

PAPER

Effects of Multimedia Education Integrated Marketing Course Teaching on Students' Marketing Awareness and Marketing Attitude

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ABSTRACT

Integrating information technology into teaching will be a major policy for schools, improving teaching models. Teachers should get rid of the traditional teaching model of merely stressing on knowledge imparting in order to have students enjoy learning, absorb knowledge, and cultivate interests. With an experimental design model, 116 students of the Department of Business Administration of a university in southern Taiwan are participating in the quasi-experimental research. The experimental class (58 students) is preceded by multimedia education integrated marketing course teaching, and the control class (58 students) maintains traditional teaching combined marketing course teaching for the 18-week (three hours per week for a total of 54 hours) experimental teaching research. According to the results of the proposed discussions and suggestions, it is expected to develop instruction from a single model to an intuitive, interesting, artistic, and three-dimensional mode, create a vivid and interesting teaching situation for students, get them into a lively learning atmosphere, induce students' attention, and enhance students' learning interests.

KEYWORDS

multimedia education, marketing course, marketing awareness, marketing attitude

1 INTRODUCTION

Didactic teaching is generally criticized for prioritizing learning effectiveness without emphasizing students' learning process, motivation, and attitude. Integrating information technology into teaching will be a major policy for schools to enhance teaching models. The learning scope extends beyond information dissemination; instruction via tablets, mobile devices, and other technological tools can elevate cognition and application abilities while fostering active learning. Consequently, teachers must transcend traditional teaching models that solely focus on knowledge impartation. Instead, they should facilitate joyful learning experiences, enabling students to

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absorb knowledge and cultivate their interests. As the adage goes, “those who love it excel over those who merely know it, and those who delight in it surpass those who love it.” Instruction ought to nurture students to “comprehend,” “love,” and “enjoy” learning [1]. For example, commercials, interesting short films, and popular songs are students' favored media. Rhetorical techniques such as “oxymoron,” “metaphor,” and “hyperbole” are often used in commercials to captivate audience [2]. These engaging digital learning materials, easily accessible to learners, represent multimedia teaching resources which teachers can adeptly employ in rhetorical instruction. Information is now accessible through static sources such as newspapers and magazines, books, periodicals, the Internet, picture books, and comics, as well as dynamic mediums such as films and sound, covering broadcast, televisions, movies, computers, and e-books. The evolution of such multimedia could result in more multiple, efficient, and specific information communication by integrating sound, images, confessions, and soundtrack. In face of the changing information technology teachers must evolve from merely lecturing courses to becoming developers of learning experiences. They should embrace multimedia teaching, crafting adaptable materials to augment learners' effectiveness. Multimedia instruction transcends traditional media and incorporates various sensory stimuli to pique learners' interest, seamlessly integrating into everyday applications. It naturally ignites students' passion for learning, fostering positive thinking through relaxed and enjoyable emotional experiences. This study delves into the impact of multimedia education integrated into marketing courses on students' awareness and attitude toward marketing. The aim is to transition instruction from a singular model to an intuitive, engaging, artistic, and three-dimensional approach, creating a vibrant and captivating learning environment. This aims to captivate students' attention and intensify their interest in learning.

2 LITERATURE REVIEW

In a changing world with increasing uncertain factors, a complicated international environment, and rapidly increasing changes, educators maintaining traditional teaching methods of dictation and blackboard writing could no longer attract the attention of students who live in environments with multiple sounds and lights. In order to achieve teaching objectives, the utilization of multimedia teaching is not simply a population phenomenon but also a trend [3]. It cannot be denied that the application of multimedia to teaching is more diversified and richer than traditional teaching methods. Mashari and Adi [4] indicated that the use of media, compared to not using media, to increase cognitive understanding by more than 15 times in fixed time and the persistence of cognitive memory by more than five times and could shorten one-twelfth of cognitive learning time. Properly integrating multimedia into instruction could help instructors enhance efficiency and efficacy in cognitive teaching as well as create a teacher-student win-win. Bull et al. [5] pointed out the second characteristic of multimedia teaching: that the information required for instruction, during recording or after recording, could be selected, operated, or edited. Information from print media, audio-visual media, and Internet instructional media could be selected as part of achieving learning objectives, systematically organized, and recombined to provide effective stimulation in teaching so as to achieve cognitive teaching objectives. Consequently, the following hypothesis is proposed in this study:

H1: Multimedia education integrated marketing course teaching would positively affect marketing awareness.

