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A THEORETICAL FRAMEWORK MODEL FOR THE CREATION CERAMIC ART BASED ON ASH GLAZE IN THE PRODUCTION OF CERAMIC WORKS

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ABSTRACT The theoretical framework forms concepts, terms, definitions, models, and theories that become the basis and orientation of the discipline for the study to be carried out. The researchers have prepared a model for the creation of ceramic works of art to form a guide in the research process to identify terms relevant to the concept, definition, elements of ash production, the process of creative and artistic ceramic works, data collection strategies, manufacturing techniques, material selection. Researchers are inspired to create works of art based on natural forms by studying and sketching plants in their natural state. The researchers then made rounds of the relief design to observe the development of vertical and dynamic patterns. The art of creating ceramics is one of the indicators of the prosperity of human culture. It has existed in human society for thousands of years. Archaeological evidence shows that ceramics have been used in many aspects of daily life to this day, and glaze has been an important process to enhance the durability and beauty of ceramics. Glaze increases strength and hardness, as well as surface resistance to acidic and basic materials when ceramic items are fired at temperatures over 1200 degrees Celsius (°C). Ash glaze is one of the traditional (ancient) glaze. Chinese potters have been using it since the Han dynasty (206 B.C. – 200 A.D.), more than 2,000 years. In Malaysia, pottery is distinguished by its shape and design, as well as the colour produced by different types of glazes. In recent years, researchers have found that the consumption of organic waste produces a lot of waste and provides various methods and benefits in producing ash glaze. By using a simple and complex approach in understanding the formulation of blending as well as calculations in the production of ash glaze in the creation of ceramic art. In order to use this organic material, researchers are interested in experimenting with ash in experimental and practical methods. Raw materials are collected from various sources, then dried and burned. After being burned to ashes, glazes are made from it for ceramic creations according to the research process. Since it can be used for several types of ceramics, this study provides a model for using ash to make ceramic ash glazes. As a result, various forms of ceramic work with ash glaze were created.

Keywords: Theoretical framework, Ash Glaze, Blending Formulation, Sabah, Ceramic Art

INTRODUCTION

The production of ceramic artwork is a manifestation of feelings and thoughts that result through several techniques and formation processes in its production. Since time immemorial, ceramic art has existed in various utility forms such as tableware, jewellery and so on. It has a wide range of interpretations and is not only seen in the formal elements of its use, but it is also one of the production trends in ceramic art that is expressed according to expertise and creativity in a contemporary work.

The purpose of this research is to develop a series of ash glaze as an alternative in the development of creative and artistic process inventions in ceramic arts that utilize and exploit nature as a resource in creating. Its purpose can be domestic, decorative, ritualistic, or pure artistic expression, with forms and functions that vary greatly across time and culture. Ceramics used to be believed to function as daily and spiritual items. But now the making is more artistic in the context of developing ceramic art in terms of design, mixing clay materials, different burning processes and coloring elements (Ayob & Jusilin, 2016: 80).

The experimental method (studio study) operates as selecting techniques and materials and structuring the elements in the production of ash glaze in a basic and creative, artistic process in the work. This experimental method is carried out in a ceramic workshop and this study uses the blending formula. This formula understands the concept of using two or three materials to be applied in the production of ash glaze as a base glaze for mixing with oxides. These test pieces serve as decorative, smooth finishing, waterproofing, decorative effects, braiding and durable effects on surfaces. This study can have an impact on artistic innovation, the development of works and the integration of new education in the production of ash glaze that uses, saves and is sensitive to natural materials especially in Sabah and makes this an alternative in the production of creating ceramic artworks.

FLOWCHART REVIEW

Flowchart of Ash Glaze

Things that should be focus on the research aspect from the theoretical framework that include helping the researchers is identify the topic to be studied, guidance on finding past studies that focus on the study and bridging the gap between known and unknown information. By disseminating the results throughout the research period, the implementation of various perspectives (refer to Figure 1.1), combining opinions about the results, confirms the value of the research that illustrates how the process is applied to the results of this research.

