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ARTISTIC DESIGN PRACTICE FOR A TRANS-DISCIPLINARY KNOWLEDGE EXCHANGE

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Abstract

Countries of the world have continued to interconnect more closely, and as they do, encountered challenges brought about by globalization. There is no single academic discipline, however, that has the monopoly of solutions to the challenges brought about by globalization. Knowledge exchange between disciplines is therefore paramount in creating shared value. One of the areas where Knowledge exchange takes place is in learning institutions. In there, knowledge is interchanged at two levels: between academia and the society and amongst academia themselves. In the former, knowledge exchange takes place for the better understanding of the society to the society's economic gain. In the latter, knowledge is exchanged in either an interdisciplinary or a trans-disciplinary way. In interdisciplinary knowledge exchange, each team member generates knowledge by working in their specific area then shares it out. In trans-disciplinary practice,

knowledge and skills are shared amongst the academia in such a way that the team works more collaboratively for the ultimate benefit of the client. This paper reports a study that demonstrated a trans-disciplinary knowledge exchange in the artistic design disciplines of Product Design and Fashion design, and Consumer and Cultural Studies. The study hypothesized that both consumer attraction and a competitive edge of a product are enhanced when producers brand their product packages with aspects of a country's culture. The study derived features of fashion and apparel from the Kenyan textile industry and used them to rebrand labels of packages of Kenyan beverages that target the urban youth. This paper presents the visual design process that was followed in that study when identifying and selecting fashion features from clothing worn by urban youth and when utilizing the selected features as inspirations in redesigning labels of the beverages. The paper then presents the subsequent redesigned labels. It is expected that the redesigned packages will have a competitive edge over other similar products in the market thereby benefitting more economically the product producers. These benefits are a result of the enhanced consumer attraction to the products by the target population.

Key words: *Trans-disciplinary, Knowledge exchange, Visual design process*

Introduction

With the growing interdependence of the global economies, cultures and populations, globalization is today a key process that is shaping the modern world. It has brought about increased

connectivity of world cultures and economies, while promoting interaction between different populations. The interaction has been brought about by increased movement of goods, ideas, services, capital and technology following trade and price liberalization, factors that have however exposed national economies to much more intense competition between themselves like never before (Mrak, 2000). Solutions to the problems created by globalization are required now more than before but no single discipline has been found to have the monopoly of these solutions. Knowledge exchange between disciplines is therefore necessary in creating shared value and in harnessing the different abilities of academia, users of research and communities to increase the impact of research. The abilities include ideas, data, experiences and expertise and their exchange is mutually beneficial to all parties involved.

One of the places where knowledge exchange takes place is in learning institutions. In there, academia have the responsibility to help people better understand and solve problems in their surroundings by increasing the impact of their research, exchange ideas, data, experiences and expertise for their own benefit , that of the users of research and for the benefit of the communities they serve. Knowledge exchange in learning institutions happens at two levels: amongst academia and between academia and society. Knowledge exchange in the latter takes place for better understanding of society and for the society's economic gain. Knowledge exchange amongst academia happens in either an interdisciplinary or trans-disciplinary way. In interdisciplinary, each team member generates knowledge in their own specific area. In trans-disciplinary practice, knowledge exchange crosses the boundaries of different disciplines.

This paper focuses on the trans-disciplinary way of knowledge exchange. In it, solutions are devised in collaboration with multiple stakeholders. Thus, trans-disciplinarity is about transgressing boundaries of disciplines. As a practice-oriented approach, trans-disciplinarity is not confined to a closed circle of scientific experts, professional journals and academic departments where knowledge is produced (Sommerville *et al*, 2002). Through mutual learning, the knowledge of all participants is enhanced, including local knowledge, scientific knowledge and the knowledge of concerned industries, businesses, and non-governmental organizations. According to Klein (2001), the sum of this knowledge will be greater than the knowledge of any single partner. In the process, the bias of each perspective will also be minimized as the knowledge and skills are shared between the professionals in a way that allows the team to work more collaboratively for the ultimate benefit of the client.