Yang et al. [6] considered that attitudes deeply influenced students' learning and were the basic element that led students to enter each learning area. Interesting and meaningful instruction was necessary to enhance students' attitudes towards science and learning. For this reason, a teacher had to realize that they do not simply teach knowledge and skills to students in the teaching process but emphasize the cultivation of good learning attitudes. Media were good materials. After the success of using audio-visual materials for training and demonstrating weapon operations to the US army in World War II, it was imitated by other countries. As a matter of fact, multiple teaching is still the development trend in modern society due to the constant progress of technologies; the learning process, with the application of media, becomes lively and allow learners to acquire direct and specific experiences. Teaching aids with sound, light, and voice could actually better induce learners' learning attitudes than textbooks [7]. Agustin and Ayu [8], through the audio-visual sound and light effects of multimedia films, provided more opportunities for students with visual, auditory, or both learning styles to have external information selected into the long-term memory. The researcher integrated multimedia presentations into multimedia teaching, expecting to enhance teachers' teaching effectiveness and students' learning attitudes. Accordingly, the following hypothesis is proposed in this study:

H2: Multimedia education integrated marketing course teaching would positively affect marketing attitude.

Zhai and Razali [2] referred to cognitive effect as an individual functioning in the external world with the feeling, reasoning, memory, thinking, perception, imagination, judgment, and other intellectual functions to know the property and state of various affairs or scenes existing in the external world and further understand the function and behavior of relationships or rules existing in such affairs and scenes. Brahney et al. [9] regarded individual belief in certain targets or events as cognition; such a belief came from individual thought, knowledge, concept, or learning; cognition covered complicated mental activities of perception, imagination, identification, reasoning, and judgment and referred to individual understanding, knowledge, and opinions about affairs. McDonough et al. [10] proposed that individual cognition of affairs would influence the attitude towards the affairs; as a result, cognition might affect the formation of attitude, and attitude would affect explicit behavior. Guthold et al. [11], from the survey and interview of students' learning feelings, discovered that students preferred field observation in an outdoor environment and close contact with nature to help the construction of cognition in natural science and enhance their attitudes towards life. Accordingly, the following hypothesis is proposed in this study:

H3: Marketing awareness shows significant and positive effects on marketing attitude.

3 RESEARCH METHOD

3.1 Measurement of research variable

Marketing awareness. Referring to Xiao [12], marketing awareness contains the following dimensions in this study:

1. Marketing knowledge refers to prior knowledge of marketing and the preservation of knowledge learned in marketing, i.e., results. The marketing teaching objectives include knowledge, comprehension, application, analysis, synthesis, and evaluation, where marketing knowledge is the lowest ability and evaluation is the top.
2. Marketing affection refers to a mental state or emotional tendency, covering attitudes, interests, beliefs, value, and emotional style. The marketing teaching objectives contain acceptance, responding, evaluation, recombination, and characterization. Such classification is a continuous and spiral structure; the lowest level is pure, specific, and special behavior, and the higher levels are getting universal, abstract, and generalized behavior.
3. Marketing skills refer to the learning behavior of marketing skill. The teaching objectives of marketing skills cover perception, preparation, response guidance, mechanization, complicated explicit responses, and adaptation.

Marketing attitude. Referring to Wang [13], learning attitudes include two dimensions in this study.

1. The intrinsic motivation of marketing contains learners' individual needs, desires, impulses, affections, and emotions. Intrinsic motivation refers to the motivation to engage in work for acquiring a sense of achievement or satisfaction from the work value.
2. Extrinsic motivation in marketing includes inducement, purpose, interest, and ambition in the environment. Extrinsic motivation refers to the motivation to engage in work for acquiring benefits (such as reward, appraisal, and order) irrelevant to the work value.

3.2 Research object and sampling data

With an experimental design model, 116 students of the Department of Business Administration of a university in southern Taiwan are included in the quasi-experimental research. The experimental class (58 students) is taught with multimedia education integrated marketing course teaching, and the control class (58 students) maintains traditional teaching combined marketing course teaching. The experimental teaching research is preceded by 18 weeks, with three hours per week (a total of 54 hours). The collected data are analyzed with SPSS, and regression analysis and analysis of variance are utilized for testing hypotheses.

3.3 Analysis method

An analysis of variance is used in this study to explore the difference between multimedia education integrated into marketing course teaching concerning marketing awareness and marketing attitude. Additionally, regression analysis is utilized further to understand the relationship between marketing awareness and marketing attitude.

