Drawing for Design: Exploring How Best Students in Year One Learn Freehand Drawing using Geometric Shapes and Lines

Yusuf Nsanja
Department of Creative Design, College of Arts and Social Sciences, University of Rwanda
nsanjex@yahoo.com; ynsanja@gmail.com

Abstract
It is general knowledge that the discipline of design normally requires students who opt for it to have had a background in art where drawing is a must. Strange indeed is the fact that the sizeable numbers of students who join the Department of Creative Design have never been exposed to any drawing activity. To avoid lamenting, a method has to be put in place to make learners improve their drawing skills in preparation for the design profession. This paper is aimed at exploring the drawing method that could make a beginner to learn freehand drawing. It is also a platform to report outcomes of using simple methods intended at achieving expected learning outcomes from students mostly with no art back ground. The sample was the 71 first year students of 2018/2019 who were actively involved in the drawing methods aimed to test their learning and how drawing can be simplified for them using common shapes. The study gave evidence that through the use of guiding measures freehand drawing can be learned, even by those who had never done art before and that such measures could be a means to improving the drawing skills of those who were exposed previously.

Keywords: Design; Geometric Shapes; Simplicity; Mistakes; Shyness.

Introduction

For any item to be made, it has to be drawn first through a series of sketches to establish how it might appear to both the eyes of the user and the designer. The drawing is done using bare hands without the assistance of any guide like rulers, it is known as freehand drawing (Have & Toorn, 2012). Messenger (2016:130) cites Adams (2013:02) who explained freehand drawing as*"marks that have meaning"* and when self-generated, have the capability to link sensing, feeling, thinking and doing.

It is common knowledge that freehand drawing is not a simple thing to do. To make it manageable, this study assumed that for anything to be drawn, it had to be broken down and interpreted into geometrical shapes. Every object is capable of being broken down into simple form to make drawing a memorable experience (Fisher & Robinson, 2008). The study further assumed that if a learner uses geometric shapes guides, learning freehand drawing would be simplified regardless of whether one had ever done art and design prior to joining the design school. Some of these shapes are: square, triangle, rectangle, circle, oval among others.

Drawing for design follows a series of events which is a known as design process, it follows steps in which sketches are modified and refined through a process trying to get out functionality (Oh, Gross, & Do, 2001). Students aspiring to do design have to follow this process and to know how to represent their feeling visually on paper and how their ideas would pass into a series of changes towards implementation. It is common belief that in joining the department of design, freehand drawing is a must. In art and design in most high schools freehand drawing is the basic subject (Kwesiga, 2002).

The new design is that students themselves tend to appear as trapped in a maze which they have to solve by being engaged for they appear stranded. This engagement requires proper instruction to yield fruits in the development of students' basic requirements that will build them as designers. The skills development for this undertaking is ruled by free hand drawing. Exposing students to drawing for the first time is rather a challenging venture let alone those who might have done it in high school. *How are students made to perform in these subjects they have never encountered before?*

Nsanja (2008), asserts that free hand drawing needs the training of the brain and arm to have a properly judged decision. This implies that design as a discipline is affected by cognitive skills. Cognitive skills

are skills were a human uses the mind to solve problems with design inclusive (Lui, 2003). Lui adds that these are mental skills and broadly ranged from memory skills to procedural skills, from language skills to thinking skills. Freehand drawing trains students to coordinate the mind and their hands through relating creative thinking skills for idea generation (Brown & Wyatt, 2010).

Design and art departments often accept new applicants and evaluate students on the basis of portfolios and their background in art and design (Doern, *et al.*, 1997). The same trend occurs in design schools all over. Against this background, one would assume that for a student to do design needs a drawing background. This trend has however, been disproved in the University of Rwanda where the Creative Design students without art background are enrolled. A background in Fine art or Technical Drawing is just an added advantage (UR, 2019).