Scholars have reported on a trans-disciplinary relationship between product design, fashion design, consumer behaviour and the culture of a people. Mwendapole *et al*. (2015) write that understanding people's cultural habits, traditions and lifestyles is important in product design as cultural meanings guide how people interact with products. Product designers should therefore label and brand their products to incorporate concepts that emotionally connect the products with their target consumers. Wu *et al*. (2005) confirm this by arguing that consumers buy products not only for their practical purposes, but also for the distinct lifestyles associated with the products. Pujiyanto (2013) and Kotler *et al*. (2002) affirm this standpoint stating that when product branding is influenced by the consumers' cultural condition, the products are more attractive to the consumers as branding 'stimulates emotions and prompts actions.'

This paper reports on a trans-disciplinary study between the artistic design disciplines of Product Design and Fashion design, and Consumer and Cultural Studies. The paper demonstrates the *visual design process* followed when identifying and selecting fashion features from clothing worn by urban youth in Kenya and utilizing them as inspirations in developing labels of Kenyan beverage packages that target the youth. Fashion was selected because it is a type of culture and it provides a platform of expressing people's conformity to the culture they belong to (Saravanan *et al.*, 2015). The study hypothesized that consumer attraction and a competitive edge of a product are enhanced when producers brand their product packages with aspects of a country's culture. It is expected that the redesigned packages will have a competitive edge over other similar products in the market thereby benefitting more economically the product producers. These benefits are a result of the enhanced consumer attraction to the products by the target population.

Methodology

This study's methodology was qualitative in nature and utilized a case study strategy. This research design enabled the researchers to analyse data at the micro level since boundaries between phenomenon and context were not clearly evident.

The study targeted the urban youth in Kenya aged between 18 and 34 years. A representative population of urban youth enrolled in the Department of Fashion Design and Marketing at Kenyatta university in Nairobi were selected. Going by their career choice, it was expected that the youth would be more insightful about fashion and the urban youth's preference of it. A total of 153 out of 253 students, calculated a 95% level of certainty and a margin error of 5% and response rate

at 50%, took part in the study. The youth were distributed across the four levels of study. Gender consideration was made with 38 male and female youth being randomly picked from each of the four levels of study.

Out of all the types of beverages there are, only spirits that were drunk by the urban youth were studied. Spirit beverages are of the following classes: brandy, rum, vodka and whiskey. One brand of each spirit was randomly selected for study.

Developing compositions derived from jackets and dresses worn by the urban youth in Kenya

The study first sought to identify and select fashion features from jackets and dresses worn by the urban youth in Kenya. The study relied on Lin's (2007) framework that guides the application of cultural visuals in design. It states that design features from a cultural item can be identified within three levels, one of the levels dealing with appearance, form, colour, texture, decoration, surface patterns and detail. This study applied this stance by studying colour, texture, decoration, surface patterns of fashion items worn by urban youth in Kenya. The specific features studied on the male jackets were turn-down collars, necklines and fabric designs of jackets were studied. The selected samples were coded according to their geometric or free-forms. Codes JF represented jackets with free-forms and JG jackets with geometric forms. The features studied on the female dresses were those from dresses with round necks and made from patterned fabrics. The selected samples from the female dresses were also coded based on their geometric or free-forms. Codes DF represented dresses with free-forms and DG represented dresses with geometric forms.

Features derived from jackets were then combined with those from dresses to make visuals to use on the beverage labels. Table 1 exemplifies the identification and selection of free-form features from a jacket (JF1) that was worn by an urban youth. The same table shows free-form features (DF1) from a dress worn by an urban youth.

Table 1: Selected fashion features from a jacket and a dress

Fashion samples	
	
Code: JF1	Code: DF1
Source: Tuna (2014).	Source: Wanjiku (2016).

Features in JF1 are coiled shapes that were located on the shoulder of the jacket. Features in DF1 are circular shapes that were vertically placed on the dress. Features JF1 and DF1 were harmoniously combined using Adobe Illustrator and Adobe Photoshop to create a well blending and balanced composition (code FC14) (Table 2).

Table 2: Combined design composition derived from a dress and a jacket

Visuals derived from a dress and jacket	
	
Thumbnail sketch	Developed composition (Code: FC14)

This composition was used to rebrand labels of packages of beverages that target the urban youth. The section that follows explains the process followed in redesigning the labels of packages of Kenyan beverages.

