact that products of jewellery and metalsmithing are generally luxury in nature, very expensive and not many people have the financial capacity to afford them. Also, changing tastes, and competition with imported goods make demands for jewellery and metalsmithing products very low. Low income potential was the least concerns of respondents with 14.9%. A relatively small percentage of students are concerned with income. This may reflect limited experience in the industry, so students are unsure of the actual income that people who are employed in the jewellery and metalsmithing field potentially earn.

The Link Between Career Paths Known to Students and Primary Concerns about Job Prospects

A chi-square test of independence was conducted to find out any significant statistical association between students' knowledge of career paths in jewellery and metalsmithing (question 6) and their primary concerns about job prospects in the field (question 10). The results of the test are presented in the Table 5.

Table 4: Significant Associations ($p < 0.05$)

Career Path	Job Concern	χ^2 (Chi² Stat)	P-value	Interpretation
Entrepreneur (owning a business)	High startup costs	14.36	0.00015	Very strong link between entrepreneurship and concern over start-up costs.
Lecturer/Educator	High startup costs	12.70	0.00037	Surprisingly strong association — perhaps concerns about start-up affect views of alternatives like teaching.
Entrepreneur (owning a business)	Limited market demand	11.65	0.00064	Reflects concern that running a business may suffer from demand issues.

Gemmologist	High startup costs	7.52	0.00611	May reflect costs of training, equipment or certifications.
Consultant in jewellery/metalsmithing	High startup costs	7.51	0.00614	Indicates possible concern about barriers to consulting work.
Lecturer/Educator	Limited market demand	7.06	0.00787	Possible perception of low demand driving students toward teaching.
Metalsmith/Craftsman	Lack of industry recognition in Ghana	6.80	0.00910	Concern that this hands-on role is undervalued.
Researcher	Low income potential	5.58	0.01814	Suggests financial viability of research roles is in question.
Jewellery production manager	High startup costs	5.53	0.01869	Reflects perceived cost of managing a production business.
Metalsmith/Craftsman	High startup costs	4.37	0.03651	Tools and workspace may be seen as costly.
Jewellery production manager	Limited market demand	4.23	0.03960	Indicates potential concern about product demand.
Jewellery designer	High startup costs	4.22	0.03985	Designers may need tools/software that are expensive.
Lecturer/Educator	Limited job opportunities	4.01	0.04510	Possibly reflects oversaturation or lack of teaching roles.

The most consistently significant concern is “High startup costs”, especially linked to roles that involve business ownership, consulting, and production. Limited market demand is significantly tied to entrepreneurial and production roles, indicating commercial viability is a top worry.

Roles like Metalsmith/Craftsman and Researcher are more tied to lack of industry recognition and income concerns. The Lecturer/Educator path interestingly links to multiple concerns, showing it may be a fallback or viewed as less stable than expected.

Consideration on Starting Own Jewellery/Metalsmithing Business after Graduation

11. Would you consider starting your own jewellery/metalsmithing business after graduation?
87 responses

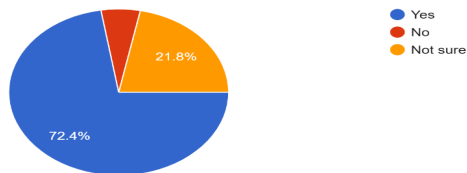


Figure 10: Consideration on starting own jewellery/metalsmithing business

The pie chart reveals strong entrepreneurial interest 72.4%. A majority of students express interest in starting their own business in jewellery or metalsmithing after graduation. This indicates a high level of entrepreneurial ambition, possibly driven by the limited formal employment opportunities in the sector or the desire to be independent.

Uncertainty is still present with 21.8% of respondents answering not sure to starting their own business. This may be due to uncertainty about market viability, financial constraints (startup capital, as seen in

Question 10 concerns), lack of experience or mentorship, perceived risks in business ownership and fear of failure. Very few students 5.8% completely dismiss the idea of entrepreneurship, suggesting, there is at least baseline openness to the idea among most. Those saying “No” may instead prefer stable employment.

