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Design and Fabrication of a Signet Ring as a Souvenir for Graduating Students of AsanSka University College of Design and Technology

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Abstract

This study examined how a signet ring can be designed and made as a graduation souvenir for the students of AsanSka University College of Design and Technology. The study handled the contextual gap in graduation souvenirs within the institution where students did not get any significant gifts in order to remind them about their academic achievements. The research design was a qualitative research design, which used studio-based descriptive research methods and research technique of exploration. Data were collected by interviews (unstructured interviews with students and lecturers), and firsthand observation of fabrication processes. The production of the ring used with the traditional and contemporary jewellery making techniques including annealing, pickling, milling, piercing, soldering and finishing. The results showed that the graduating students wanted to get personalised souvenirs to remember their learning experience and the institution they belong to. The research established that signet rings can be used as permanent reminders when correctly planned and made to remind students of the institution and make them feel that they belong to it. The study adds to the comprehension of the way in which the traditional craft methods may be utilized to produce significant modern commemoration items in educational settings.

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Introduction

Signet rings were used as early as 3500 BC, as McCreight (2004) ^[12] believes that cylindrical seals are recorded in documents where Mesopotamian people utilized them as a form of authentication. This is the very place where the corporate seal originated and it is used by certain businesses up till the current time. Signet rings were invariably owned by any person with power during the period that preceded the Middle Ages. This was the nobility of all the nobles and they signed all correspondence and official documents using the custom-made signets. In fact, the official documents must be signed using the signet ring of the King as per the decree of King Edward II in 14th century. Most of the rings of these periods were destroyed when their owner died. This is because they were separate and eradicated the possibility of falsified records appearing after the death of a noble. During this period, a ring would be used to symbolize how superior you were to the other ordinary men and that you belonged to the upper class as it was claimed by Bates and Parkinson (1996) ^[4].

According to Austin (2017) ^[3], signet rings were first used to stamp or sign papers. A family flag was frequently emblazoned or embossed on them. An impression would be left on clay or any soft wax with a permanent mark of the metal forms on the various legal documents. Some of the most important historical documents have been signed with the help of a signet ring. A ring stamp at the time was believed to be more authentic than a signature. Even though the family crest was generally one of the symbols on every distinct ring, there was always a special mark that enabled the unique identification of the holder of the ring. Some of the rings had simple monograms or icons, which were affiliated to the most notable families. Each of the rings went through

reverse engineering to ensure that the design was visible when the rings were stamped on a document. Of course, such level of craftsmanship also made the rings expensive and extremely difficult to replicate. A remembrance or memory A memento, a keepsake or token of remembrance is an item that a person buys as a reminder of the memory (assistant brand) that the buyer may have of it. Anything that can be carried or bought back home by a traveler and keeps as a reminder of visiting a certain place can be a souvenir (Etymology Dictionary, 2010).

Existing souvenirs are presented to the graduates of AsanSka University College of Design and Technology. Nevertheless, the researcher will revise the list of things that are provided to the graduating group. The researcher therefore aims at making a special jewel that the graduands can wear upon its completion. As an example, when graduands gather at a convention, the researcher hopes that this product would be put on in other so as to predict the image of the school they graduated with. Institutions have different types of jewellery that are used to mark or to establish dominance in the society. Examples of brooch, tie clip, cuff pin, medal, sticker, vest and even signet ring. Such an institution and group were to have signet rings. Signet rings are those rings worn at offices, communities and churches. Establishing an original and genuine signet ring as the official emblem of the 2013 graduands of AsanSka University College of Design and Technology, can contribute to increasing the number of new students who are planning to seek admission in the school. It is also capable of assisting in raising the image of AsanSka University College of Design and Technology look majestic. A signet ring is a special type of a ring where the wearer, family, membership, or kinship is generally symbolized by a sign, seal or inscription.

There are enormous types of signet rings, which are; Family crest ring, Monogram ring, Seal ring, Initial ring, Name ring, Symbolic ring (example, cross, star). A souvenir is an object that is retained to remind someone, a place or an event.

When graduating, students in most institutions are given gifts like brooch, medal, cuff pin, gown etc. But students who leave the AsanSka University College of Design and Technology fail to get such benefits. The researcher deems it significant to design an exclusive gift, which is signet rings to be presented to such graduands upon leaving school (Mishra, 2025) ^[13]. Such a special design of a signet ring is something that can be worn at the end of their graduation. An example will be when they come together to do some community activities, when they go to vocation or sightseeing as well as when they are attending a school function. This will not only increase the image of the school but will also lead to the promotion of the authenticity that in fact a person is a former student of AsanSka University College of Design and Technology. It will also assist the broadcasting of the image of the artist (researcher) to the prospective customers or business partners.