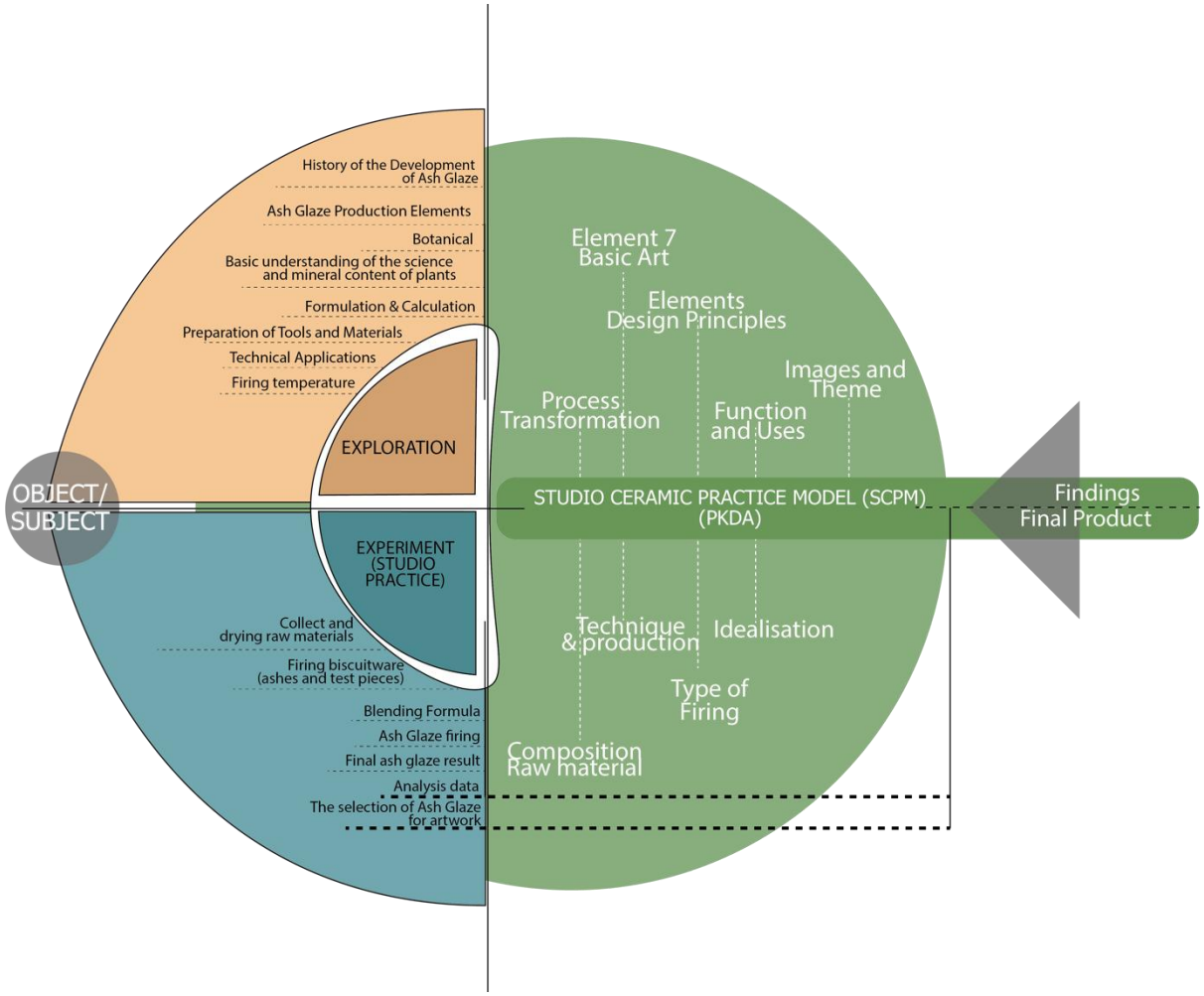


Figure 1.1 : Flowchart of ash glaze research as an alternative to creating works in ceramic art (Farah N., 2024)

Figure 1.1 refers to the combination of the results of the exploration approach, the experimental, practical approach from the point of view of the results of previous studies that can provide an explanation to the field study and the basic elements that have been implemented in the researcher's study. The process of producing ceramic works of art that involves clay as the main medium in the work. In exploring (exploration), the ever-changing availability of crops, identify practice requirements that can be used for any new ash source. Based on the elements of exploring, the first level artwork process presented is the selection of the raw materials selected, and through the processing of the raw materials to carry out the work production activities by an artist or maker. This stage has involved the mental activities and labour of the maker which involves the level of the craftsman or maker in transferring his "preconceived" mental image to the material found in the environment.