Factors that Would Influence the Decision to Work in Jewellery and Metalsmithing

12. What factors would influence your decision to work in the jewellery/metalsmithing industry?
(Select all that apply)
87 responses

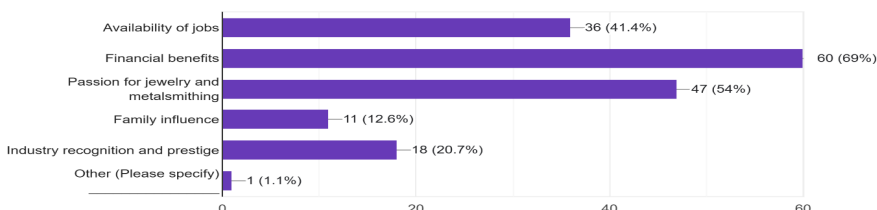


Figure 11: Factors that would influence the decision to work in jewellery and metalsmithing

Financial Benefits (69%) is the most influential factor that respondents would consider in working in the industry, indicating that the majority of respondents are motivated by the potential earnings in the jewellery and

metalsmithing industry (Nyamwange, 2016, Odewole, Odji and Ario, 2022). This suggests that people consider economic viability before choosing this career path, possibly evaluating salary expectations, profitability of

personal ventures, or financial security. Many respondents may be considering rethinking their pursuit in this field, if finances were not appropriate (Zhang, 2024). Passion for Jewellery and Metalsmithing is the second greatest influence with (54%). A significant number (more than half) of the respondents indicated that personal passion is a strong motivator, signifying that intrinsic interest is a significant factor in their career choice.

This is in line with Nobis Jr (2025) who found in their study that “many students cited personal ambition as a key factor in their decision, reflecting their desire to challenge themselves and achieve personal and professional growth”. Money may rank first, but this second response shows that a good number of the students simply enjoy the artistry and the craft work that goes with it. What moves this group is creativity, personal fulfilment, or the wish to contribute designs of their own to the industry. Availability of Jobs (41.4%) weighed on the respondents as well, and the research conducted by Nobis Jr (2025) agrees closely with this consideration, given that his findings stated that “practical considerations, such as job stability and future employment prospects, also influenced students’ decision”.

A good number of the respondents are therefore worried about where the jobs in this industry will come from. Job security, then, weighs heavily on the decision to stay in jewellery/metalsmithing or to leave it. A larger pool of openings would certainly pull more young people into the field. Where the work is scarce, graduates simply move on to something else (Edwards and Le, 2010).

Industry recognition and prestige drew 20.7% of the respondents. Set beside money and passion, prestige is evidently not what pulls most people into this line of work. The few who do value recognition in the field may be hoping to make a name for themselves, or to become visible within it. Only 12.6% of the respondents said that family tradition or

family expectation had shaped their career decision. Most of them, in other words, come to jewellery/metalsmithing for reasons of their own and not under pressure from home, and career choice in this field now looks more independent than generational. That is hardly surprising, given that only 3.4% of the respondents have any family tie to the jewellery and metalsmithing industry at all. A single respondent (1.1%) chose “Other,” which means that the predefined factors listed on the questionnaire covered almost all of the motivations. That answer may point to a very particular or unusual reason for considering a career in the industry.

Table 5: Summary of Responses to Influence of Education to Career Aspirations

Response	Frequency	Percentage
Yes, positively	72	82.8%
Yes, negatively	3	3.4%
No significant influence	12	13.8%
Total	87	100%

The table above is the summary of responses to the question “Has your education at the Metal Section, KNUST, influenced your perception of job prospects in jewellery and metalsmithing?” Most respondents 82.8% reported that their education at the Metal Section, KNUST, positively influenced their perception of job prospects in jewellery and metalsmithing. This suggests that the programme is effective in helping students understand career opportunities and develop confidence in their professional future.