The researcher of AsanSka University College of Design and Technology, needs to make it in the sense that, when you are a female, you would get the feminine design or version of the same since there are cases where males meet there will be no females, and where females meet there will be no males. In case a female is wearing a ring that belongs to the male, then it would be a partner but when it is female, it would confirm that it belongs to her. The reason is that, females can receive their allowance on it making it wearable in their own circle of friends not necessarily where a male stud or a ring which

would raise the impression of it belonging to another person it being their male counterparts.

Theoretical Framework for the Study

This chapter outlines the theoretical fundament of the study, which is the design and fabrication of a signet ring as a graduating student souvenir of AsanSka University College of Design and Technology. The framework is based on the theory that has been developed in the dmateral culture and jewellery studies which offer a conceptual basis in determining the meaning of the signet rings as an object of commemoration and how they are created.

Material Culture Theory

Material culture theory focuses on the interaction of people with objects that they make, use and own. According to this theoretical point of view, objects bear symbolic meanings which indicate the identity, values and social status of those who own them (Kopytoff, 1986) ^[9]. The theory can be used in jewellery studies to understand why some things become meaningful outside their functionality.

The historical object such as signet rings has always had the cultural and symbolic meaning over and above their utilitarian function. The rings date back to 3500 BC and were employed to accomplish authentication of documents and define authority and identity (McCreight, 2004) ^[12]. The material culture theory applies in this study since the signet ring is a material symbol of the success and belonging to the AsanSka University College of Design and Technology by the graduate. The ring is made a material manifestation of the learning process and achievement.

Ring Design

The design of the ring must put into consideration a number of factors such as the shape and design of the band. In case, you want a monogram or the coat of arms of your family to be engraved, the researcher recommends you to use a classic oval shape.

Besides, square shapes dominate in men than oval in women. The square shape of the ring that is befitting the latest modern designs also provides you with modern outlook. The size of the ring will depend on the taste and fashionary inclination of the wearer. The outgoing ones also have huge and conspicuous accessories such as statement rings. On the other hand, the reserved tend to prefer one plain thing like a similar ring or minuscule gemstone which they usually prefer the most. The beauty of the signet ring could be improved with the help of the design of the band even though it is disregarded by many people. The researcher proposes the usage of a slender ribbon to make your grace conspicuous in case you wish to appear graceful. On the other hand, when you want to create an impression that will last a long time, then wear a thick band (Kaelon, 1989).

Signet Ring

Signet rings have a rich history, which goes back many ages and civilizations. Such specific rings are not only a decorative element; they are also an indicator of social status, identity and family history.

A signet ring is an object example of jewellery that has a flat surface, which is engraved with a pattern, such as a monogram, initials, or family crest. Signet rings are now used as fashion accessories and a symbol of authority of status but in the past the rings were used as seals to verify documents

and letters. These fashion accessories are uniquely designed, function, and backgrounded as compared to the other rings. Signed rings have an engraved seal on the ring surface which is a personal or signature seal. These rings were used in order to impress the wax and clay material to be used in authenticating letters, documents, and legal documents. Another alternative to the signet rings is to place the family crest in the signet rings, and this has been continuing across the centuries proudly claimed by Amy (2007) ^[1].

Moreover, signet rings in the past days bore a relation with social status, power, and authority. The signet rings are generally attached to royalty, nobility, and other high officials since they are fabricated using this kind of material. Signet rings had been used since 3500 BC. Cylindrical seals can be traced in documents according to which Mesopotamian people used the seals as a marker of authenticity. This led to the creation of the corporate seal that is currently being used by some companies up to date (Commy, 2007).

Signet rings have a fascinating journey through space and time. These rings can be traced back to the period when ancient people like the Romans and the Egyptian used seals on their documents and other important letters. The signet rings became even more popular in the Victorian era. Signet rings were a common gift to the child when he or she became an adult. Signet rings were also popular with both men and women of every social status which Obeng (1996) ^[14] claims. Signet rings have been worn by prominent people throughout the ancient times. They represent family pride, power and position.

AsanSka University College of Design and Technology

AsanSka University College of Design and Technology is a Ghanaian University college of design and technology affiliated to the University of education-Winneba and accredited by the Ghana tertiary education commission (GTEC). It is found at the opposite of the Valley View University along the Adenta-Dodowa road (Oyibi-Accra, Ghana).

