AN ADAPTATION OF GROUP BRAINSTORMING FOR TEXTILE DESIGN THINKING

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ABSTRACT
The proper systematic design ideations have not been implemented in textile design courses for undergraduate students in Universiti Teknologi MARA (UiTM). These substances have being identified based on several standard observations towards moderating teaching regulation for Textile Design Departments at Faculty Art & Design, UiTM. Toward the matters, the inflexibility of the existing designs direction flows have affecting the particular studio courses taught in irrelevant manners without adequate standard operational procedures. Probably, several Textile Design lecturers have demonstrated their personal teaching styles without having competency acquired. Moreover, those possessions have affected by several different Schools of Thought and have delivered with un-contented teaching requirement determinations approach regulations. Towards the research progression, researcher attempts to deploy an alternative group-brainstorming formulation toward respective textile design courses. Therefore, the IDEO (2011) Model Design Thinking conception will be regulate as research procedure in order to obtain the paper purposes. Expectedly, the improvements will further enhance the stakeholder knowledge on learning proficiency abilities toward the research idea generation on forthcoming educational revisions.

Field of Research: Design Ideation and Textile Design.

1. Introduction
Design thinking has to be a compulsory requisition in design field. According to Ainon Mohd and Abdullah Hassan (1994), design thinking is different from traditional thinking (logical and analytical). Thinking is divided into two: hard and soft design thinking. Hard design thinking is the result of soft design thinking. Soft design thinking has a procedures and systems. These procedures have been formed into a various model of design thinking. In Malaysia educational context, thinking skills are applied to students from primary to higher learning education. A various number of educational systems have been implemented and reviewed from time to time. The extension of the system had produced a
number of educational formats that based on the examinations. Design thinking was introduced at the secondary level for design subjects. The emphasis of design thinking at this stage wasn’t comprehensively conducted. In Universiti Teknologi MARA, a number of design programs were established. The implementation of design thinking is applied only to the selected programs both graphic and industrial design. It is supposed to be extended to all design programs as pre requisition for every design courses.

2. Research Background

The design departments in the Faculty of Art & Design UiTM have their own procedures in conducting courses. Most of it will be initially started with identification of the problem, followed with research, development of ideas to product design. This design flow is conducted based on the nature of the programs. The process is called design process. The importance of design process are to ensure all stages are completed, following agreed timeframe that have been planned and provides complete documentation start from the beginning till the end of process. The initial design flow in design process is idea generation or ideation. According to Jonson (2005), ideation or idea generation is the creative process of generating, developing, and communicating new ideas, where an idea is understood as a basic element of thought that can be visual, concrete, or abstract. While Graham and Bachmann, (2004) defined Ideaion is all stages of a thought cycle, from innovation, to development, to actualization. Ideation is also known as structured brainstorming and it is proven as the most influential technique for design and innovation. Brainstorming is used as a problem solving by generating large numbers of ideas. Osborn introduced it in 1953 in his book called Applied Imagination. He proposed that it would be more effective if brainstorming to be used in a group rather individual. His thought has haven’t proved to be correct but the idea of having an activity in a group has stimulates a team spirit and group cooperation. According to Amir Shaker Zainol (2010), most empirical studies focus more on individual creativity rather than group creativity even though in industrial design practices it admits that group creativity, which is brainstorming, is very important. Creativity can be enhanced through training such as brainstorming and creative problem solving (Nickerson, 2003). The unique rules of brainstorming as introduced by Osborn (1957; 1963) are: quantity is wanted, no criticism, the wildest ideas are welcome, and combine and improve ideas. In an organizational setting, the importance of group brainstorming cannot be denied (Paulus, 2000). The organization uses it to overcome problems or invent new products (Paulus & Brown, 2007). One of the successful companies of industrial design that has been practicing brainstorming is IDEO. As stated by IDEO’s general manager, Kelly (2001) emphasized that creativity in design firms is not coincidental or mysterious, but could be gained.