Basic principles in the context of visual art works can be produced through a combination of approaches to the basic elements of visual art and principles of design art. Basic elements of visual art such as appearance, texture, line, shape, space, and colour. Art principles represent how

artists use artistic elements to create an effect and create an interesting work. The principles of art and design are balance, contrast, emphasis, movement, pattern, rhythm, and unity/variety. The use of this principle will provide diversity in interpreting the work.

Each individual who produces will decide the art principle that they want to use in the work. Although some, not all, use elements of the design principles in one piece, the principles are interrelated and the use of one will often depend on the other. For example, when creating emphasis, the resulting work may use contrast or vice versa. It is generally agreed that a successful work is unified, while also having some variation created by areas of contrast and emphasis, balanced visually, and providing movement of the eye around the composition. Therefore, one principle of art can influence the effects of others. In the production aspect of the work, it can manipulate the seven elements by combining with design principles in shaping the production of ceramic works of art. In the production of works not every work of art contains each of these elements, but at least there are some elements used in the production of works.

This theoretical is not only intended to explain the general principles of practice. But on the other hand, the theoretical process about the production of ash glaze contributes to its development and to frame its reception. It also aims to extend the understanding of ash glaze, using the language and ideas that are collected continuously with the understanding involved in practice even though there are some practices that are based on a more scientific method and more geared towards a formulation approach. The methodology, which has developed because of this practice-led investigation, provides transferable knowledge, relevant to other practitioners involved in the development of ash pits in other locations and using other ash as the main subject of study. The following section reviews the four stages of this model which are the elements of clay production, experimentation (studio study), creative process and artistic process (SCPM/PKDA) in the development of ceramic artwork, and the result.

RESEARCH METHODS: CREATIVE AND ARTISTIC PROCESS PROCESSING (PKDA)

The artistic process is the process of producing works where according to Chapman (1992) the creativity process is related to the process of producing works (artistic process). This can also be explained by a process that is variable in terms of methods and techniques. Among the steps that need to be seen from the input aspect is idea generation (Inception of Idea). The researcher sets the objective and direction of producing the work. This depends on the idea and source of the object and subject seen.

Processing and refinement of ideas is done at the stage of refinement or purification of ideas. This is done to determine the image, theme, and purpose of obtaining the work. The creative process can, create or producing something. This means that every creative human being can create anything either internally or externally feeling. The creative results that are manifested reflect a person's effort in creating something. In the creative process, the researcher outlines the composition of raw materials, manufacturing techniques, burning techniques and the formation of ideas that include subjects/objects that have been explained. According to Wan Zarina Wan Othman and Ratna Laila Sahidin (2017) says that in the creation of something, a person's creativity always referring to the creative process he experienced. The creative process for everyone is different according to the experience that everyone goes through.