Mr. Kwabena Asante-Asare, Founder and CEO of AsanSka Minerals Ltd and AsanSka Football Club founded it in the year 2015. The AsanSka University College of Design and Technology was initially called AsanSka College of Design and Technology (ACDT). The College vision is to be a globally renowned institute of Design education and research. AUCDT mission aims at training professional artisans and non-professional artisans and research and knowledge dissemination and policy formulation and development in technical/vocational education. The mission of AUCDT is, to offer university and professional education by teaching, learning and research, to offer skills which will help in enhancing creative and analytical thinking skills, then also to seek and spread of knowledge and information, and to institute relationship with other relevant institutions and bodies that share the vision and mission.

Philosophy of Graduation at AsanSka University College of Design and Technology

Graduates will be prepared with technical expertise of value addition to our natural reSources. The graduates will also not only graduate to be the leaders in designing innovations and creativity, but of developing an entrepreneurial spirit capable of transforming the status quo. The impartation of the wisdom based on sustainable development of design thinking

processes will guarantee graduates of the College to succeed (AUDT, 2024).

Being a privately-owned design and technology institution, quality education is offered due to professional staffing, quality reSources, and small classes to support interactive learning methods. Our learning staff attends to your interest and meets your academic requirements. There are four departments in AUCDT namely department of Jewellery Design Technology, Department of Digital Media and Communication Design, Department of Fashion Design Technology and Department of Product Design and Entrepreneurship.

Graduation Ceremony

Graduating of each student is a formal event which marks the successful attainment of a course of study and is a once in a lifetime event. Graduation ceremonies are of various types that involves school graduation ceremonies, church graduation ceremonies, community graduation ceremonies, work graduation ceremonies among others. When students eventually receive their much-desired and valued college degree on graduation day, they are usually left to celebrate their achievement.

Graduation ceremony is very important to them since it provides them with a great chance to show off how proud they are of you. The graduation not only gives them a chance to show their pride in everything that you have done, but also gives you a chance to act as a live example to your friends and children.

Methods

Research Approach

Qualitative research can be vaguely referred to as exploratory research. This form of research will give an insight into the issue. According to Leedy and Omrod (2005) ^[10], qualitative research technique is employed to obtain knowledge of opinion, motivation and crucial motives and motivation.

Research Method

The research methods used in this study were the studio based descriptive research and exploratory research methods. This included production and documentation of the project as well. Marshall (2010) ^[11] claims that the creative and intellectual endeavors that are made by artists are viewed as researches. The descriptive approach, which provided in detail the several working processes involved in the production of the signet ring, was employed in depicting and describing the tools and materials and equipment used to make the work piece by using the majority of the metal techniques in this research.

Data Collection Procedures

In the gathering of information among students, the researcher met with the students individually. The researcher spent more time in the studio to collect information through the aid of the interviews. This was the vantage position where the researcher collected the information of the students and the lecturer. Each respondent and interviews were recorded and transcribed after a period of 15 minutes. The researcher also conversed with the students as they were being audio-recorded to make them more responsive as the researcher engaged them. Among lecturers, interview was done unstructured. It was face-to-face interview. The researcher posed follow-up questions to the lecturers.

Observation

The observation part is concerned with the researchers peering over the details into the different designs and fabrication processes of the signet ring, its principles (which embraced the principles of the light on colour of the gemstones), the working and idea behind it. The different methods of fabrication methods that could be used in a bid to achieve the perfect domes were observed. These were predominantly as observed in documentaries, educational illustrations, which were online.

Population of the Study

The study targeted students and lecturers of Jewellery design department at the AUCDT. The students were not fully participating and therefore purposive sampling approach was chosen to select 1 second year jewellery design student, 2 final year student and 1 jewellery design lecturer (the result was a total sampling population of 4 in this study).

Facilities Available for Research

AUCDT library and the World Wide Web were the main facilities that were accessible to the research. The internet was also crucial in the study by the researcher. In conclusion, the researcher used ten (10) books, paid a visit to more than forty (40) internet sites. Nonetheless, books, and internet sites with direct relevance to what the researcher was doing were exploited fully.

Data Analysis Plan

The proposed plan will utilize data collection that will be in the form of semi-structured interviews and observations to examine the consumer preferences in the design of signet rings. The initial codes were created, and the data were transcribed and reviewed after which key themes could be identified such as the Cultural Influences, Material Choices, and Design Trends. All the themes were identified and justified by the quotes of the participants. It will be concluded in the final report stating the findings and implications to the

designers as well as commenting about the biases and limitations of the study.