3. Statement of the Problem

The pioneer Textile Design courses is Universiti Teknologi MARA in 1967, it was only Design Institute emphasizing Printed Textile then followed by Batik design in 1976. The first batch of graduates have had served as a lecturers in this Institution well known now as Universiti Teknologi MARA. The inherit design process pedagogy has been adapted and practiced by younger generation of students. These students somehow were destined or appointed as lecturers/teachers in various Universities, Vocational Institutions, Private Collages or even government schools nowadays.

Lecturer Centered Learning

Firstly, the issues of textile design process. The inflexibility of the existing design flows were causing the studio-related courses were taught in different ways without standard operational procedures. Textile design lecturers have their own teaching styles. They came from different school of thought and have
the ownership to determine their own styles. The current practice is identified as an individual idea generation based on the visual research, inspirational from books, magazines, photos and one to one design consultation with lecturers. The teaching method in textile design process is basically based on three stages, which are Visual Research, Idea Development and Final Products. These are traditional design process flows that have been practiced for over 30 years. From preliminary survey in December 2012, the researcher found out that the abovementioned process has still now been applied to current practice. Idea generation or Ideation phase was conducted generally by using one to one consultation. The disadvantage of current practice was the system that focusing solely on lecturer centered learning. Even though Outcome Based Education (OBE) as a current curriculum emphasizes on Student Centered Learning, the design process is still conducted to one to one orientation. Students were completely depending on lecturers as problem solvers. They were very dependent and can't independently produce or contributing their original ideas. Surveys were conducted through phone calls to the respective lecturers from various University and Institutions that offer Textile Design courses. Most of the pilot survey respondents were the alumni of textile Design Department UiTM. Most of the design processes were not specifically emphasizing to brainstorming to generate ideas. Undeniably the system has successfully been adapted and practiced by students but now the paradigm changes differently. The current students' capability and applicability to adapt the traditional system is influenced by various factors while the rigidity of the existing process does not dynamically help the phenomenon. The researcher has summarized the first problem statement, as there was no standard operating procedure in textile design process especially in ideation phase. Lecturers teach with their own styles. The teaching style is identified as Lecturer Centered Learning (LCL). Possibly, the excellence lecturer will stimulate proper idea generation while average lecturer will follow rigid design flows. This situation caused imbalance knowledge distributions to students.

**Spatial Ability**

Secondly, the intake system issues which randomly enrolling the candidates by neglecting fundamental requirements in the respective disciplines. For instance, students from STPM intake were freshly enrolled to the department and they have to adapt new things without fundamental knowledge in textile design. They were facing a time constraint in completing their undergraduate study between three years (six semesters). Compared to diploma intake that equipped with skill and experience during their diploma course undertaken, current situation has contributing imbalance attributes between those two groups. The most identified problems from STPM intake were towards the understanding the design process during studio-related courses especially in studios or classes. Syllabus emphasized on design teaching but it doesn’t teach student in design thinking. Besides that, they were having some difficulties in drawing. This might probably being influenced by various factors. Basically, idea is the main issue in design has associated to creativity. From preliminary investigation, the researcher has justified most of the design course syllabuses in Textile Design Department have not clearly stated the ideation process. Toward the matter, when students were unable to generate the ideas on the next stage would be a difficult part. This might causing them feel demotivated during class. Indirectly, the teaching and learning environment in design studios became rigid and fatigued. To equalize the gap, the researcher believes by having a group brainstorming at the fundamental level would give a significance and contribution to the effective design process. With the proper idea generation method hopefully might improve the students’ design thinking skills towards the process of learning in studios thus giving a convincing academic achievement. The researcher has summarized second problem statement as STPM students were unable to produce ideas due to none of proper design thinking in the syllabus. They feel the design process is too complicated. There were various factors that affecting this situation. No
designing experience, improper design ideation method, Lecturer Centered Learning, poor supervision and time constraints were identified as contributing factors.

4. Aim of Research

- The aim of the research is to deploy brainstorming procedural in the existing textile design process.

5. Research Objective

The objective of this practical action research is:
- To utilize brainstorming conception in order to produce a large numbers of ideas in textile design ideation phase.

6. Research Questions

This research is aimed at trying out and testing the brainstorming conception in textile design ideation. The study attempts to answer the research questions:
- What are the learner’s (student) perceptions of the textile design course when brainstorming is used in design ideation?