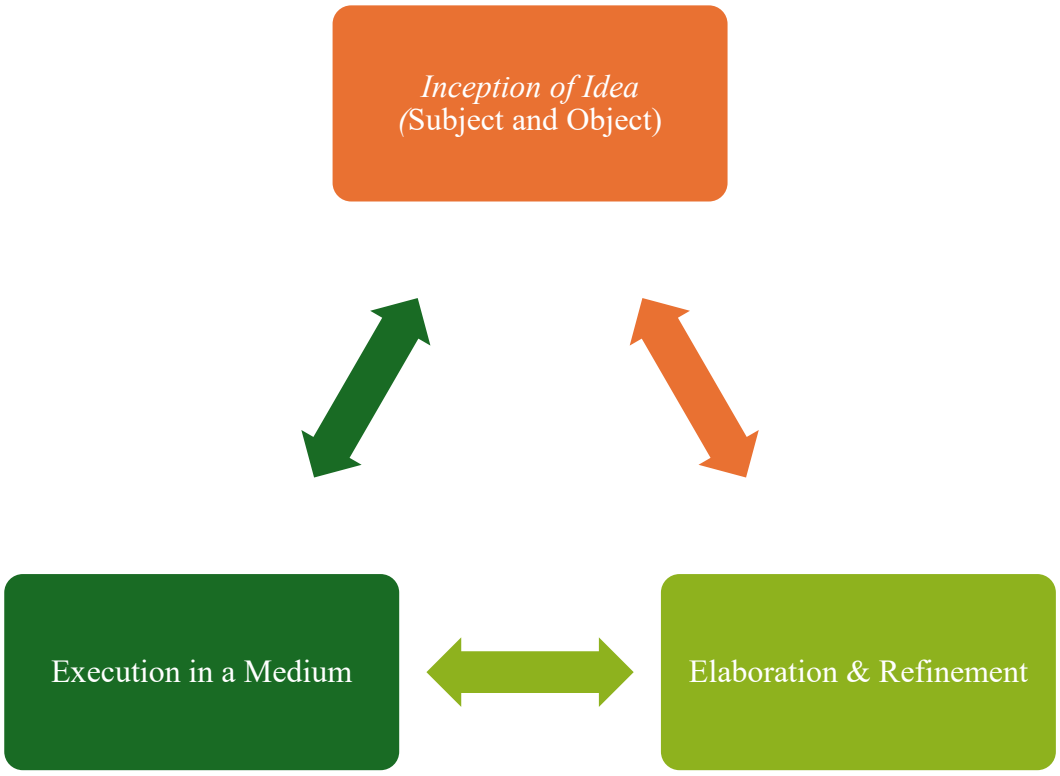


Figure 1.2: Creative and Artistic Process Processing (PKDA)

The artistic process of art to the result of the creation of ceramic art with the following characteristics which is the transformation process of design and composition art, seven (7) basic elements of ceramic art such as appearance, interweaving, line, shape, space, colour, value (value) and texture. Next, it involves elements of design principles, functions and uses as well as images and themes. These artistic processes will give the effect of tone development, movement representation, form elaboration, a strong sense of individuality and creativity. A process that involves the expressive use of line and form, originality in composition, and sensitivity to line and colour in the work. This process uses new capabilities more flexibly, widely, and deeply in the production of ceramic works of art.

Skills in using materials where the researcher emphasizes the exploration aspect, the researcher focuses on the history of ash glaze and the elements of ash glaze production. These elements are the guidelines for researchers in making ceramic artworks successful. The next part of the researcher emphasizes the aspect of experimental research (studio study). This experiment is important for the analysis carried out and has proven to be very useful in both the planning and evaluation of subsequent empirical tests. The studio studies based on the comparison of elemental constituents in the range of ash, have led to a deeper understanding of the possible behaviour of new ash in co-pigment (colour) glazes. Qualitative analysis provides a profile of the characteristics of RHA, WA and STL ash known from the highlights of previous studies and thus an overview of its possible performance as an ash glaze material. The value of this approach to research was confirmed when the relationship between analysis and behaviour was demonstrated in subsequent

experimental studies and in the final section. A selection of glazes to choose and apply to ceramic artwork.

In addition to the goals set for the research, there are further outcomes at the stage of producing the work. The various types of ash glaze that are developed make it possible to juxtapose different surface qualities and colours in works of art, this strategy and researchers are useful as an alternative to ash glaze in the production of ceramic works of art. This approach has great potential for further design development using new alternative ash glaze. The emergence of themes that connect artworks to their place of origin represents a major new dimension in art practice that will surely continue to develop through the above framework (refer to Figure 1.1).

The researcher successfully developed ash glaze with a range of X and Y ash samples and experimental test pieces of the study can be accepted by using this blending mixture involving SVLB, DVLB and TLB after examining the history and knowledge in the manufacture of ash glaze. The experimental results were designed to create artworks with various surfaces and colours depending on the work's goals and expression. Inspiration to create works of art based on the formation of ideas studying and sketching idealizations and themes. The researcher then made a round of release design to observe the development in the formation of ideas.

Production of 2D Ash Glaze Artworks (Practical Study)

Inspiration from nature forms such as plants and tree leaves have been developed into an art form for hidden aesthetic expression. Furthermore, the beauty and aesthetics that come from natural elements inspire artwork in the development of ceramic art creation. Researchers are inspired by natural forms that are realistic representations of living things such as plants, creating natural forms derived from artificial parts of organic forms. The artwork developed through this research and presented in the next section using the selected ash glaze.