Results and Discussion

Various Designs of Signet Rings

Signet rings have a rich history and a wide variety of designs that cater to different tastes and preferences. Traditionally, these rings were used to seal documents and signify authenticity, often featuring family crests or initials. Over time, their role has evolved into that of a decorative accessory and a personal statement. One of the most classic designs is the flat-top signet ring. This style has a smooth, flat surface that is perfect for engraving. It's commonly used for displaying initials or family crests, making it a popular choice for those looking to showcase their heritage. The oval and round signet rings are also traditional favorites. Their rounded surfaces provide a timeless elegance, allowing for intricate engravings that can reflect personal stories or symbols. In modern design, signet rings have taken on more diverse forms. Geometric shapes (Fig 1.1), such as squares and rectangles, have become trendy, offering a contemporary edge. Some designers experiment with unique and asymmetrical shapes that challenge conventional aesthetics, appealing to those who want something truly distinctive. Moreover, the use of mixed materials has gained popularity. Signet rings may now incorporate metals alongside gemstones, wood, or even ceramic, allowing for a blend of textures and colours that enhance individuality. Engraved patterns and textures add another layer of personalization, with designs ranging from floral motifs to intricate geometric patterns. A notable emerging trend is the inclusion of kinetic mechanisms in signet rings. These innovative designs feature moving parts, creating an interactive element that makes the ring not only a piece of jewellery but also a conversation starter. Overall, the diversity in signet ring designs reflects a combination of tradition, personal expression, and modern aesthetics, making them versatile accessories for various occasions.



Source: https://www.ebay.com/sch/i.html?_nkw=gold%20signet

Fig 1.1: Geometric Patterns in Signet ring

1.1.1. Various Fabrication Techniques of Signet Rings

Signet rings, with their rich history and significance, are crafted using various fabrication techniques that enhance their beauty and durability (Fig1.2). Understanding these methods provides insight into the artistry and craftsmanship behind these timeless pieces of jewellery.

One of the most traditional methods of fabricating signet rings is lost-wax casting. This technique involves creating a wax model of the ring, which is then coated in a ceramic shell. Once the shell hardens, the wax is melted away, leaving a mould for molten metal to be poured in. This method allows for intricate designs and detailed engravings, making it ideal

for custom signet rings that require precision. Lost-wax casting is particularly valued for its ability to produce high-quality pieces that capture fine details, such as family crests or personalized symbols.

Another common technique is die-striking, where a metal blank is placed between two dies and struck with a hammer or press. This method is efficient for mass production and ensures uniformity in size and shape. Die-striking is often used for simpler designs, but it can also accommodate some level of detail. The resulting rings are known for their strength and durability, making them suitable for everyday wear.

CNC machining, or computer numerical control machining, has emerged as a modern fabrication technique in the jewellery industry. This method utilizes computer-controlled tools to carve and shape the ring from a solid block of metal. CNC machining allows for high precision and the ability to create complex designs that might be challenging to achieve through traditional methods. This technique is particularly popular for contemporary signet rings that incorporate unique shapes and intricate patterns.

Hand fabrication is another approach that emphasizes artisanal craftsmanship. Skilled jewellers manually shape and assemble the ring using tools like hammers, pliers, and soldering equipment. This method allows for greater creativity and customization, as artisans can create one-of-a-kind pieces tailored to individual preferences. Hand-fabricated signet rings often have a personal touch and can

showcase the jeweller's unique style and technique.

Electroforming is a less common but innovative technique that involves depositing metal onto a mould using electrical currents. This method allows for the creation of lightweight rings with intricate designs, as the metal builds up layer by layer. Electroforming can be used to create organic shapes or detailed textures that might be difficult to achieve with traditional methods. Additionally, stone setting techniques play a significant role in the fabrication of signet rings. Common methods include bezel setting, where a metal rim encircles the stone, and prong setting, which uses metal claws to hold the stone in place. The choice of setting technique can greatly influence the overall aesthetic of the ring, adding to its uniqueness and appeal. Finally, the finishing techniques applied to signet rings, such as polishing, plating, or antiquing, further enhance their appearance. Polishing creates a smooth, shiny surface, while plating can add a layer of gold or rhodium for a luxurious finish. Antiquing involves darkening the recesses of the design to highlight details, giving the ring a vintage look.

In conclusion, the fabrication techniques of signet rings are diverse and multifaceted, ranging from traditional methods like lost-wax casting to modern innovations like CNC machining. Each technique contributes to the final product's quality, aesthetics, and uniqueness, reflecting the wearer's personality and style. Whether crafted through artisanal methods or advanced technology, signet rings remain cherished symbols of identity and heritage.