7. Significance of Study

The study will be deemed vital for the proper credit of the improving Design Ideation Process through the use of group brainstorming method to the students of Textile Design Department. Possibly the findings of this research could be useful to the following;

- **Students**
  Having a clearer point and the understanding of design flows, this will further enhance students' vision of the significance to mastering the essential skills of idea generation so they will do best. This could develop good design habit.

- **Lecturers**
  This study could intensify lecturers’ awareness in recognizing the teaching tasks and effective teaching strategy.

- **Curriculum Planners**
  The findings of this study could assist the planners in the proper selection of methods, techniques, and strategies that demand to be underpinned.

8. Scope of the Study

General focus of the study will be based on the deployment of group brainstorming procedure using IDEO model to the Textile Department students who undergo their undergraduate study in Universiti Teknologi MARA Malaysia. The study intends to use the existing design course syllabus especially in fundamental level. IDEO model will be utilized which emphasizes brainstorming as a main concept. The context would be specified on 2 stages, idea generation and refine idea only. The respondents would be selected from students whom do not have a basic knowledge in designing. This will include the intake from STPM, other universities and colleges and other design department.

9. Research Design
Generally, **Action Research** are being practiced by the academic practitioners either individual or groups, to change and improve existing practices. In education, the practitioner may consist of a teacher, lecturer, administrator or a school counselor, or other individuals involved in the process of teaching and learning. However, action research often refers to research carried out by teachers to improve the teaching and learning practices. For example, teachers can identify the methods of teaching and instructional materials they use to enhance the effectiveness of teaching. In this research proposal, the researcher has planned to use *Practical Action Research*. It’s a qualitative in nature. Action research is a tool that is used to help teachers and other educators uncover strategies to improve teaching practices (Sagor, 2004); it is a viable and realistic endeavor for all educators. Action research requires teachers to design a study in an area of interest that they would like to carry out in their classrooms or schools. Lewin (1946; 1948) was the first to introduce the codification about the procedure implement action research. He suggested that the procedure as having four major ratings, namely designing, action, observe and reflex.

### 10. Description Method

The researcher has planned to use classroom action research that will involve him to conduct a class. The proposed respondents would be a fresh intake from STPM, other colleges and departments that will be in semester one. Most of the proposed respondents do not have textile design knowledge due to different backgrounds. The main courses in semester one is focusing in fundamental of textile design. This will involve idea exploration course. Previously this course was conducted using conventional teaching method. At the first stage, the researcher will provide 14 weeks lesson plan that will assist in teaching. A strategy will be used as an alternative to the conventional teaching method. The class will be conducted as previous state but at the ideation process, the researcher will utilize brainstorming concept. This is planned because brainstorming procedural has never been applied in the ideation phase. IDEO model (Design Thinking for Educators) has been selected as a guideline in brainstorming. This model is widely used in other disciplines especially in administration, business and marketing. This brainstorming model will be integrated with the classroom action research. Action research is cyclical process that doesn’t demand to finish at particular point. Data obtained from previous investigation frequently opens new avenues of research.
10. The Samples

The sampling will be selected in this research is *purposive* which is *non-probability sampling* in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research. In this case the researcher will choose Semester 1 Textile Design Students in Universiti Teknologi MARA. 25 students will be involved out of 78 total students.

11. Research Scope/Location

Research site for this action research is in the Textile Design Department, Universiti Teknologi MARA, Malaysia.

12. The Instruments Will Be Used

The researcher has planning to use 4 data sources as below:

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<th>Questioning</th>
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<th>Examining</th>
<th>Reading</th>
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<tr>
<td>Interviews</td>
<td>Observations</td>
<td>Samples of student work</td>
<td>Literature reviews</td>
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<td>Questionnaires</td>
<td>Field Notes</td>
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<td>Documents/Policies reviews</td>
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13. Method of Data Analysis

The collected data will be analyzed accordingly to the research objective requirement. In order to get thick description, triangulation is a comprehensive data analysis in qualitative by combining at least three sources of data rather than single source. To generate a reflection, three sources of data will be analyzed, synthesized and reflected to produce a result.

References