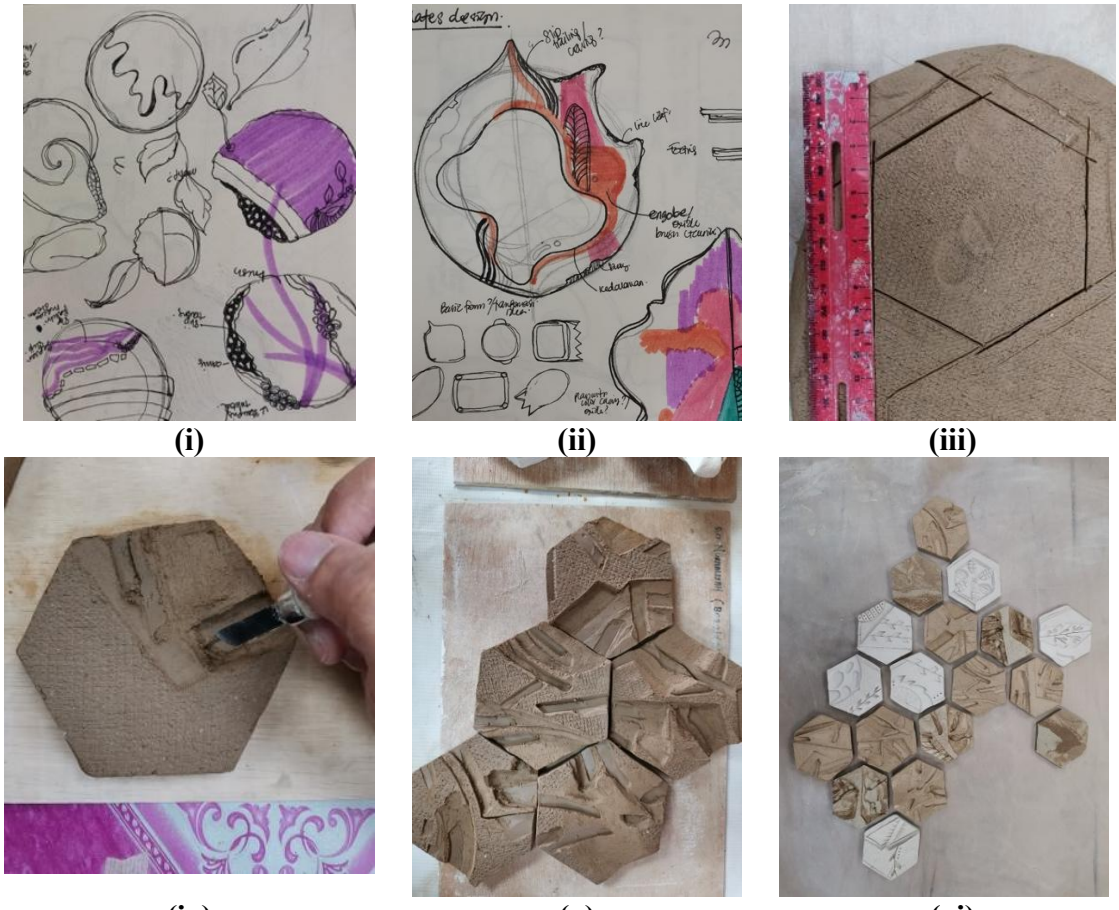
Some of these explorations become fully completed designs that are then exhibited at exhibitions or innovations but nevertheless some of the ceramic pieces and artworks contribute authentic information about how new licks can be used creatively. For a wider appreciation of the results in a natural and realistic atmosphere, the researcher carried out an artistic and creative process in the making of ceramic works of art by using the idealization of elements from nature.

(i) **(ii)** **(iii)**

Figure 1.3 : Inspiration/Ideas from nature
Source : Noor Mustaqim bin Mohamed (2023), Penang Botanical Garden

One of the most important things in production is the formation of ideas and the exchange of information to the public. This is because everyone has a different understanding of real objects. Researchers need to express creative intent through schematic design and determine style, shape, texture, material, and layout. However, some nature forms are designed with part of the original form that clearly produces emotion in the created work. This texture effect was inspired by the pattern observed in the nearby forest, shown in Figure 1.3. This process is further developed with the use of lines themselves, adding further details and inspiring motifs.

With the application of flowchart of ash glaze (refer to Figure 1.1) the findings of the study are based on a thorough study during the process in the production of ash glaze as a creative and artistic medium. Therefore, this finding provides some aesthetic experience, creative and artistic formation, and the phenomenon of creativity at the end of the work. The result of the artwork will be evaluated based on observation, descriptive analysis.