Abdul Aziz, *et al*, (2025) report the same thing, their study having found that “educational experience plays a crucial role in helping individuals determine their career choices”. Practical training, exposure to industry knowledge, mentorship from lecturers and coursework that speaks directly to career pathways are among the likely reasons behind it. Students who reported a positive influence had probably come to appreciate the industry better, to see its openings more clearly, or simply to want the career more than they did on entry.

Against this, a small proportion of 3.4% said their education had worked the other way on their view of job prospects. Little access to modern industry practice, teaching that leans on dated techniques, a curriculum sitting at some distance from what employers actually ask for, and weak links with firms would all account for such a view. The programme works for most of the students, but there are places where it does not meet what they expected.

No Significant Influence took 13.8% of the responses. Some of these students may well have arrived with their career expectations already formed before entry. It is also possible that the curriculum says too little about career opportunities, so that they remain unsure of the professional routes open to them, and that family, personal experience or their own private reading shapes what they think more than academic coursework does. They also asked, “Do you think the curriculum at KNUST adequately prepares students for careers in

jewellery and metalsmithing?”. A summary of the responses is presented in table 6.

Table 6: Summary of Responses to Adequacy of Curriculum in Preparing Students for Careers

Response	Frequency	Percentage
Yes	64	73.6%
No	10	11.5%
Not sure	13	14.9%
Total	87	100%

A majority (73.6%) hold that the curriculum does prepare them adequately for careers in jewellery and metalsmithing, which says that the programme is passing on the essential theory and the practical knowledge that industry participation asks for. Ten (10) respondents (11.5%) disagreed with them. Thin exposure to modern jewellery production techniques, a gap between what is taught in class and what industry wants, and too little hands-on work with real applications are the likely causes, and they point to a need to tie the academic side more closely to professional industry standards. Thirteen (13) respondents (14.9%) were unsure. Their uncertainty may well come from having few chances to engage with the industry, from an unclear route out of school and into employment, and from limited career guidance and few professional connections of their own. The last question in this section asked the students “what additional support do you think is needed to improve students’ career readiness?”

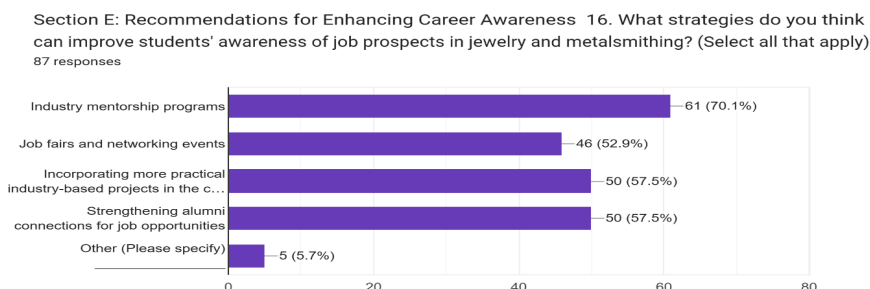


Figure 12: Additional support required for improved students' career readiness

Demand for industry exposure came out strongest of all, with 83.9% of respondents (73 students) asking for internships and hands-on training. A figure that high says most of the students feel their academic learning keeps them at arm's length from practical engagement with the jewellery and metalsmithing industry. Real experience gained through workshops, apprenticeships and field-based mentorship would ease the move into professional careers considerably. Parrot (2019) and Selden and Chan (2020) make much the same argument, that internships build the employability of students by widening what they know and have done, and that the experience gained on internship often shapes the career a student later chooses. KNUST already runs a full semester of on-field practical internship in the second semester of third year, yet these responses call for more contact with industry across the whole of the programme rather than in one block. Career Guidance and Counselling follows, with 55.2% (48 respondents) calling for structured career advice. That many students feel uncertain about their career paths is plain enough from the figure. One possible reason may be that the jewellery and metalsmithing industry keeps evolving, and that it now calls for new skills the students have not been trained in. Establishing mentorship programmes, career workshops and one-on-one counselling sessions would

