CENTRAL AND PERIPHERAL ROUTES IN MULTIMEDIA APPLICATIONS: CASE STUDY IN PROMOTING COGNITIVE SCIENCE PROGRAM

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CENTRAL AND PERIPHERAL ROUTES IN MULTIMEDIA APPLICATIONS: 
CASE STUDY IN PROMOTING COGNITIVE SCIENCE PROGRAM

By

Nelson A. Sitabal

This project is submitted in partial fulfillment of the requirements for a 
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CENTRAL AND PERIPHERAL ROUTES IN MULTIMEDIA APPLICATIONS: CASE STUDY IN PROMOTING COGNITIVE SCIENCE PROGRAM

Nelson A. Sitabal

This research aim to identify which routes of persuasions works best in multimedia presentation for the Faculty of Cognitive Science and Human Development, University Malaysia Sarawak. Specifically, this research intends to develop multimedia presentations that are able to attract and persuade the audience to think critically on the message that is being conveyed. Two multimedia presentations have been developed based on the central and peripheral route and comparison of the multimedia presentation is done by using survey forms completed by 50 respondents from SMK Datuk Peter Monjutin. Consequently, data from the survey form is analyzed using Statistical Package for Social Science (SPSS) to test the research hypotheses. In conclusion, majority of the respondents prefer central route implementation in the multimedia presentation.
ABSTRAK

KAEDAH CENTRAL DAN PERIPHERAL DALAM APLIKASI MULTIMEDIA: MEMPROMOSIKAN PROGRAM SAINS KOGNITIF

Nelson A. Sitabal

Kajian ini bertujuan untuk mengenal pasti kaedah pemujukan terbaik untuk digunakan dalam persembahan multimedia bagi Fakulti Sains Kognitif dan Pembangunan Manusia, Universiti Malaysia Sarawak. Secara spesifiknya, kajian bertujuan untuk membangunkan program persembahan multimedia yang berupaya untuk menarik perhatian dan memujuk penonton untuk berfikir secara mendalam mengenai mesej yang disampaikan. Dua program persembahan multimedia telah dibangunkan mengikut kaedah 'central' dan 'peripheral' dan perbandingan program persembahan multimedia tersebut telah dilakukan menggunakan borang soal selidik yang telah diisi oleh 50 orang responden dari SMK Datuk Peter Monjutin. Data dari borang soal selidik telah dianalisa menggunakan Statistical Package for Social Science (SPSS) bertujuan untuk menguji hipotesis kajian. Kesimpulannya, majoriti reponden memilih kaedah 'central' dalam persembahan multimedia.
1.1 Introductions

In this modern world, competition exists between organizations not just to promote their products, but also in conveying their messages to society. Various media have been used in order to achieve their goals, and recent scenarios have shown a number of growing companies that have started services such as websites development, creative advertisement marketing and also short multimedia application (montage) development that can enhance the ways organizations want to convey their messages.

The underlying routes used by these companies as a 'rule of thumb' in conveying the messages are often known as central routes and peripheral routes. These routes are usually defined along with persuasion, thus named as guidelines in advertisement developments and also in conveying message.
Recent advertisements, regardless whether is on printed media or displayed on the electronic media such as televisions and internets show a growing number using females as a mean in promoting their product. In some websites and also multimedia presentation, pictures of popular singers and actresses are the main attractions. Many products promoted on the internets are using popular female and males figures as their models and some even used politicians as an attraction. This is one of the techniques used in peripheral routes where the advertisement is not emphasizing on the product, but rather using models of attractions to the audience. In this case, the audiences are more likely to view the advertisement because of the models, and not the product. The peripheral route also occurs when positive or negative cues, such as images, sounds, or language that is used in the media are associated with the object of the message.

However not all promoting-based medias use models as attractions for their product. The popular Amazon.com website for example, just displays some nice interface and a search engine for desired items. The Amazon.com owns its credibility for providing accurate reviews on the items. Download.com is another example, the main attraction for this website are critiques on the products and also ratings. This approach of promoting product is known to as central route. Therefore the central route, occurs when the attitude of the audience, or individual, is changed as a result of thoughtful consideration of the message (Petty and Cacioppo, 1981). In this example, the reviews and critiques of the product are the attractions for the product itself.
1.2 Study Background

This study is conducted among students who wish to pursue their way to the university. Form 5 students are the desired respondents of this study because this group needs more details on what programs are offered in the university, and which programs suit their interest.