Redesigning labels of packages of Kenyan beverages using the developed compositions

Once the composition was made it was used to redesign the labels of packages of Kenyan beverages. This *visual design process* had several components that included: varying color contrasts/ blends for highlights; balancing the layouts; creating new fonts generated from the visuals and creating visual and tactile texture as surface decoration on the labels.

The following section of the paper explains each of the different components.

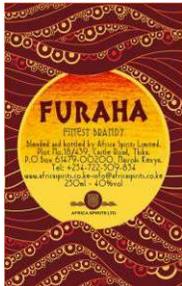
Highlighting using color contrasts/blends

To appeal more to the urban youth, the redesigned labels needed to

be eye-catching. Analysis of the existing package designs showed the need for color contrast/blend variation. Graphic design digital tools and techniques were used in highlighting the colors that were in compositions derived from combinations of features of the dresses and jackets.

Table 3 illustrates both the existing label and the new composition (code FC14) with highlighted color contrasts/blends. The table also shows the redesigned label of the select beverage in the new highlighted composition.

Table 3 : Application of color contrast/blends for highlights in the new beverage label designs

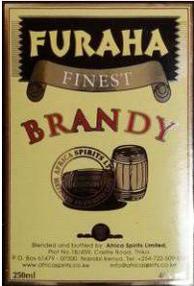
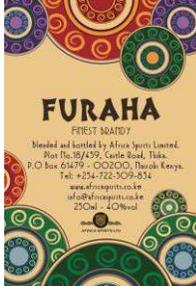
Sample package design with color contract		
Existing package label design	New combined Design composition with highlighted jacket and dress Features	Redesigned package label design with highlighted jacket and dress features
 <p>The existing label for FURAHA Brandy is a rectangular design with a yellow background. At the top, the word "FURAHA" is written in a bold, black, serif font. Below it, "FINEST" is written in a smaller, black, serif font. The word "BRANDY" is written in a large, red, serif font. There is an illustration of a glass and a bottle. At the bottom, there is small text including "120ml".</p>	 <p>The new combined design is a vertical rectangular panel with a deep red background. It features intricate, golden-brown patterns that resemble traditional African textile designs, specifically the 'jacket and dress' mentioned in the caption. The patterns consist of wavy lines and circular motifs.</p>	 <p>The redesigned label features the same intricate golden-brown patterns as the new combined design. A large, circular yellow area is centered on the label, containing the word "FURAHA" in a bold, black, serif font. Below it, "FINEST BRANDY" is written in a smaller, black, serif font. There is also small text at the bottom, including "120ml".</p>

Harmonious arrangement of visuals

Good and harmonious layouts of the redesigned labels of packages of Kenyan beverages was also emphasized in the *visual design process*. Visuals that included forms and text were arranged and balanced harmoniously in the new label design for effective communication with the urban youth.

The table below shows harmonious arrangement of visuals in the beverage label. It illustrates the existing label, the new composition with features derived from jackets and dresses and the redesigned beverage label designs with well-balanced visuals.

Table 4: Application of harmonious layouts in the new beverage label designs

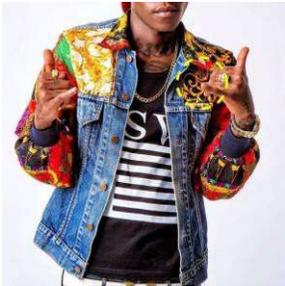
Sample package design with color contract/blend		
Existing package design	Layout of a design composition With harmonious arrangement of visuals	Redesigned package design with harmonious arrangement of visuals
 <p>The existing label for FURAHA Brandy is a rectangular design with a yellow background. At the top, the word 'FURAHA' is written in a bold, black, serif font. Below it, 'FINEST' is written in a smaller, black, serif font. The word 'BRANDY' is written in a large, red, serif font. In the center, there is an illustration of a glass of brandy and a bottle. At the bottom, there is a small logo and some text.</p>	 <p>The layout of a design composition with harmonious arrangement of visuals is a rectangular design with a yellow background. It features a decorative border at the top and bottom, consisting of colorful, circular patterns in red, green, and blue. The patterns are arranged in a way that creates a sense of movement and rhythm.</p>	 <p>The redesigned label for FURAHA Brandy is a rectangular design with a yellow background. It features a decorative border at the top and bottom, consisting of colorful, circular patterns in red, green, and blue. The word 'FURAHA' is written in a bold, black, serif font. Below it, 'FINEST BRANDY' is written in a smaller, black, serif font. In the center, there is an illustration of a glass of brandy and a bottle. At the bottom, there is a small logo and some text.</p>