Freehand drawing is offered in the Department of Creative Design as a foundation module to year 1 students. Skills development to individuals whose dream was never design but find themselves pursuing design as a profession has in itself challenges. That is making new students think visually. Whereas a sizeable number admitted don't have an art background, there are students who are admitted and did art & design in the one and only School called Ecole D'Art De Nyundo in Rwanda. Rwanda Times (2010). There is a belief among learners that it is those from Nyundo who are meant excel in the discipline.

There is considerable variation in the abilities of students, each student has their strength and experiences. Gökdere (2017) affirms this by saying that individuals are not the same and that this variation is caused by social, psychological and mental characteristics. Gökdere, futher attested that every individual has different interests abilities, needs, learning methods and developmental characteristics. Against this backdrop, this study reached out for method that could be used to help every prospective design student.

This study tried to educate all the new students of design that with the use of simple geometrical shapes regardless of their art background, establish what will be appropriated in their study. Many people including students draw without planning their drawings on paper. They draw what they have recorded in the mind. This kind of approach appears to be combersome and demolarising to learners who are new to the discipline like freehand drawing. In most cases students get wrong representation of what the are drawing.

Literature Review

Almost everything designed undergoes a design process through a series of sketches which pass through changes towards perfection. This is the drawing done using one's free hand without any assisting tools (Barber, 2006). Students of design need this basic in order to put out ideas they propose to make into tangible objects. This review places interest in free hand drawing and accompanying factors in students learning. The challenging way freehand actualizes ideas into visual statements was clearly evident in the way students came up with interesting freehand drawings which they never thought they could do.

The Term Freehand Drawing

Freehand dr**a**wing is the makings of sketches to train and equip learners with new skills that will help them in other modules come up with preliminary sketches that will depict a concept for a particular undertaking.Have & Toorn (2012) says that drawing is a general term that include sketching, mapping, diagramming, drawing from life, doodling among others. Freehand drawing will mean drawing using bare hands.

Why do we do freehand drawing in a design discipline?

This question is answered was Adams (2014:01) in his paper *Drawing attention to Drawing* where he contends that drawing *is done to teach us to see: to notice rather than merely to look*. He further made this review learn that freehand drawing in the design discipline is done to expose our hidden thoughts and

communicate these thoughts outwardly. These hidden thoughts are Messenger (2016) called ideas. Ideas according to Messenger, remain inert in the mind until they are exposed to the surface. Drawing takes centre stage in bringing out these ideas which are in form of mental constructs. All individuals have such mental constructs. These mental constructs are what Brown & Wyatt (2010) says is part of inspiration. Design is helped by inspiration in most cases. Through a series of freehand drawing, the creative journey is achieved through trying out what works and what doesn't. Inspiration is followed by ideation where freehand drawing acts as an integral part. The authors sum up the activity of actualising design concepts through drawing as design thinking. This is where consumer insights, rapid prototyping are tried out using freehand to come up with effective design solutions. Ideas remain as dreams until a time when they are visually exposed (Messenger 2016). Exposure of such ideas is done through drawing. As revealed in the introduction, freehand drawing as part of the modules offered in Creative design demands that students train on how to make visual statements reflecting on the mental constructs they might have. This is done by making students undergo training to perfect their ability to see (Adams, 2013). Its not that students are blind, but it is because they begin to analytically view things. Other narratives echo this study's belief that building a concept is a domain of the head and making it an actual tangible visual concept is done using the hand. The hand to actualize a concept would refer to what the brain has conceptualized and then bring it out as visual statements. These narratives include among others (Jarrett & Lenard, 2000; Barber, 2003; Messenger, 2016; Have & Toorn, 2012) who contended that freehand drawing communicates and helps in making ideas, thoughts and feelings available to a wider audience and that drawing is an invention that helps the creative exploitation and growth of thought. These writers fell short of exposing a possible method that could be used to train beginners especially those who have never done drawing at all.