give students a clearer view of the opportunities open to them and a firmer basis for an informed career decision. Business and Entrepreneurship Training was named by 59.8% of respondents (52 students), which is a great deal of interest in self-employment and business ownership. Many of them aspire to work in jewellery and metalsmithing but do not have the essential skills needed to start a venture of their own and then keep it running. Modules in financial literacy, marketing, pricing strategies and business planning would go some way towards fixing that, and would help graduates through the difficulties of entrepreneurship and on to enterprises that last. Networking Opportunities with Industry Professionals mattered almost as much, with 58.6% of them (51 respondents) pressing for stronger connections with the industry. Behind that answer lies a settled belief that success in jewellery and metalsmithing rests on who one knows, on seeing how the work is actually done, and on the mentorship of people who have been doing it for years. Wider access to networking events, trade fairs, guest lectures and partnerships with leading firms would open up both the insight and the employment prospects to them. Finally, the "Other" forms of support drew very little attention, 5.7% or 5 respondents, so the structured interventions listed above are what most of the students see as their primary need. Those five did not detail what they had in mind.

It could well be training on more modern technology, financial assistance to start a career, or specialised skill workshops built around industry demands.

Recommendations for Enhanced Career Awareness

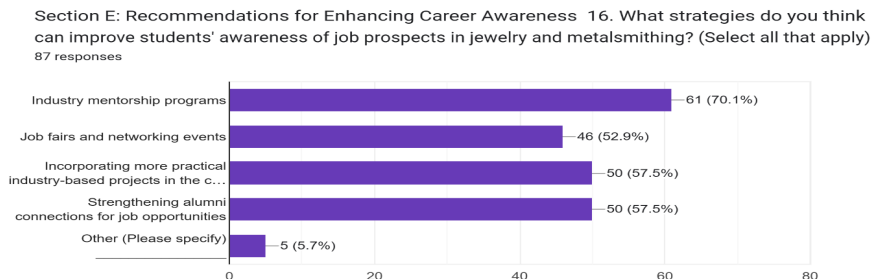


Figure 13: strategies to improve awareness of job prospects

Students were also asked for their thoughts on what could be done to improve awareness of job prospects in the field. Industry mentorship programmes came top of the list, chosen by 61 of the 87 respondents (70.1%). Guidance straight from people working in the trade is, on this showing, what students regard as the surest route to career awareness. Mentorship gives advice fitted to the individual, a view of how the work is done, and contacts, all of which count for a great deal in a field of this particular kind. That so many chose it says how much students and stakeholders value a direct, continuing relationship with a professional. It may also reflect a recognition that jewellery and metalsmithing run on networks and on knowledge passed hand to hand rather than written down. Two further options, putting more practical industry-based projects into the curriculum and strengthening alumni connections for job opportunities, were each chosen by 50 respondents (57.5%). Students clearly believe that hands-on work and the use of alumni networks matter a great deal in getting from education into employment. Both would help them to build the skills that employers actually want and to reach job opportunities through people who already know them. That the two options drew exactly

the same level of support says that students place as much value on experiential learning as they do on drawing from the experience of those who graduated a few years earlier. Between them the two take much of the mystery out of the job market and lay down a concrete pathway into employment. Job fairs and networking events were chosen by 46 respondents (52.9%). That is a little behind the other options but still a majority, and it shows that structured occasions where students meet potential employers and recent graduates and hear about career paths are worth having. They rank below mentorship and hands-on experience all the same. Useful as they are, a job fair does not carry the depth of engagement or the ongoing support that a mentor or alumni network provides. Other (please specify) was selected by only 5 respondents (5.7%). So few taking up that option means the options provided already covered the main strategies students consider effective, and hardly any of them had an alternative to offer. The small number choosing "Other" suggests that the main strategies identified by the survey sit closely with what the respondents perceive and need.