Re-designed Typography

As part of developing cultural visuals for rebranding packages of spirit beverages, new fonts were developed from visuals derived from jackets and dresses worn by the urban youth. This was to create packages that would appeal more to the urban youth. Eight (8) new serif and sans serif fonts were developed, labeled and installed in *Adobe Illustrator* software. The new serif fonts were named Urban Lifestyle, Urban Class, Urban Swagger, and Urban Young while the new san-serif fonts were named Urban Life, UrbanElegance, Urban Swagg and Urban Youngin. The developed fonts comprised numbers, their lowercase and uppercase letters together with necessary font symbols.

The following explains the process of developing the fonts. Urban Lifestyle font is used as an example. This font was generated by combining features of free-forms from a dress (DF18) and a jacket (JF1). These created a combined design composition that was used to develop the font. See Table 5.

Table 5: Combination of features derived from fashion for developing fonts

Fashion samples	
	
Code: DF18	Code: JF1
Source: Tuna (2014).	Source: Tuna (2014).

Visuals derived from the jacket and the dress were harmoniously combined in a composition that developed fonts and characters used to attract readability of words. Letter P is an example of the developed Urban Lifestyle font. This font were used in rebranding packages of the existing Hunter’s Choice beverage. (Table 6). It is expected that the use of the new fonts on the labels will cause the urban youth to be attracted more to the spirit brand. As they do so, producers could incorporate information that raises awareness on alternative use of textile products for a sustainable industry in a Green Economy.

Table 6: Fonts derived from jacket and the dress worn by Kenyan urban youth

New font	
Developed font	Application of font on a label of a beverage
	
Font type: Urban Lifestyle	Hunter’s Choice package

Texture as surface decoration of the developed labels

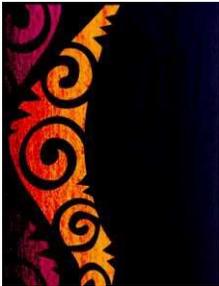
During the analysis of samples of both jackets and dresses for the study, it was observed that texture and surface decorations were part of features in fashion items associated with the culture of the urban youth in Kenya. Texture and surface decorations found on jackets

and dresses had to be incorporated in the new compositions used for rebranding packages of spirit beverages. To do this, a new method for generating and applying both visual and tactile textures as surface decorations in design was developed.

Developing visual texture in branding

The process of developing visual texture took three stages. The first stage consisted drawing the desired texture on paper using colored pencil and then scanning and saving the drawing as a JPEG image. The second stage involved creating a design composition using *Adobe Illustrator*. The composition would later be used as a base to create the texture. Lastly, the scanned image created out of colored pencils was placed on top of the composition. Table 7 shows an example of screenshots of the three stages.

Table 7: Screenshots of the three stages of generating visual texture

Sample design with visual texture		
Stage 1	Stage 2	Stage 3
		
Texture created on paper	Design composition	Design composition with visual texture

The new composition needed to have good contrast and harmony. The

transparency panel of *Adobe illustrator* was used to achieve this. Table 8 illustrates screenshots of results of the use of 'color burn' and 'multiply' effects in *Adobe illustrator*.

Table 8: Screenshots of three stages of transparency application for good contrast and harmony

Composition	Experiments using thetransparent panel	
		
Composition 1	Transparency:Color burn Result: Good contrast	Transparency: Multiply Result: Good harmony

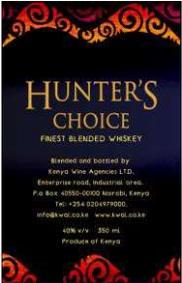
Table 8 illustrates screenshots of results of the use of 'color burn' and 'multiply' effects in *Adobe illustrator*. Table 9 further illustrates screenshots of results of the use of 'darken' and 'normal' effects in the transparency panel of *Adobe illustrator*.