Source: https://www.ebay.com/sch/i.html?_nkw=gold%20signet

Fig 1.2: Signet ring from Investment Casting

Evaluation of Objective Two Based on Research Question Two

The objective two was to ascertain precisely which tools and materials as well as jewellery techniques to be undertaken for the fabrication of the signet rings. This in turn answers the research question, what are the tools and materials used in fabrication of signet rings for ceremonial purposes?

Tools and Equipment

The following tools were used in the execution of the work. Doming block and its punches, Hammers, Files, pliers, Tweezers, Blow torch, LPG gas, and jewellers saw frame and blades, pair of shears, ruler, guillotine, scratch brush.

Hammers

Hammer is a mechanical tool that delivers a sudden impact to an object. The hammers were used in flattening metals and striking metal punches for the making of metal.



Source: <https://www.toolsntoolsuk.co.uk/jewellery-tools-blog/>

Fig 1.3: hammer

1.2.1.2. Needle files

Needle files are small files used to finish and shape metal.

The needle files were used to file edges of metal domes to make them after cutting.



Source: <https://www.toolsntoolsuk.co.uk/jewellery-tools-blog/>

Fig 1.4: Needle files

Pliers

Pliers are a hand tool useful for bending and compressing a

wide range of materials. The pliers were used for compressing metal.



Source: <https://www.toolsntoolsuk.co.uk/jewellery-tools-blog/>

Fig 1.5: A pair of pliers

Jeweller's Saw frames and blade

This is used for piercing metals normally metal sheets.

Jewellers are used for piercing metal rods and metal sheets.



Source: <https://www.toolsntoolsuk.co.uk/jewellery-tools-blog/>

Fig 1.6: A jeweller's saw

Shears

A tool used for cutting metal sheets. The shears were used in cutting metal rod and pieces of metal from the metal sheets.

Flexi Shaft

A flexi shaft is a versatile tool commonly used in jewellery making, particularly for polishing and setting gemstones. It consists of a flexible shaft that connects a motor to various attachments, allowing for intricate and detailed work. The flexibility of the shaft enables the user to maneuver easily

around complex shapes and contours, making it ideal for working with gemstones that require precision. When polishing gemstones, the flexi shaft can be fitted with different polishing tips or wheels, which can be made from various materials such as felt, cloth, or even diamond-coated surfaces. These attachments allow jewellers to achieve a high shine on gemstones, enhancing their brilliance and overall appearance. The ability to adjust the speed of the flexi shaft's motor also provides greater control, enabling users to polish delicate stones without the risk of damage.



Source: <https://www.toolsntoolsuk.co.uk/jewellery-tools-blog/>

Fig 1.7: Flexi Shaft

Beading Tools for Gem setting

Beading tools are essential for creating beautiful jewellery, and each tool serves a specific purpose. First, beading needles are crucial for threading small beads. They are designed to easily pass through tiny holes, making it simpler to string gems in jeweller.

Materials

The main materials that were used were silver and gemstones (cubic zirconia). They were chosen because of their suitability for the particular work in terms of affordability, durability and its properties.

Overview of Fabrication Process

The fabrication process deals with the step-by-step processes that were used in the production of the project work, such as construction of support, pasting of designs from printed picture to the support, application of the metal domes onto the support which is the silver sheet. Some of the metals pierced out were domed to receive metal domes onto it.

Pre-Fabrication Process (Experiment on Test Pieces and Idea Development)

According to (Cohen and Manion, 1985; Cohen, Manion and Morrison) [5], experimental research involves the deliberate manipulation and of conditions to determine the results required by the researcher. Thus, making a chance in a variable and observing the resultant effect of the chances on

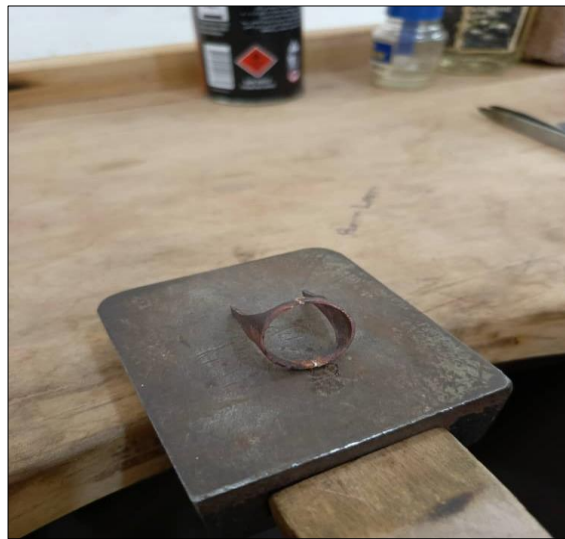
another variable.

