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CONTENTS

i-NPD Board: Innovative and Student-Centered Learning for Marketing Students

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Abstract

Innovative and student-centered learning is something that is encouraged and lauded upon in the 21st century classrooms. In this study, New Product Development, which is a theory-based subtopic in several Marketing courses, is injected with innovative elements to increase students' attention and understanding. Prior to this, students often struggle in assimilating all the required information in the 8- step process of the New Product Development. The i-NPD Board serves as an intervention that is both innovative and interactive to guide and nurture students in understanding the New Product Development topic in new lights and perspective. i-NPD Board is trialled out to a group of 12 students who were taking the Marketing courses with New Product Development in the subtopic. A post-interview was conducted after the trial. Based on the findings, respondents unanimously agree that the i-NPD Board is creative and useful in learning the New Product Development topic, helps them in presenting the topic and guiding them in the process of creating products. On the other hand, several respondents perceive the i-NPD Board to be a bit cluttered and needed more guidance in using it. A comprehensive instruction manual on how to utilise the i-NPD Board should be created along with detailed explanation and close guidance for better understanding of the i-NPD Board.

Background and Review of Research Materials

New Product Development is one of the subtopics offered for Principles of Marketing course and essentially what makes up the entire Product and Service Development course. New Product Development is intended for the learners to learn the steps required in developing new products. New products are the lifeblood of a company. As old products mature and fade away, companies must develop new ones to take their place (Kotler, 2018). New Product Development (NPD) Process consists of eight steps; *Idea Generation, Idea Screening, Concept Development and Testing, Marketing Strategy Development, Business Analysis, Product Development, Test Marketing* and *Commercialisation*. Using structured methods for managing business innovation can be an effective way to improve the ideation process as NPD is a structured topic. Teaching structured methods is a potent way to enhance the innovative capabilities of companies and to develop creative products for the marketplace (Fernandes et al., 2009).

During the teaching and learning process prior to this study, the assessor will explain the process step by step. Learners are then required to prepare and present the new product that they plan to develop via the New Product Development

process. More often than not, learners forget what has been taught or skip crucial elements in almost all classes that the assessors have taught before. Consequently, the full potential of New Product Development process was not properly utilised by the learners during the teaching and learning process.

Thus, an intervention in the form of an innovative project was introduced by the assessors to combat this problem and further enrich the teaching and learning activity and make it more student-centered. The innovative project is called i-NPD Board or its full name; Intelligent New Product Development Board. The i-NPD Board is an A2-sized board containing all the information and the necessary details

of all the eight steps in the New Development Process which then the learners merely fill in the necessary and important information.

Based on the researcher's observation and experience, students struggle to develop new product development (NPD) process activity because they take a long time to develop a deeper understanding during the teaching and learning process.

Research tells us that there are many studies indicate that traditional methods are no longer applicable to younger generations and many higher education institutions are moving forward by applying creativity and innovation in their teaching and learning activities (Narayanan, 2017). Some common visual learning strategies include creating graphic organizers, diagramming, mind mapping, outlining and more.

Therefore, Intelligent New Product Development Board (i-NPD Board) helps students to see how ideas are connected and realize how information can be grouped and organized. With visual learning, new concepts are more thoroughly and easily understood when they are linked to prior knowledge. Students can use diagrams and plots to display large amounts of information in ways that are easy to understand and help reveal relationships and patterns.

Creative teaching method is imperative in gaining students' learning interest: the simulation of this system mainly investigates the relationship between creative teaching method and students' learning interest. The use of creative teaching methods can trigger students' learning interest (Tian-SyungLan, 2013).

According to the study, a new teaching method will increase students' learning interest, trigger their learning motivation, develop their scientific attitude, and improve their learning achievements and learning effectiveness (Tian-SyungLan, 2013). Therefore, Intelligent New product model (i-NPD Board) helps students see how ideas are connected and realize how information can be grouped and organized. With visual learning, new concepts are more thoroughly and easily understood when they are linked to prior knowledge. Students can use diagrams and plots to display large amounts of information in ways that are easy to understand and help reveal relationships and patterns.

Research Questions

This action research is intended to find answers to these pertaining questions:

i. Is the i-NPD Board useful for the learning of the New Product Development topic?
ii. Does the i-NPD Board aid the learners present the New Product Development process successfully?
iii. Does the i-NPD Board guide the students with the product creation process?
iv. What are the recommendations for the future usage of the i-NPD Board?

Research Objectives

The objectives of this research are as follows:

i.   To determine the usefulness of the i-NPD Board in learning the New Product Development
ii. To find out whether the i-NPD Board aids the students in presenting the New Product Development process successfully.
iii. To ascertain if the i-NPD Board guides the student with the product creation process.
iv. To provide recommendations for the future usage of the i-NPD Board.

Methodology
Research Design

This innovative project is envisioned to help learners in undertaking the New Product Development process via the i-NPD Board. Qualitative research suits this project the best as it is the study of research problems inquiring into the meaning of individuals or groups ascribed to a social or human problem. It was then equipped with the collection of data in the natural setting and ended with voices of participants and reflexivity of the problem that signals a call for action (Creswell, 2007).