Table 9: Screenshots of more stages of transparency application for good contrast and harmony

Composition	Experiments using the transparent panel	
		
Composition 2	Transparency: Darken Result: Good contrast	Transparency: Color burn Result: Good harmony

Once the desired composition of visual texture was achieved, the composition was used to redesign the label of a select beverage. Table 10 demonstrates how the label of a package of Hunter's choice was rebranded using cultural visuals from fashion that had visual textured effect included in the designs. It is anticipated that the redesigned label will be more attractive to the youth. The spirit label could then have additional information on alternative use of textile products for sustainable industry in a Green Economy incorporated to reach the youth.

Table 10: Application of visual texture in package rebranding

Sample design with visual texture		
Existing package	New label design with visual texture	Redesigned beverage with visual textured label
		

Developing tactile texture in branding

Tactile texture was also developed and applied to designs used in rebranding packages of beverages that target the urban youth. A number of experiments were first conducted to ascertain the type of tactile texture that could be generated. These experiments included mixing glue with ink and then applying it on paper, warming paper after applying a layer of glue, digital printing on a paper that has dry glue and drying glue on a paper. Two types of glue were used: Craft glue and fabric glue.

Creating tactile texture using craft glue

The table below summarises the results of experiments that were conducted using craft glue. These were achieved when the craft glue was left to dry on paper and when paper is warmed after applying a layer of craft glue.

Table 11: Results of experiments done using craft glue

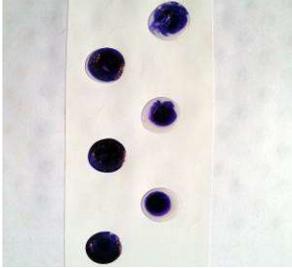
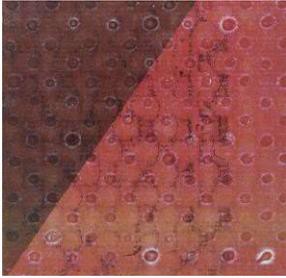
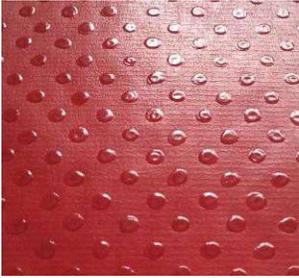
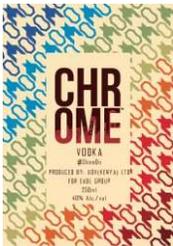
Experiments conducted using craft glue	
Experiment A	Experiment B
	
<p>Test: Warming paper for 10 minutes after applying a layer craft glue.</p> <p>Result: The craft glue hardens very much. This process is not applicable in design.</p>	<p>Test: Mixing craft glue with ink.</p> <p>Result: It doesn't mix well and the drying time is over 3 days. This process is not applicable in design.</p>
Experiment C	Experiment D
	
<p>Test: Printing on a paper which has a layer of dry craft glue.</p> <p>Result: The craft glue melts during printing. This process is therefore not applicable in design.</p>	<p>Test: Applying craft glue on a paper and leaving it to dry.</p> <p>Result: Uniform and good 3D feel on the surface are visible. This process is applicable in design.</p>

Table 12 shows the application of the successful results of the use of craft glue in creating tactile texture when applied to labels of packages of spirit beverages.

Table 12: Application of tactile texture made using craft glue in package rebranding

Sample design with tactile texture		
Existing package design	New package design	New package design with tactile texture made craft glue
		

The use of tactile texture made using craft glue created a three dimension effect on the surface of the package. This effect relates to surface decorations found in features of some fashion items worn by the urban youth. The consumer experiences the tactile texture when they touch the product’s package. This feel should contribute towards attracting the youth more to the spirit brand.

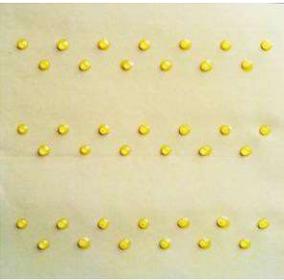
Creating tactile texture using fabric glue

Fabric glue was also experimented with to create tactile texture. Experiments conducted included warming paper after applying a layer of fabric glue, diluting fabric glue then applying it on paper and applying fabric glue on a coloured surface of paper.