Experiment and trials using the various jewellery forming techniques and finishing methods were done to find out the suitability of jewellery forming techniques for the signet ring. Investigations and experiments of jewellery forming techniques that can be used to assert the signet ring was done. This enabled the researcher to know the exact jewellery techniques to use (Figs 1.8 to 1.11). This as well helped the researcher to know the size of the work to be executed and materials selection. Various polishing surface decoration and surface preservation methods were explored to enable the researcher to find out the appropriateness of a particular finishing technique suitable for the signet ring and also to know the atmospheric conditions these finishes can withstand.



Source: Researcher's own (2024)

Fig 1.8: Patterns of signet ring



Source: Researcher's own (2024)

Fig 1.9: soldered and rounded signet ring



Source: Researcher's own (2024)

Fig 1.10: Signet ring test piece 1



Source: Researcher's own (2024)

Fig 1.11: Signet ring test piece 2

Idea Development

In this stage, various ideas were sampled in relation to the project topic. The project began with sketches which depicts different designs communicating the focus of the project (Figs 1.12 and 1.13). The researcher had the need to create a

signet ring that would immediately broadcast the focal point of the research which is AUCDT. The sketch was later developed with coral draw application to bring out the final sketch for the project (Figs 1.14 and 1.15).



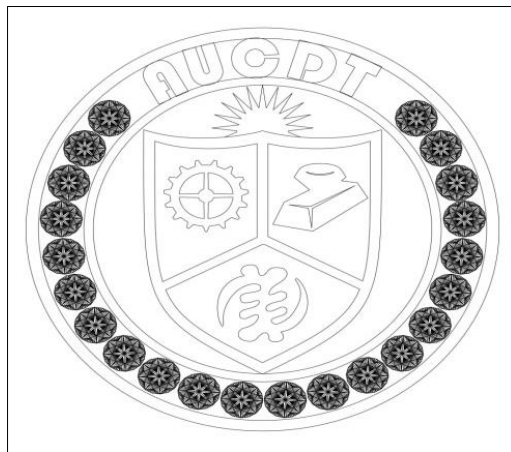
Source: Researcher's own (2024)

Fig 1.12: Sketch of signet ring1



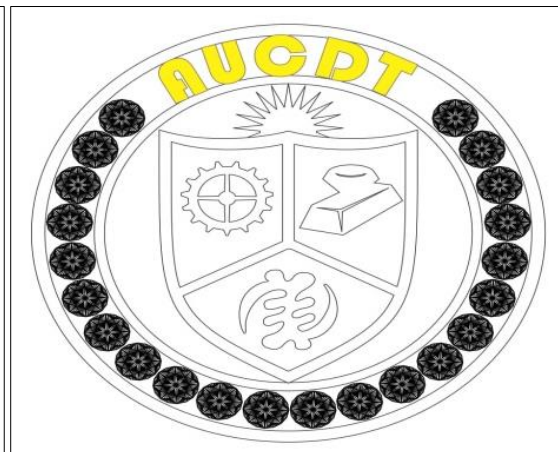
Source: Researcher's own (2024)

Fig 1.13: Sketch of signet ring 2



Source: Researcher's own (2024)

Fig 1.14: Final design of signet ring1



Source: Researcher's own (2024)

Fig 1.15: Sketch of signet ring 2

Fabrication Processes

This stage involves the processes that were carried out in the execution of the work. The processes used are annealing, pickling, milling, piercing, soldering and gemsetting. These processes have been meticulously explained using the descriptive research approach.

Annealing, Pickling and Milling of Metal

When it comes to creating signet rings, processes like annealing, pickling, and milling of metal were essential steps in ensuring the quality and durability of the final piece. Annealing process involved heating the silver to a specific temperature and then allowing it to cool slowly. This process softened the metal, making it easier to work with. For signet rings, annealing was crucial because it allowed the researcher to shape the metal without cracking or breaking, especially

when creating intricate designs or setting stones. After annealing, pickling was performed. This involved immersing the metal in a mild acid solution to remove oxidation and other impurities that may have formed during the heating process. Pickling helped restore the silver's shine and prepares it for further finishing, ensuring that the surface is clean and ready for any engraving or embellishments that are common in signet ring designs.