Hoffman (1998) as cited by Have & Toorn (2012) contends that drawing for designers is meant to aid visual communication with others and oneself. He further says that students should be able to communicate their ideas through drawing without taking care of how to draw. He however falls short of the fact that some of these designers might become among others medical, zoology or botany illustrators where precision and perfection to depict the subject matter is paramount.

A simplified method in drawing was the axis onto which this study revolved; it was geared towards making students ready for design tasks by drawing correctly not to use bad drawing to communicate. Depicting forms correctly is so important in this regard to be able to communicate as Hoffman (1998) suggests. Student designers need to be told how freehand drawing is the oasis of all creative design disciplines. Drawing leads to tangible results following a design process. This is in agreement with Adams (2014) who concluded that we draw to bridge imagination and implementation. Have & Toorn, (2012) summarised the whole debate by saying that we do drawing to actualise visual thinking and visual problem solving through employing the relation between the hand and the brain

Geometric Shapes and Drawing in Schools

Sessions of drawing are characterised by participants wanting to express themselves visually. This need is on so many occasions, including the period of this study, was antagonized by shyness and low self esteem. (Jon Rimmer & Harris, 2011). Crozier (2001) as sited by Jon Rimmer & Harris (2011:01), describes shyness as most likely to be experienced in novel social settings and when we believe that we will be evaluated by others. Timidity and discormfort crown shyness in most cases (Gocmen, 2012). Students in drawing schools tend to behave in agreement to this notion. Shyness goes ahead to affect learners by fearing to show their work to the lecturer and this characterised the early stages of the study. Gocmen (2012) relates shyness and self esteem as items that can affect arts and design students. He lets this review learn about Self-esteem as is a way of being, thinking, feeling and acting that implies that one accepts, trusts and believes in ones self (Gocmen, 2012). Farahini *et al* (2011) testify that shyness is one of the factors in active social dealings and may hinder creativity. In their findings, however, the results shown reveal that there was such a negative connection between shyness and creativity along its

components among the gifted (Farahini,*et al* 2011: 1479). This seems to suggest that shyness is so effective at hindering creativity in the ungifted. To modify shyness interventions can be made. Silvia *et al* (2008) as cited by Faramini *et al* (2011) posit that shyness could be modifiable. This study used the assertion as a shield towards modifying shyness through use of geometrical shapes as confidence builders towards helping learners take on freehand drawing without fear.

Talent and Skills in Freehand Drawing

Talent is said to be an inborn ability or taste to learn in a particular area (Winner & Drake, 1996). The authors argue that there is that inborn ability that helps in learning particular thing. They further posit that individual differences in the inborn traits do exist, motivation however, plays a big role. Working hard and motivation are also cited to be important pillars in achievement. In conclusion they put forward that talented students in visual arts have high ability before they start working on a drawing. The authors fall short of realising that talent can be suppressed with bad methods being used to improve it. Talent improvement is a function of practice. Practice perfects a skill and patience refines one wants to attain (Nsanja, 2008). According to the author, constant sketching will make your hand firm in visually recording what the brain has seen. Barber (2006) also shared similar sentiments that paractice sharpens ones drawing skills and keeps them perfect.

Observation in Freehand Drawing

It is so important that the student of design becomes observant during the sessions of freehand drawing. This notion was shared by Have & Toorn (2012:75) who affirmed that all knowledge starts from observation, perception and vision. Much as observation, visualisation and imagination play a major role in the drawing process as outlined by Have & Toorn (2012), learners who have never been exposed to drawing appear to need more than training their eyes to observe, visualise and imagine. Learning to see for the student of design in free hand session needs more than training the eye. This study thought of ways of overcoming this challenge through use of geometrical forms as guides through which natural forms could be derived. Drawing from observation however has been tagged to looking hard but not making realistic drawings but to train the art of looking (Agarwal, 2012).Drawing from observation requires that one draws what they see (Jarrett & Lenard, 2000). This is sometimes called still life or life drawing (Barber, 2003). Barber contends that even still life needs to be placed logically on paper following design principles. That's why this study saw it as a need to expose students on using common geometrical shapes and lines. It was assumed that it would help those who have never encountered drawing at all and also improve the perception of those who have had art training before.