Methods

Population (N) and sample (n)

The population of this study are the learners from Kolej Profesional MARA Seri Iskandar, specifically learners of the Diploma in International Business, Diploma in Marketing and Higher National and Diploma in Business (Marketing). The samples for this research are 12 respondents who were randomly selected among students who took the Principles of Marketing and Product and Service Development courses using the convenience sampling method.

Data Sources and Collection Method

The Intervention Activity – The i-NPD Board

Before the intervention activity was implemented, the researchers have taught the topic using the traditional way, which are through lectures and tutorial activities. After the whole syllabus was taught, the researchers randomly selected 12 students from two different courses for this experiment. The respondents were briefed on the i-NPD Board, its components and the usage. The respondents were given two hours to utilise the board in creating one new and innovative product.

Diagram 1: The i-NPD Board

Interview
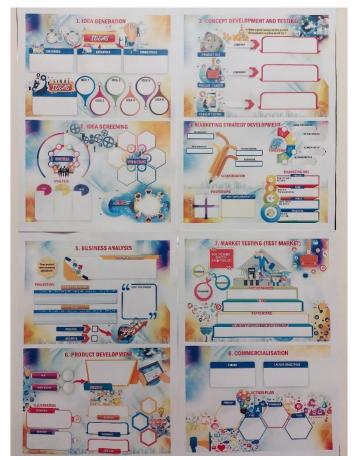
Structured interview questions were used for the purpose of collecting data and feedbacks of this innovative action research project. Structured interview, being one of the qualitative research methods is made up of standardised questions where each respondent gets the same set of questions, in the same way and in the same order. Structured interview is used because of the minimum variation

between interviews (Bryman, 2016). A group of twelve respondents were chosen for this research where the interview was done face-to-face in order to elaborate the questions, prod the respondents for answers and record the feedbacks. For this research, a structured post-interview was done after the intervention activity was implemented. The interview consists of 10 questions where the respondents were asked on their opinions of the i-NPD Board, as well as recommendations for better use of the Board in the future.

Findings

Post-Interview

Post-interview questions had been implemented to the 12 students from different courses.

Based on the post-interview, the findings show that most of the respondents agreed that they have experience problems in learning theory-based course. Majority of students show lack of understanding of NPD theory that should have been understood. They are many reasons why the respondents prefer learning using template/diagram/models. This is because it will help them to understand the theories better. The respondents also prefer visual learning style because it is deemed to be more attractive, interesting and colourful. Innovation in learning is also something they preferred to ensure understanding and nurture creativity.

Respondents agreed that the i-NPD Board helped their teammates in understanding the new product development process better. It also improved their communication and helped them with the presentation. The i-NPD Board is a technique for group project assessment and suitable for presenting New Product Development topic. Majority of the respondents agreed that this model really helped them with the new product creation. It taught them to understand each step in developing new product and easy to be used.

Although the students agreed that they felt i-NPD Board were easy to use and beneficial to them, but they also agreed that their group has faced some challenges, issues and constraints when using the i-NPD Board. The issues with the board are the small size and clutter issue. Some of the proposals for potential use of the i-NPD Board are to increase the size of the board, reduce the elements in the board and include an instruction manual to it.

Conclusion
Research Objectives Discussion

The first objective of this research is to determine the usefulness of the i-NPD Board in learning the New Product Development topic. The respondents unanimously agreed that they have problems in learning theory-based courses and needed all the help that they can get in the form of innovation in teaching and learning. The respondents think that i-NPD Board is easy to understand, colourful, interactive and attractive, and helps them to understand the New Product Development topic better.

Next objective is to find out whether the i-NPD Board aids the students in presenting the New Product Development process successfully or not. It can be concluded that the respondents agree that the i-NPD Board helps them to present the New Product Development topic as everything is arranged in the way it is supposed to be in one board.

For the third objective which is to ascertain if the i-NPD Board successfully guides the student with the product creation process, majority of the respondents answered positively. It is an evidence that the i-NPD Board proved to be helpful and can guide students in the product creating process.

Lastly, this research aims to provide recommendations for the future usage of the i-NPD Board. Respondents suggest that the i-NPD Board should be printed on a larger-sized paper that comes with clear explanation on how to utilise it.

Reflection
As we complete this action research, there are several suggestions and recommendations from post-interview on how to improve i-NPD Board in the future. Most of our respondents suggest that the assessor needs to reduce the icons and provide more space to write in i-NPD Board. The assessor should take that into consideration and come out with the improved design of i-NPD Board. Based on

the post-interview outcomes, another constraint when using i-NPD Board is the students need a clear explanation about this model. The assessors should create instruction manuals on how to use each table in i-NPD Board and detailed explanation, as well as close guidance for better understanding the i-NPD Board.

Based on assessors' own observation, several elements in the i-NPD Board can be excluded to avoid the board from being cluttered with too much information and only focus on the important elements. Overall, the i-NPD Board is proven to be a success and inserts innovative element in the teaching and learning that is fun, saves times, creative and interactive, and at the same time focuses on the students.

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