Cognitive Science is one of the programs offered by Faculty of Cognitive Science and Human Development at University Malaysia Sarawak (UNIMAS). Cognitive Science can be considered new in Malaysia and up to recent date, this program is growing and emerging, showing a sign of a brighter future for its student.

1.3 Problem Definition

Currently, there are a few multimedia applications that have been developed by the Faculty of Cognitive Science and Human Development to promote Cognitive Science program. Apparently few could be used to represent or to promote the program itself as they lack one important element, persuasion that evokes motivation.

Messages delivered via communication channels such as television advertisements, billboards, websites, multimedia presentations and lectures are likely to be ineffective, because they must first capture our attention, and then be comprehensible, credible, memorable, and compelling before they can lead to action (McGuire, 1978). However such approach has been used widely today because some issues can be presented effectively using these methods.
Earlier multimedia application developed by the faculty can be considered good multimedia presentation as they incorporate good text manipulations, as suggested by Chun and Plass (1997) where not much text are displayed to avoid confusion to the viewer. Other than that, the multimedia presentations also use color and graphics which are considerably interesting. Some multimedia presentation even has videos in it and audio streaming. It is very obvious that the developer has spent time enhancing the quality of the interface of the multimedia presentation.

The scenario arises with the current multimedia presentation is that the audience can understand message, they like the multimedia presentation, but they are less compelled regarding to the message that is conveyed throughout the multimedia presentation. This is due to the failure of implementing routes or guidelines in developing multimedia presentation that enables persuasions to occur, which are routes to persuasion.

Unaware to the multimedia developers, they often develop presentations that are likely similar to any of the routes, however they didn’t intentionally manipulate these routes for persuasions, therefore making the persuasion less effective when the multimedia is presented. This is the point where a study needs to be done. The aim of this research is to develop suitable multimedia presentations that are not only interesting, but also persuasive. Since there are two routes to persuasions, this research also aims to find the differences and also its effectiveness in persuasion using these routes in the multimedia presentations.
1.4 Research Objectives

Research objectives are divided into two parts, general objectives and specific objectives.

1.4.1 General

i. To study how central and peripheral routes can be implemented in multimedia presentation designs.

ii. To develop suitable multimedia presentations that can be used to represent and to promote Cognitive Science program.

1.4.2 Specific

i. To study the effectiveness of using central routes in promoting Cognitive Science program

ii. To study the effectiveness of using peripheral routes in promoting Cognitive Science program

iii. To study the effectiveness of multimedia and its effects to audience

1.5 Research Hypotheses

H_0 = There are no significant differences in implementing central or peripheral route design in promoting Cognitive Science program.

H_1 = Implementing central route with is better than peripheral route in multimedia presentation design in promoting Cognitive Science program.

H_2 = Implementing central route with is better than peripheral route in increasing the level of understanding in promoting Cognitive Science program.

H_3 = Implementing central route with is better than peripheral route in increasing the level of attitude change of the audience in promoting Cognitive Science program

H_4 = Implementing central route with is better than peripheral route in increasing the level of attractiveness in promoting Cognitive Science program.
1.6 Research conceptual framework

There are two independent variables, and three dependent variables in this research. The independent variables are central and peripheral route. The dependent variables are level of understanding, attitude change and attractiveness. The research conceptual framework is illustrated in Figure 1.0.

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Figure 1.1: Research conceptual framework

1.7 Relevance of the research

Research done related to this topic usually defined these routes as means of persuasion, but in this research it is also used as tools or methods of conveying message effectively. This can be achieved by observing how people perceive electronic media presentation, such as multimedia. This research also contributes to other user-interfaces application developments such as advertisements, report presentations and web designs and hopefully be able to help stressed designer in choosing which and how these routes can help them achieve their goals.