Mistakes in Freehand Drawing

Mistakes are seen as failure by beginners. Barber (2003) asserts that one should mind less about mistakes. Mistakes in themselves are a source of creativity as Adams (2013:01) puts it that an unintentional mark can transform a drawing, giving it a new impetus, direction or meaning. Students making mistakes is a learning experience according to Adam. To students, mistakes are a sign of failure. The students in reaction try to use erasures to put away what they see as shaming to draw badly (Farahini *et al* 2011). However, when learners' attempts are characterised by mistakes, hopelessness appears to set in which in the long run interferes with learning of the students (Barber, 2003). To minimise on mistakes common geometrical shapes appear to be a solution. This solution is a transition from the accepted norm where students of drawing have always been drawing images with no guiding shapes. This has often resulted into misrepresentation of the subject matter and getting the proportions and structure of the drawing in question wrong. The above literature can be concluded by confirming that learners to do a particular task need motivation and to know the reason they are doing a particular subject. All timidity and fear in any discipline can be aided by confidence builders. In this study confidence builders are the geometrical forms that were used to guide students understanding of form and to assemble rather complex subject matter. Even if individuals are gifted or talented, practice was important in perfecting a talent towards the desired goal. This implies that talent can be static if practice is not put into consideration. Shyness is an

attribute that can affect student's visual self expression. The learner keeps quiet a stays static because of fear to ask. It can be reduced by such interventions as building students self esteem trough complementing them and exposing them to a methodology that simplifies their study.

Methodology

Research Design

The study was descriptive, and practice based being assisted by participatory observation. The students were taught using the method of geometric shapes as a means to helping students in drawing natural objects. They were taught to draw geometric shapes as faint guides which helped in the drawing of natural objects. The intended drawing was made darker. They were further initiated into the module objectives and why they were doing freehand drawing. Among the reasons was that freehand drawing was the actualiser of all design modules in their course. The study was dominated by thorough demonstration of groups of 10. This is because these 10 students were manageable at a go to ensure that each individual's needs are addressed. Along with other skills taught were lines of action. Suppressing fear and building self esteem was a key in this study. These items were used as confidence builders to students who appeared to be shy whereas others were not sure of what they were doing. The instructor though discouraged the use of erasures. Use of erasures was seen as a hindrance to free expression. Students feared to make mistakes; the instructor however encouraged learners to be free to make mistakes. Learners were told that from mistakes they could be more creative. The facilitator emphasized mistakes as a platform towards new creativity. Encouragement was a strategy used to make learners like the freehand exercises and not to give up what they were doing this made them active participants.

Students were advised to perish the shyness in them. They were encouraged not to use erasures. They believed they had made mistakes and the remedy was to rub. The facilitator emphasized mistakes as a platform towards new creativity. Confidence building characterised the study. Being a big size, it was a fire fighting strategy where the facilitator went visiting each learner to establish how everything was progressing. The aggressive approach where you the lecturer go direct to each student to see what he or she is doing was used. It helped to establish those were lagging behind. All assignments from inception were collected and evaluated to record the progress among students.

Participants

The study was carried out in the Department of Creative Design University of Rwanda. The methodology used was practice based and involved participatory observation on all 71-year year one students of 2018/2019 academic session.

Data Collection Tools

Participatory observation, collecting assignments and evaluating them. Random selection of students was done and interviewed on the way freehand drawing was done. The student leader was assigned to interact with students and ask them what they have learned. This is because of the language barrier. Most of the students had considerable challenges in English. This is due to the challenges of having a francophone background and they were made to change to Anglophone. The report given by the class captain was promising in that most of them were pleased they could freely draw during the given assignment.