(i) **(ii)** **(iii)**

(iv) **(v)** **(vi)**

Figure 1.4 : (i), (ii), (iii), (iv), (v) and (vi) Process making an artwork

Figure 1.4 produces the design of the pattern depicted on the selected sketch. These selected sketches are the result of the elaboration of ideas and the development of ideas from artists and reference works. Where the respondent applied the pattern design from paper to the real form by using decorative techniques and this should be explored further, as it allows the possibility of producing repeated effects. Therefore, the element of control, on pieces where each shape is

individual. As a case study of the creation of natural forms, the researcher was inspired to create a work from the upper part of the plant. These forms express the natural growth of plants by making simpler forms. The smooth and rough texture presents the elegance of a slick coating on a work of art.

The pure form represents nothing. This type of form is derived from the subtraction and addition of natural forms until the original form is completely far from the original. New forms may be created without reference to nature integrating geometric forms. Pure form emphasizes ideas more than emotions. In the case study of developing a work of art in its pure form, the researcher presents a work of art in the form of a sculpture inspired by the upper part of a plant. Researchers are interested in nature which has many unique and beautiful features. This organic ceramic artwork is inspired by these natural forms that have authenticity. Plants are the beauty that exists in form because the identity of the plant type is an art form in nature.

Experiments were also made in shaping the pieces, using various inspirations through nature. In addition, various combinations of ash glazes were used, and different application methods were used, dipping, pouring, brushing. Test pieces of local clay were used giving yellowish brown and reddish-brown colours, and white on the surface. These materials again form a link to the place where they are collected. The crusty texture is reminiscent of rusted metalwork and the selected coloured glazes give a drastic effect. The bluish colour seen on metal objects leads to the use of (CB) under the glaze on some pieces. Includes examples decorated and textured by several methods used for the pieces of work described.

The researcher presents the artwork with a groove in the interpretation of the work and the ash in the scraped part makes the artwork in its pure form by using the carving method to show the depth in the work. In addition, the researcher applied to the surface with a sample of matt gloss to emphasize the beauty that does not shine on the surface of the earth. Researchers seek a balance between the two as a guideline to create ceramic artwork in its purest form. The series is inspired by the trees and grass that surround the researcher. Things and empty spaces are always interesting to researchers. Things discussed include trees, leaves, branches, or a mixture of these elements that show the beauty of nature.

This line expresses the feeling of plant growth. Artistic influences are inspired from natural forms and created as pure forms. Researchers define this form as representative of plant growth. Its mass and shape can convey the spirit of growth. This formation also provides an inspiration in producing bark works for every type of plant available. The texture and colour used are the same as the test pieces described in the sample analysis section above. Textures are limited to surfaces to create a satisfying balance of control and randomness. Pieces of rough textured artwork are sketched to produce a textured finish consistent with the other surfaces of the artwork. Various found materials, chips and small pebbles are used to create textured surfaces.

RESULTS AND DISCUSSION

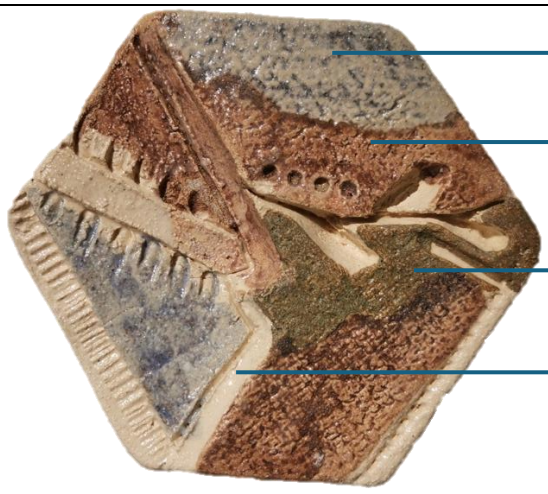
The piece of artform is formed in a smaller wooden frame, a soil combination of torn and textured strips of clay, pasted and rolled together to see the reaction of the combination of the two soils. Again, waste material from crops is used to create texture. The texture of the pieces is reminiscent

of rusted metalwork and the selected coloured glazes give the effect of textures and colours that are natural tones. The bluish colour seen on the metal objects led to the use of copper carbonate under glaze on some pieces. Table 2 shows the colour range in a selection of some pieces.