Milling was the mechanical process involved in flattened shaping the metal (Figs 1.16 and 1.17). In the context of signet rings, milling was used to create precise dimensions and intricate patterns on the surface of the ring. This is especially important for traditional designs, where detailed designs of AUCDT and personalization are key features. Milling allowed for the creation of smooth edges and a polished finish, enhancing the overall aesthetic of the ring.



Source: Researcher's own (2024)

Fig 1.16: Milling of silver for signet ring



Source: Researcher's own (2024)

Fig 1.17: Milled silver in rod or sheet form

Pasting of Designs, Piercing and Soldering

Pasting the design on the silver and piercing were important steps in the creation of signet rings, particularly when it comes to achieving intricate details and personalized features. When the researcher decided on a specific design for a signet ring, the researcher started by pasting the design

onto the surface of the silver. This involved transferring the design, which was the AUCDT design onto the metal (Fig 1.18 and 1.19). This step was crucial because it serves as a guideline for the subsequent work. Having a clear and accurate design helped ensure that the final design reflects the intended aesthetics and details.



Source: Researcher's own (2024)

Fig 1.18: Pasting of Designs 1



Source: Researcher's own (2024)

Fig 1.19: Pasting of Designs 2

After the design was in place, the next step was piercing. This technique involved using a jeweller's saw to cut through the metal along the lines of the pasted design. Piercing allowed for the creation of intricate patterns and shapes that can add depth and character to the signet ring. For example, the design included a crest, piercing helped define the edges and create a three-dimensional effect, making the details stand out.

When crafting a signet ring, the researcher needed to join different pieces of metal together, such as attaching a shank to a signet top or incorporating additional design elements. Soldering involved melting a filler metal, known as solder, which flows into the joint between the pieces being joined. This process created a strong bond as the solder cools and

solidifies, effectively holding the components together. In the context of signet rings, soldering was particularly important for maintaining the structural integrity of the ring, especially if it features intricate designs or multiple layers. For instance, if a signet ring has a stone setting or decorative elements, soldering ensured that these components were securely attached, preventing them from loosening or falling off over time.

Additionally, soldering allowed for the incorporation of personalized features, such as leaf designs and writings on the signet ring. The researcher soldered on additional decorative elements or even create unique shapes that enhanced the overall design of the ring (Figs 1.20 to 1.23).



Source: Researcher's own (2024)

Fig 1.20: Soldering of component 1



Source: Researcher's own (2024)

Fig 1.21: Various components of Signet ring



Source: Researcher's own (2024)

Fig 1.22: Signet ring with inner strip



Source: Researcher's own (2024)

Fig 1.23: Signet ring with writings

Finishing of Signet Ring

Finishing a signet ring was a crucial step that enhances its appearance and ensures the quality of the final product. This process involved several techniques that refine the ring's surface and bring out its beauty. After the ring had been shaped, soldered, and any designs have been applied, the finishing process begins. The researcher's typically start with sanding the ring to remove any rough edges or imperfections left from the previous steps. This emerying is done with various grits of emery paper, gradually moving from coarse to fine to achieve a smooth surface.

Next, polishing is performed to give the signet ring a shiny, reflective finish. This can be done using polishing compounds and a buffing wheel or by hand with a soft cloth. The polishing process not only enhances the ring's visual appeal but also helps to protect the metal from tarnishing and wear over time.. For example, the rouge and Tripoli is used to buff the signet ring. Finally, the ring may undergo a cleaning process to remove any polishing compounds or debris. This can involve ultrasonic cleaning or simply rinsing the ring in a mild solution to ensure it is free from any residues (Fig 1.24).



Source: Researcher's own (2024)

Fig 1.24: Finished Signet Ring

General Discussion

The results of the current research are quite consistent with the literature review and prove the historical and cultural importance of signet rings as commemorative items and illustrate their relevance in the educational process today. It was found in the literature that signet rings were in use since 3500 BC with the main purpose of authentication and as an indicator of power (McCreight, 2004) ^[12], which was reflected in the method of design of the current study. The researcher was able to transfer these more traditional concepts of identity and achievement into a worthwhile graduation souvenir thus validating the material culture theory of Kopytoff (1986) ^[9] which states that objects have symbolic value that represents identity and values.