Findings

Assembling of a drawing could be assisted by common Geometric shapes. Some students who had prior training seemed to have good time, however some became rigid and didn't show need to learn anything new. It was evident that some students who had a background in art tend to be contented with the previous skills they had acquired. One of the students who had a background in art was a problem in this study. Instead of engaging in work he was busy making digital drawings which were beyond the scope of this study. The work evaluated from the onset of the study evidently showed that freehand drawing could

be learned by anyone regardless of their art background. The students who where timid on the onset of the freehand module started to be at ease.
These geometrical shapes were a confidence builder among the students who had a feeling that they could not draw. Those who appeared to be shy during the test drawing sessions started inviting the instructor to see their work.

Innovating learning tools, tactics, and techniques to improve how students learn was found to help students in comprehending the learning objectives. It was equated to teaching a baby how to walk. Freehand drawing is defined to be use of bare hands to draw without the assistance of guides like rulers, stencils among others. The guides in this study are geometrical guides which were faintly drawn to facilitate a drawing process. Through discouraging erasures, learners were able to pick confidence in expressing themselves.

It was established that students feared to make mistakes, this was evidenced in the way they tried to hide their work. Being 71 in number it was a challenge to meet them especially when they intentionally avoided the instructor's comments. To rectify this, I used the attendance list to visit everyone and award a mark which I would later call the continuous assessment mark. The challenge was to learn from their mistakes. They wanted to use erasures which were discouraged. The discouraging of erasures will further promote confidence even within the poor learners. The most important role of visiting the learners one on one proved to make students overcome the fear of making mistakes. Mistakes were found out to be effective learning.
It was found out that the confidence building among the learners makes them active and participatory. Students realised that they could learn from mistakes because they were advised not to rub but to keep on working.

The geometric guides which were used in the study were seen to increase the self esteem of students. This was evidenced in the mini pinup which was held every 3 weeks of learning. Students were always mentioning that they never attended art classes at Nyundo. Nyundo is the only centre at high school that offers art and design in Rwanda. They wanted to attribute their initial weaknesses to this fact. Even within those who attended at Nyundo, there are those who had problems in expressing themselves in freehand drawing. The introduction of the method of using Geometrical forms facilitates their freehand drawing skills were so helpful. It overcame the level of frustration they had because they saw themselves achieving less despite having had an art background.

Even those students who appear to be talented appreciated the method because it made them see more and simplify their subject matter more. Students always wanted to be perfect at an instant. That is why most of them were using erasures. They only stopped when the instructor advised them not to.

Conclusions

Talent has a great percentage in determining the achievement of a student in freehand drawing. However, practice perfects skills; even those with talent need to practice and achieve higher levels. Those who are week will be at an advantage if they do practice. Practice trains the hand to coordinate with what the brain has perceived (Nsanja, 2008).
Drawing can be learned by anyone if the guidance is carefully inclined to guides like basic Geometrical shapes which can facilitate the learners' ability to draw. Teaching students to see and to think visually are needs a lot of patience and engaging learners into use of aids which can guide them attain a desired goal. Geometrical shapes a constant reminder of the proportions and the nature of the subject being depicted. Drawing for design is a component which every aspiring student of design requires to prosper. It is the mode for telling out what concept is being thought about. To learn drawing students, need to do a lot of practice to perfect their vision and hand-brain coordination. The reduction in the level of shyness amongst

the learners was attributed to the method of using basic geometric shapes as guides in their freehand drawing sessions.

Recommendations

The use of basic geometrical shapes should be incorporated in the teaching of drawing. It has been found to simplify students learning experience. Students of design who have never done art before should be treated as special case that requires being motivated about the unknown into which they have ventured to traverse.

References

Adams, E. (2014). *Drawing Attention To Drawing.* Ixia the public think tank.

Agarwal, V. (2012). *A sketchbook about drawing.* Glasgow: Grayson Perry Turner.

Barber, B. (2003). *Advanced Drawing Skills. A Course in Artistic Excellence,.* London: foulsham W. Foulsham & Co. Ltd, The Publishing House, Bennetts Close, Cippenham, Slough, Berkshire SL1 5AP, England.