The researchers emphasize ceramic art sculptures that lead to flatware works (pieces) which are 2 Dimensional (2D). The researcher created an organic form of ceramic sculpture by using ash glaze as a case study. Basic forms such as organic ceramic sculptures in relief with inspiration from nature forms such as plants and tree leaves have been developed to become an art form for hidden aesthetic expression. Furthermore, it is the beauty and aesthetics that come from the natural elements that inspire organic ceramic sculptural artwork. In the production of ceramic art sculptures (2D), researchers get inspiration from the realistic forms of nature representing living things such as plants. Creating natural forms comes from the imitation of whole parts of organic forms. However, some nature forms are designed by rejecting or expanding part of the original form which clearly produces emotion in the created work.

As a case study of the creation of natural forms, the researcher was inspired to create a work from the upper part of the plant. These forms express the natural growth of plants by creating simpler forms. The smooth and rough texture presents the elegance of the ash glaze coating on the artwork. Free form is also known as irregular form. This is an uncertain form depending on the influence of the environment. In addition, it generates the emotion of endless mobility that affects the direction of the structure and angle of the shape. New forms may be created without reference to nature integrating geometric forms. Form emphasizes ideas more than emotions. The researcher presents a work of art in the form of a sculpture inspired by the upper part of a plant.

Table 2: The Use of Glaze on Ceramic Works After Firing

Bil	Artwork	Sample
(i)		12B (NO 4) 12B (NO 7) 12B (NO 9) 12B (NO 1)

(ii)


12B (NO 4)
12B (NO 7)
12B (NO 1)
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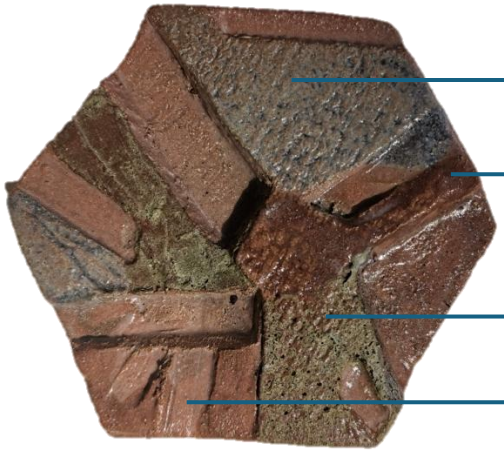
(iv)