Possibility of Considering a Career Outside Jewellery and Metalsmithing

17. Would you consider a career outside Jewellery and Metalsmithing after graduation?
87 responses

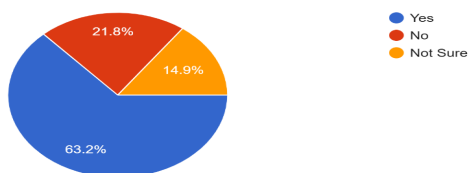


Figure 14: Career outside jewellery and metalsmithing

On the issue of whether they would consider a career outside jewellery and metalsmithing upon graduation, a majority of the respondents (63.2%) said that they would. Most of the students in this field, then, are either not fully committed to staying within the industry or are simply open to exploring alternative career paths of their own. Several of the reasons lying behind that answer have already been discussed earlier in this paper, under the heading “3.7.1 - primary concerns about job prospects”. Only 21.8% of the respondents said that they would not look outside their own field. That smaller group is the dedicated one, plainly attached to jewellery and metalsmithing and meaning to build a long-term career within the industry. What holds them there may be strong personal interest, satisfaction with the training they have received, or confidence in the jobs they can see ahead of them. Another

14.9% do not yet know which direction they will take after graduation. They may simply lack information about job prospects, they may have had too little career guidance, or they may doubt where the field itself is going. Better career counselling and more exposure to industry would help them decide on firmer ground.

Reasons Why They Would Consider a Career Outside Jewellery and Metalsmithing.

Those who answered Yes were asked to provide reasons why they would consider a career outside jewellery and metalsmithing after graduation. The reasons enumerated by the students are set out below, grouped under the themes that ran through them

Table 7: Responses on Why Students Would Consider a Career Outside Jewellery and Metalsmithing

Category (theme)	Responses
Entrepreneurial/Financial motivation, Lack of capital/logistics to start jewellery business	-Jewellery and metalsmithing will be my side business, I will explore other businesses - I would like to explore other careers -If it's more profitable than jewellery and metalsmithing -I would like to start my own business in another field but in the long run setup a jewellery business - This is because jewellery and metal smithing are an expensive area - I want to earn more money which I may not get in the field - Because of the high initial investment costs - I'm unsure how to obtain the capital to start the business.
Lack of skill/support	- Yes, I will because, we are not given the technological training yet we claim we are technology school through the lack of ultramodern tools. As to how things are to be done, sometimes we are being taught archaic ways and works which is not even needed in this 21st century.... I perfectly think if we are shown the technological phase used in studying this course, no one will consider a different career after school Thank you - Actually, I don't have an explanation but would definitely love to try something else - There are no facilities in Ghana
Interest in other areas	- I have passion for fashion design and I would love to add jewellery to make my brand different - I would like to explore other careers - I don't want field work - there is no work - I have interest in the fabrication aspect but it seems all the practical assignments we are given are mostly jewellery related which is very difficult for some of us with no interest in jewellery. - I believe that, with the idea about metals I have obtained, I can enter into Automotive engineering or industries to work there. - Because you can do other work apart from jewellery -The creative skills developed through jewellery and metalsmithing can be applied to other fields, such as graphic design, product design, or fine arts.

Job security	- Yes because, I don't want to stay jobless after graduating. - I want to join the army - If I am offered a well-paying job, I will consider it and use jewellery as my side hustle -The industry outside is far ahead of what we are being taught - There are no jobs in jewellery and metalsmithing after school - One job does not give enough finances in Ghana
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What the students wrote in this section shows aspiration running up against practical difficulty, and career considerations shifting about as a result. A good number of them are thinking about, or already moving towards, work outside jewellery making itself, and they gave a number of different reasons for it. Grouped into themes, those reasons say a fair amount about the perceptions and the realities shaping their professional outlook and about the Ghanaian conditions in which they are judging them. One of the clearest themes is the pull between wanting to run a jewellery business of one's own and the financial and logistical barriers to starting one. The wish to establish their own jewellery businesses is plainly there, but the substantial capital investment required keeps cutting that wish back. Respondents returned again and again to the "expensive area" of jewellery and metalsmithing and to the "high initial investment costs", and some of them stated outright that they were uncertain about "how to obtain the capital."

The pursuit of jewellery-making gets postponed, or recast as a supplementary income, a "side business" or something for the "long run", while a venture in another field that can be started sooner takes precedence over it. That is a sober reading of current financial viability rather than any absence of entrepreneurial drive. Concerns about whether a jewellery enterprise would repay the money laid out on it further compound these financial worries, and some are looking instead to fields they believe will pay them better.