Successful results were observed when the paper was warmed for one

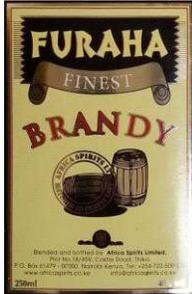
minute after applying a layer of fabric glue and also when the fabric glue was applied on a coloured surface of a paper then left todry. The table below summarises experiments that were conducted.

Table 13: Sample experiments using fabric glue

Experiments conducted using fabric glue	
Experiment A	Experiment B
	
<p>Test: Applying fabric glue on a surface of a sticker paper and then warming the paper for 1 minute.</p> <p>Result: Uniform 3D effect on the surface of paper. This process is applicable in design.</p>	<p>Test: Diluting fabric glue using warm water.</p> <p>Result: The fabric glue dries but leaves a stain on the sticker paper. However, this test is successful when conducted on the surface of conqueror paper only.</p>
Experiment C	Experiment D
	
<p>Test: Applying fabric glue on a coloured surface and then warming the paper for 1 minute.</p> <p>Result: The 3D effect on the surface is not uniform. This process is not applicable in design.</p>	<p>Test: Applying fabric glue on a coloured surface and then warming the paper for 1 minute.</p> <p>Result: Uniform 3D effect on the surface. This process is applicable in design.</p>

Results from successful experiments with fabric glue were applied in designs to create a surface decorative effect on packages of spirit beverages. Table 14 illustrates the findings.

Table 14: Application of tactile texture using fabric glue in package rebranding

Sample design with tactile texture		
Existing package design	New package design	New package design with texture
		

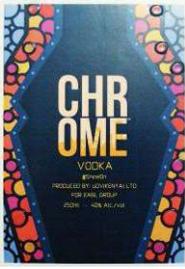
The effect of fabric glue when used to rebrand packages of Furaha Brandy showed surface decorations similar to those found on features of some fashion items worn the urban youth. This texturaleffect is also experienced when the consumer interacts with the package of the beverage. Tactile texture made using fabric glue can enhance consumer attraction towards the package of the spirit beverage.

Redesigning labels of packages of Kenyan beverages using all components of the visual design process

The paper finally presents rebranded labels of packages of beverages done with all components of the visual *design process* included. This components were: varying color contrasts/ blends for highlights; balancing the layouts; creating new fonts generated from the visuals

and creating visual and tactile texture as surface decoration on the labels. Table 14 illustrates the rebranded label of Chrome beverage made using all the four steps.

Table 15: Rebranding a beverage package using all components of the visual design process

Rebranding Chrome Vodka		
Existing package design	New package design made using all components of the <i>visual design process</i>	Rebranded package made using all components of the <i>visual design process</i>
		

The new package of Chrome vodka was rebranded using cultural visuals derived from a jacket and dress that are worn by the urban youth. Tactile texture was also applied on the package to enhance attraction from consumers. The new package also consists of a new font (Urban Elegance) that was derived from fashion.

It is expected that the new designs will stimulate the urban youth to be attracted more to the new package. This is because the new packages now possess visuals that reflect their culture and lifestyle.

Conclusion

Markets are composed of a wide range of consumers, all with different desires and tastes. Product producers need to target a specific group of consumers to sell their work. Consumers, on their part, need to be attracted to the products on the market. This state of affairs require a trans-disciplinary approach of knowledge exchange to benefit all the actors on the market.

This paper affirmed the hypothesis that both consumer attraction and a competitive edge of a product are enhanced when producers brand their product packages with aspects of a country's culture. Consumer attraction and a competitive edge of a product are enhanced when producers brand their product packages with aspects of a country's culture, where fashion and apparel were the select cultural types. The trans-disciplinary approach in the artistic design disciplines of Product Design and Fashion design, and Consumer and Cultural Studies enable a rich combination of features of fashion and apparel as an outcome of the visual design process and thereby satisfies the varied tastes on the market and benefits more economically the product producers.

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