4 RESULT ANALYSIS

4.1 Effects of multimedia education integrated marketing course teaching on marketing awareness and marketing attitude

Difference analysis of multimedia education integrated marketing course teaching in marketing awareness. An analysis of variance is used in this study to discuss the difference between multimedia education and integrated marketing course teaching in marketing awareness, i.e., analysis and explanation of marketing awareness. Table 1 and Figure 1 show the difference between teaching methods and marketing knowledge. Multimedia education integrated marketing course teaching presents notable effects on marketing knowledge ($P = 0.000^*$), and multimedia education integrated marketing course teaching shows higher marketing knowledge than traditional combined marketing course teaching. Regarding the difference in teaching methods in marketing affection, multimedia education integrated marketing course teaching reveals significant effects on marketing affection ($P = 0.000^*$), and multimedia education integrated marketing course teaching shows higher marketing affection than traditional teaching combined marketing course teaching. In terms of the difference in teaching methods in marketing skill, multimedia education integrated marketing course teaching presents remarkable effects on marketing skill ($P = 0.000^*$), and multimedia education integrated marketing course teaching appear to have higher marketing skill than traditional teaching combined marketing course teaching. H1 is therefore supported.

Table 1. Difference analysis of multimedia education integrated marketing course teaching in marketing awareness

Variable	F	P	Scheffe Post Hoc
Marketing knowledge	21.751	0.000*	Multimedia education integrated marketing course teaching (4.12) > traditional teaching combined marketing course teaching (3.35)
Marketing affection	26.538	0.000*	Multimedia education integrated marketing course teaching (3.91) > traditional teaching combined marketing course teaching (3.28)
Marketing skill	36.257	0.000*	multimedia education integrated marketing course teaching (4.05) > traditional teaching combined marketing course teaching (3.44)

Note: *stands for $p < 0.05$.

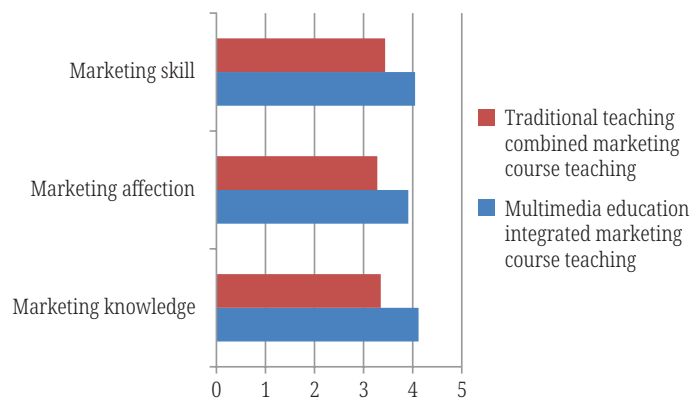


Fig. 1. Variance analysis of marketing awareness

Difference analysis of multimedia education integrated marketing course teaching in marketing attitude. According to the analysis of variance, the difference between multimedia education and integrated marketing course teaching in marketing attitude is discussed in the study, i.e., analysis and explanation of marketing attitude. Table 2 and Figure 2 show the difference between teaching methods and marketing attitudes. Multimedia education integrated marketing course teaching reveals notable effects on intrinsic motivation of marketing ($P = 0.000^*$), and multimedia education integrated marketing course teaching appear to have higher intrinsic motivation of marketing than traditional teaching combined marketing course teaching. Multimedia education integrated marketing course teaching presents significant effects on extrinsic motivation of marketing ($P = 0.000^*$), and multimedia education integrated marketing course teaching shows higher extrinsic motivation of marketing than traditional teaching combined marketing course teaching. As a result, H2 is supported.

Table 2. Difference analysis of multimedia education integrated marketing course teaching in marketing attitude

Variable	F	P	Scheffe Post Hoc
Intrinsic motivation of marketing	29.623	0.000*	Multimedia education integrated marketing course teaching (3.84) > traditional teaching combined marketing course teaching (3.25)
Extrinsic motivation of marketing	35.439	0.000*	Multimedia education integrated marketing course teaching (4.22) > traditional teaching combined marketing course teaching (3.72)

Note: *stands for $p < 0.05$.

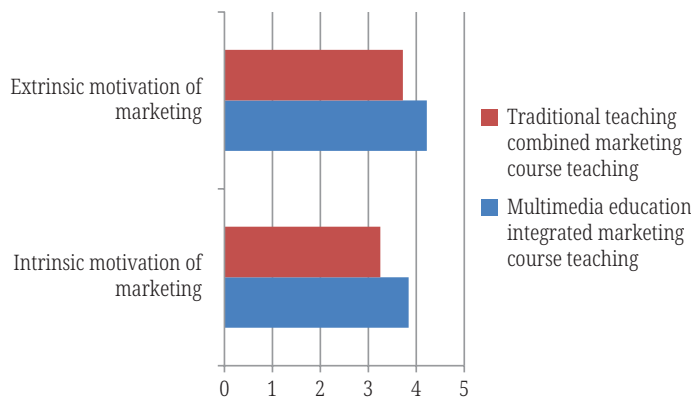


Fig. 2. Variance analysis of marketing attitude

4.2 Correlation analysis of marketing awareness and marketing attitude

Correlation analysis of marketing awareness and intrinsic motivation of marketing. To test H3, the analysis results, Table 3, reveal remarkable and positive effects of marketing knowledge, marketing affection, and marketing skill in marketing awareness on intrinsic motivation of marketing ($\text{Beta} = 0.227^{**}, 0.198^{**}, 0.237^{**}$).