The results of the study on the design diversity align with the literature of the different types of signet rings, such as family crest rings, monogram rings, and seal rings (Austin, 2017) ^[3]. The scholar used the elements of these conservative designs and modified them to represent institutions in the contemporary society. Equally, the technique used in fabrication, such as annealing, pickling, milling, piercing, and soldering are based on the techniques that have been used in jewellery making in the literature but the techniques have been put into application in the study to produce a piece with a graduation theme as opposed to the historical family crests that are usually discussed.

Nevertheless, it is clear that there is a significant difference in the choice of material. Although the literature suggests the use of gold, silver, titanium, tungsten, or stainless steel as a signet ring (Kaelon, 1989), in this research, silver with cubic zirconia gemstones was used due to the affordability and durability in the case of student buyers. This practical implementation shows how theoretical principles of design can be changed according to certain needs of the context without losing aesthetic value.

The literature is personalization (engravings) (Austin, 2017) ^[3], which the findings of the study greatly endorse, with the participants desiring customized aspects of the affiliation to institutions. The design of the AsanSka University into the

ring is a perfect example showing how the traditional functions of the signet rings could be re-considered to serve the needs of the modern educational institution, the link between the historical artisanship and modern branding requirements of the institution.

Conclusion

This research was able to come up with a signet ring to use as a graduating gift to the students of the AsanSka University College of Design and Technology. The study proved that signet rings, with their deep historical context back in the year 3500 BC, are the perfect commemoration items as they are used to mark the accomplishment, identity, and affiliation with the institutions. Under the qualitative research techniques such as interviews and in-studio exploration, the study distinguished different design opportunities that were between conventional flat-top and oval designs and modern geometric design. The fabrication process showed that the traditional methods of jewellery-making, including annealing, piercing, soldering, and finishing, were useful in making high-quality signet rings. The choice of silver was because of its cost effectiveness, durability as well as beauty. According to the findings, students who will graduate want individualized souvenirs that would display their experience at the institution and the experience they have had. When designed and manufactured properly, the signet ring can be a permanent souvenir which is worn by the graduates with pride that both instills institutional identity and at the same time gives them a sense of ownership among themselves.

Recommendation

According to the results, the AsanSka University College of Design and Technology should adopt signet ring program as a college graduation practice. Jewellery designers must also not ignore the opportunity of customization even though they should not neglect the traditional craftsmanship. Schools need to join jewellery design courses to make significant commemoration objects that enhance bonding of alumni and institutional identity.

References

1. Amy K, Harter P. Research methods in librarianship: Techniques and interpretation. New York: New York Academic Press; 2007. p. 56–57.
2. Asanska University College of Design and Technology. About AUCDT [Internet]. 2024 [cited 2026 Jan 21]. Available from: <https://aucdt.edu.gh/about/our-history/>
3. Austin C. A brief history of signet rings [Internet]. 2017 Jun 12 [cited 2026 Jan 21]. Available from: <https://thehistorypress.co.uk/article/a-brief-history-of-signet-rings/>
4. Bates, Parkinson. Production [Internet]. 1996 [cited 2026 Jan 21]. Available from: <https://www.google.com.gh>
5. Cohen L, Manion L, Morrison K. Research methods in education. London: Routledge; 1985.
6. Commey. All about filigree jewelry – an ancient Indian art [Internet]. 2007 [cited 2026 Jan 21]. Available from: <https://www.culturalindia.net/jewellery/types/filigree-jewelry.html>
7. Online Etymology Dictionary. Souvenir [Internet]. 2010 [cited 2026 Jan 21]. Available from: <https://www.etymonline.com/search?q=Souvenir>
8. Kaelin. Aesthetic: its importance to granulation art and history [Internet]. 1989 [cited 2026 Jan 21]. Available from: <https://www.bing.com>
9. Kopytoff I. The cultural biography of things: Commoditization as process. In: Appadurai A, editor. The social life of things: Commodities in cultural perspective. Cambridge: Cambridge University Press; 1986. p. 64–91.
10. Leedy PD, Ormrod JE. Practical research: planning and design. 8th ed. Upper Saddle River (NJ): Pearson Education; 2005. p. 184, 203.
11. Marshall C. A research design for studio-based research in art. Teaching Artist Journal. 2010;8(2):77–87.
12. McCreight T. The complete metalsmith: An illustrated handbook. Portland (ME): Brynmorgen Press; 2004.
13. Mishra AB. Kalyan Jewellers: A case study on brand perception and disruptive innovation in the jewellery market. In: Impact of digital transformation on business growth and performance. Hershey (PA): IGI Global Scientific Publishing; 2025. p. 261–284.
14. Obeng JP. Asante Catholicism: Religious and cultural reproduction among the Akan of Ghana. 1996. p. 20.

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