12B (NO 4)
12B (NO 7)
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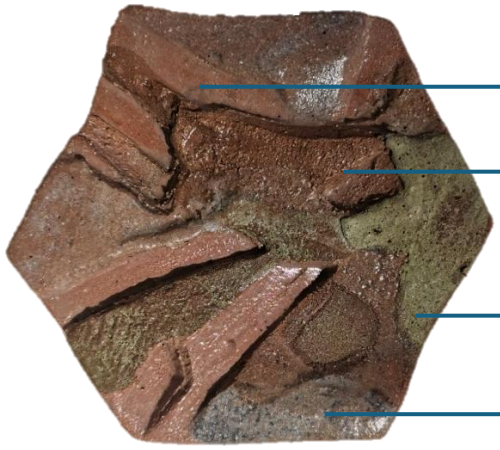
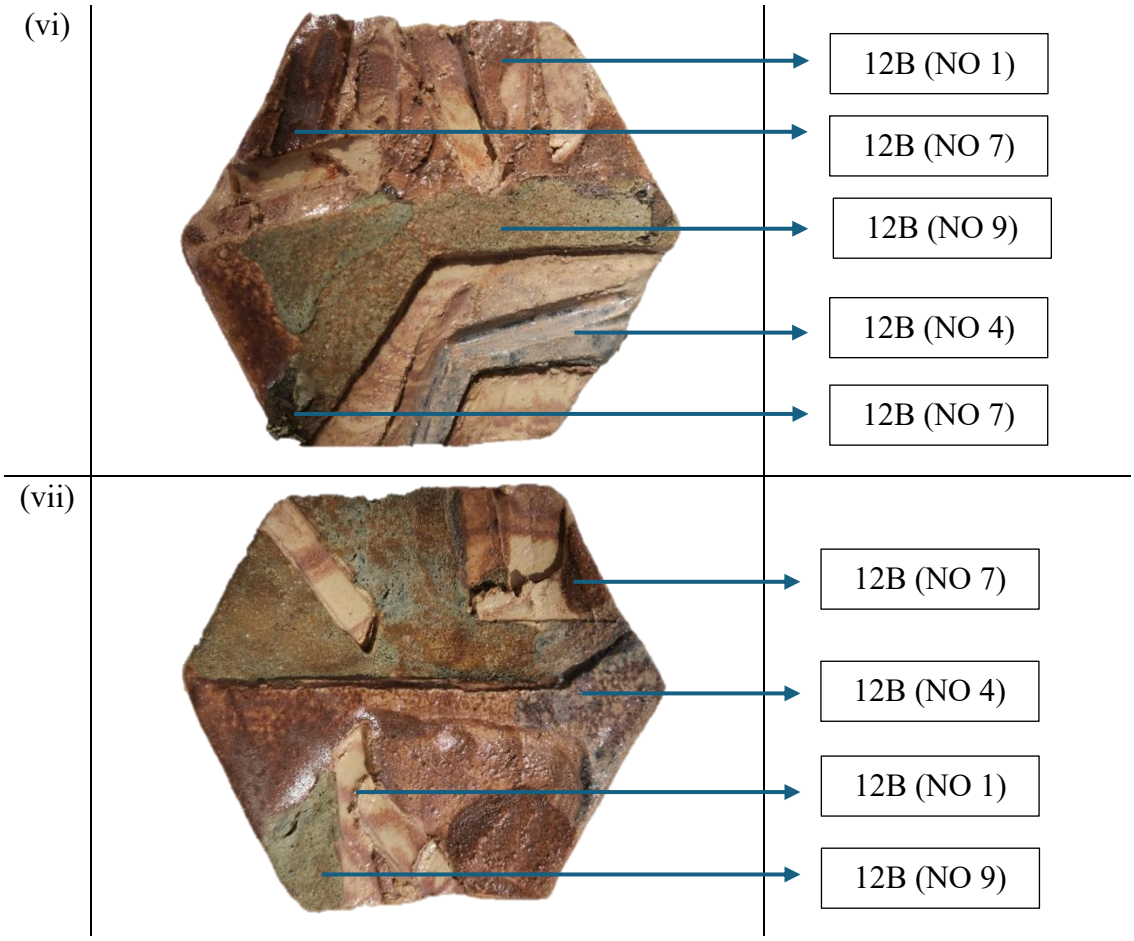
12B (NO 1)

(v)


12B (NO 1)
12B (NO 7)
12B (NO 9)
12B (NO 4)



The originality of this sculpture can be shown through the form of nature. The movement and balance of plant form is the beauty inherent in form because the identity of each type of plant is an art form in nature. This line expresses feelings of movement and balance. The influence of art from the abstract, however has been clearly identified with natural forms. Researchers define this form as representative of moving and balancing. Space and shape can convey the spirit of movement and balance.

CONCLUSION

This study successfully establishes a comprehensive and structured model for producing ash glaze, demonstrating both its technical viability and its artistic value in contemporary ceramic practice. By combining theoretical foundations with practical experimentation, the research highlights the importance of understanding material origins, chemical behaviour, and historical references. The use of ash derived from organic sources such as plants and agricultural waste reveals how naturally occurring materials can be transformed into glazes that are not only durable but also visually expressive, aligning traditional knowledge with modern artistic needs.

Furthermore, the research presents ash glaze as a sustainable and innovative alternative to conventional glaze formulations. Through systematic testing, blending, and firing, the study shows

how different ash sources contribute unique colours, textures, and surface qualities. This methodological approach enhances the understanding of glaze chemistry while encouraging environmentally responsible practices in ceramic art. The blending formula introduced in the study also provides a practical framework for other artists or researchers seeking to expand their material vocabulary using locally available natural resources.

The resulting artworks created through this process embody the aesthetic potential of ash glaze, reflecting natural themes such as growth, movement, and organic texture. Inspired by the forms and structures of plants, the pieces reveal how material choice, surface treatment, and artistic intention can work together to produce expressive and meaningful artworks. The findings underscore the relevance of ash glaze as a creative medium that not only enriches surface quality but also deepens conceptual and artistic expression. By integrating sustainability, experimentation, and artistic exploration, the study contributes significantly to contemporary ceramic art and encourages continued innovation in material-based creative practices.

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