Correlation analysis of marketing awareness and extrinsic motivation of marketing. To test H3, the analysis results, Table 3, appear notable and positive effects of marketing knowledge, marketing affection, and marketing skill in marketing awareness on extrinsic motivation of marketing ($\text{Beta} = 0.241^{**}, 0.206^{**}, 0.268^{**}$). H3 is then supported.

Table 3. Analysis of marketing awareness to marketing attitude

Dependent Variable →	Marketing Attitude			
Independent Variable ↓	Intrinsic Motivation of Marketing		Extrinsic Motivation of Marketing	
	Beta	P	Beta	P
Marketing awareness				
Marketing knowledge	0.227**	0.000	0.241**	0.000
Marketing affection	0.198**	0.000	0.206**	0.000
marketing skill	0.237**	0.000	0.268**	0.000
F	35.146		42.717	
significance	0.000***		0.000***	
R2	0.334		0.392	
adjusted R2	0.302		0.375	

Notes: **stands for $p < 0.01$. ***for $p < 0.001$.

5 CONCLUSION

The research results reveal that students, after receiving multimedia education integrated marketing course teaching, outperform those with traditional teaching combined marketing course teaching on marketing awareness and marketing attitude. Multimedia education integrated marketing course teaching could improve students' marketing awareness and marketing attitude, change students' marketing course learning awareness and attitude, awareness of marketing, affection for marketing learning, and existing ideas about marketing, as well as have them find out the fun in learning marketing. Multimedia education integrated marketing course teaching could actually improve students' marketing awareness and marketing attitude to further promote the learning effectiveness. In addition to the role of a teacher, the presentation of multiple materials also plays a critical role in the success of learning. A teacher, aiming at students' learning development stage, could design or select appropriate multimedia materials and arrange multiple stimuli in the teaching activity before marketing course teaching to induce students' learning motivation and interests for enjoying learning fun, improving marketing awareness and marketing attitude, as well as enhancing learning effectiveness.

6 DISCUSSION

The research results show that students receiving multimedia education integrated marketing course teaching make obvious progress in marketing awareness and marketing attitude in comparison with those with traditional teaching combined marketing course teaching. Apparently, students affirm and support multimedia education integrated marketing course teaching and consider the activity interesting, challenging, and able to enhance the marketing course learning ability. They also expect to continue the relevant courses in the future. The design of multimedia could include selecting or designing interactive materials. The interaction model provides students with a sense of participation, and the real-time response could strengthen students' sense of achievement. Different students present distinct

conditions for learning. When students are able to self-control their learning time and speed, low-achieving students will reduce the pressure and worry in the group. Multimedia materials are full of sound and light effects to attract students' attention in a short time. When learning materials are not taken into account but simply attract students with special effects or sound or light effects of multimedia, excessive sound and light stimulation would distract students' attention or cause difficulty in information handling, resulting in learning below expectations.

7 SUGGESTION

According to the research conclusions, the following suggestions are proposed in this study.

1. The application of multimedia education integrated marketing course teaching requires a teacher integrating multimedia materials into the teaching process and a real-time feedback system for testing learning effectiveness, e.g., "FingerClick real-time feedback system" with the functions of "synchronized multimedia video and audio questioning system," "multiple evaluation test supporting model," "complete learning evaluation records," and "multi-format import and export." A teacher definitely grasps students' learning conditions to enhance marketing course students' marketing awareness and marketing attitude.
2. Finding out marketing course-related multimedia materials from a teacher's position, either advertisements or retro songs, students with different growth backgrounds might feel fresh to present excellent performances on marketing awareness and marketing attitude. It is suggested that students, in groups, collect multimedia-related materials, and the teacher designs the marketing course teaching process. Interesting and diverse materials searched from students' perspectives would induce their active learning motivation and enhance their diversified learning effectiveness.
3. Both marketing awareness and marketing attitude are tested with the entire class, and gender is regarded as a part of the background variables to analyze the results; however, the results do not appear to show any differences. It is suggested to group males and females for the instruction and directly regard gender as an operational variable. A competition could better induce students' learning motivation and effectiveness.

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