On top of these financial hurdles sits a second worry, about the adequacy of skills development and the support the institution provides. A tangible frustration was expressed by some respondents over the distance between the training they receive and what contemporary industry asks of them. Their criticisms pointed towards a "lack of ultramodern tools" and of being taught "archaic ways and works," which they judged inadequate for the "21st century." One of them suggested, poignantly, that an education infused with current technological practice would leave no student thinking of a different career. A perceived deficit of this kind feeds straight into decisions about career trajectory, because it undermines graduates' confidence in their preparedness for the market they are about to enter. The remark that "There are no facilities in Ghana" pushes the problem further still, beyond any single institution, to the national infrastructure that ought to support the craft.

A divergence of interests also shapes these choices. Some wrote about a passion for other fields such as fashion design, where jewellery skills would complement their work, and others about entirely different domains, such as automotive engineering and graphic design. Exploration of this kind is common among people working out a career (Saldivar, *et al*, 2024). For a few, it was specific aspects of the field, or the nature of the work itself, that put them off, whether the "field work" or the weight the programme gives to jewellery over other kinds of fabrication.

One noteworthy observation came through all the same. Respondents widely accepted that what jewellery and metalsmithing teach them, design thinking, problem-solving and the handling of materials, carries over readily into other professional fields. Finally, the imperative of job security was the theme that ran hardest of all through the answers about exploring careers beyond the field. The apprehension of being “jobless after graduating” is a significant motivator, and drives a good deal of it. That fear is fed by a belief that “there are no jobs in jewellery and metalsmithing after school”, and by the sense that the working industry is “far ahead of what we are being taught,” which makes getting into it harder still. Ghana’s economy adds its own pressure, since, as one respondent put it, “one job does not give enough finances,” so individuals are pressed to look about for something steadier or for more than one stream of income. Consequently, even if offered a position, some would keep jewellery as a “side hustle” should a more lucrative and secure primary job come along. Saldivar *et al* (2024) and Abdul Aziz *et al* (2025) found the same, with students choosing science teaching and technical and vocational education because the jobs there are stable. Taken together, these responses show a practical realism among emerging jewellery and metalsmithing professionals. What steers their decisions is not any singular lack of passion for the craft. It is a complex matrix of high start-up costs, gaps they perceive in their education, diverse personal interests, and the pressing need for financial stability and job security in the current economy. All of this carries implications for curricula, for institutional investment in modern resources, and on the building of a supportive entrepreneurial environment within Ghana’s creative industries.

CONCLUSIONS

Jewellery and metalsmithing students at KNUST are largely optimistic about their field and attached to it, yet they run into a practical conflict when they think about what comes next. Their education shapes their views for the better. Set against that are significant concerns about the cost of starting a business, the small number of jobs, and the low regard in which the profession is held in Ghana. Because money and security come first, many are prepared to work outside the field and to treat jewellery as a side business or something to return to later. What the findings ask of the programme is plain enough, namely more comprehensive exposure to industry, practical training in business and entrepreneurship, robust career counselling that students can rely on, and stronger opportunities to build up professional contacts. Attend to these and the skills and expectations of students will sit closer to what the industry is actually like, which should keep more of the talent inside Ghana’s jewellery and metalsmithing sector. Graduates who leave with academic training and a working knowledge of the profession are the ones who will succeed in the careers they choose.

CONFLICT OF INTEREST STATEMENT

Researchers declare no conflict of interest.

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DATA AVAILABILITY STATEMENT

The data supporting the outcome of this research will be provided by the corresponding author upon reasonable request.

AUTHOR CONTRIBUTIONS

Emmanuel Mensah – Conceptualisation, Data gathering, analysis and manuscript preparation.

Cyril Etornam Adala – Conceptualisation, Data gathering, and proof-reading of manuscript.

Peter Tindukin Birteeb – Data coding, Statistical analysis and proof-reading of manuscript.

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