Barber, B. (2006). *The Fundamentals of Drawing in Colour. A Complete course for artists.* 26/27 Bickels Yard, 151–153 Bermondsey Street London SE1 3HA: Arcturus Publishing Limited.

Brown, T., & Wyatt, J. (2010). *Design Thinking for Social Innovation IDEO.* Development OutReach World Bank Institute.

Crozier, W.R. (2004) Shyness and Students' Perceptions of Seminars. *Psychology Learning & Teaching*, 4(1), 27-34

Doern, J., Fine, J., Grimstead, M., Mergler, J., Willingham, L., & Wismer, S. (1997). *Making the Case for Arts Education.* Ontario Arts Council.

Farahini, N., Afrooz, G., Tabatabaeic, S. K., & Esmaeilid, M. T. (2011). The role of shyness in anticipating creativity among the gifted. *Procedia Socialand Behavioral Sciences, 30*, 1476-1480.

Fisher, D., & Robinson, J. (2008). *Teach Yourself Visually Drawing.* New Jersy: Wiley Publishing Inc.

Gocmen, P. O. (2012). Correlation between shyness and self-esteem of arts and design students. (E. www.sciencedirect.com, Ed.) *Procedia - Social and Behavioral Sciences, 47*, 1558-1561.

Gökdere, M. (2017). Examination of Student's Interests and Learning Preferences Through Total Talent Portfolio. *Journal of Educational and Instructional Studies in the World, 7* (4).

Have, R., & Toorn, M. v. (2012). The role of hand drawing in basic design Education and the digital age. *International Conference on Engineering and Mathematics ENMA.* Faculty of Architecture Delft University of Technology.

Hoffman, D.D. (1998) Visual intelligence — How we create what we see, *New York, W.W. Norton & Company, Inc.*

Jarrett, L., & Lenard, L. (2000). *The Complete Idiots Guide to Drawing.* 201 West 103rd Street Indianapolis, IN 46290: A Pearson Education Company.

Jon Rimmer, J. G., & Harris, E. (2011). Class participation and shyness: affect and learning to program. University of York, 2011.

Kwesiga, P. (2002). Art - Design - Education - Exchange with Africa. In S. Miettinen (Ed.), *(Art – Design – Education - Exchange with Africa) 14-15.6. 2001, University of Art and Design, Helsinki* (pp. 9-11). Helsinki: Department of Art Education University of Art and Design Helsinki.

Messenger, H. (2016). Drawing Out Ideas: Visual Journaling as a Knowledge Creating Medium During Doctoral Research. 129-149.

Nsanja, Y. (2008). *Illustration as Activism: The role of traditional Ugandan visual materials in community health care in the Kampala and Wakiso districts.* Durban: Durban University of Technology.

Oh, Y., Gross, M. D., & Do, E. Y.-L. (2001). Critquing Freehand Sketching. *A Computational Tool for Design Evaluation* . Design Machine Group, Department of Architecture University of Warshington.

Silvia,P., Winterstein, B., Willse,J., Barona,C., Cram,J., Hess,K., Martinez,J., Richar. C.(2008). *Assessing Creativity With Divergent Thinking Tasks: Exploring the Reliability and Validity of New Subjective Scoring Methods*. (2), 2, (pp 68-85). Psychology of Aesthetics, Creativity, and the Arts,

Rwanda Times, (2010). History of arts in Rwanda. Kigali, Nyarugenge, Rwanda: The New Times Rwanda 2007 - 2019.

UR (2019) Entry requirements in Creative Design for a degree in Bachelor of Creative design *available on* [https://admissions.ur.ac.rw)] accessed 8/7/2019 10:12 am.

sWinner, E., & Drake, J. E. (1996). The Rage to Master: The Decisive Role of Talent in the Visaul Arts. Department of Psychology Boston College.