

European Journal of Social Sciences Studies

ISSN: 2501-8590 ISSN-L: 2501-8590

Available on-line at: www.oapub.org/soc

DOI: 10.46827/ejsss.v7i3.1228

Volume 7 | Issue 3 | 2022

EFFECTIVENESS OF INTERACTIVE MULTIMEDIA COURSEWARE IN TEACHING CARE MANAGEMENT

Johdel C. Cabalunai

RN, PhD, Assistant Professor, Adamson University, Manila, Philippines

Abstract:

The effectiveness of multimedia courseware optimizes teaching care management will provide knowledge in the global world. The progress of students' rights and civilization is acceptable and is universal and effective in influencing the standard quality of learning among the care management students. The study identifies the effectiveness of interactive multimedia courseware in teaching care management and aims to know its importance, effectiveness and enhancement of students' learning process. The study employed the qualitative and quantitative descriptive approach which is a mixedmethod to identify the effectiveness of interactive multimedia courseware in care management practices, using the Focus Group Discussion (FGD) among the Clinical Instructors who have the capacity and ability to analyze the effectiveness of interactive multimedia courseware for the improvement program of the care management students. Purposive sampling is utilized in the study which closely resembled and synthesized the objectives of the study. The study comprised (90) respondents only. Results show that interactive multimedia courseware enhances the difference from teaching traditional to high-tech of teaching which is interesting for the students inside the classroom and it shows that multimedia courseware enhances students in their learning process through exposure to technology, innovation and promotion, concept and control, and its effectiveness in the improved and delivery of course outline and output. Findings show that is a significant correlation on the interactive multimedia courseware in teaching care management as observed by the respondents.

Keywords: multimedia courseware, effectiveness of multimedia courseware, teaching care management, innovation and promotion of multimedia courseware, exposure to multimedia courseware, concept and control of multimedia courseware

ⁱ Correspondence: email <u>jdale_rn@yahoo.com</u>

1. Introduction

One of the trending topics in the academe is how students can be moulded and shaped in their learning process. The techniques and strategies in their learning enhancement matter that can produce quality education and produce quality graduates among health care providers. It is a manifestation in the ongoing educational system in the care management struggle with a deep stage in coping with the demands and needs in teaching (Altbach, Reisberg, & Rumbley, 2019). This has been highlighted in the domain of learning and the structure of teaching strategies in the academic performance of the learners. The comprehension level through multimedia courseware enhances their attitude toward the lesson. The technique in the multimedia courseware provides the ability to construct the function and meaning of the lesson and activities in their teaching care management. It provides better attention and proper motivation in the study habits of students, the feeling of satisfaction, and willingness to participate in the courseware. It provides students to motivate their beliefs, attitude, worth, preference, acceptance, values, and commitment in the learning process (Mallillin, et al., 2021).

On the other hand, with the trends of technology, teaching techniques are updated from time to time to be globally competent in teaching and care management. The introduction of multimedia courseware in teaching and integration provides effectiveness to interactive learning to include virtual laboratory, graphics, text, video and audio. This is designed based on the various domains of learning especially in the academic performance of the learners to participate in the various multimedia courseware and nursing care management. The students can explore their care management subject, learning activities, and in-depth learning. It examines the various domains of learning in the scholastic program and the teaching management care and learning skills, study skills, and academic achievement. The extent of the teaching in care management acquires various knowledge in the multimedia courseware in the classroom that provides and focus on the learning process and output in the student academic performance (Mallillin, 2020). Multimedia courseware is a material intended for educational kits for teachers, students with the use of technology or computers. Classroom setting in actual learning provides an environment that is authentic opportunities in maximizing learning that demonstrates the skills, attitude and knowledge for care management students in a practicum setting. The challenges and demands of the outcome course of the students in many complex tasks vary and depend on the capacity and ability of the students in their learning process and actual setting of learning in the real world. It describes the proper usage of multimedia courseware in learning facilitation. This can encourage the students to think critically in an effective way of learning and solving problems (Bonito, 2019).

Nevertheless, analysis on the issues and problems in the multimedia courseware in the application and process of perspective teaching must be addressed for its effectiveness in the object and subject teaching process in the classroom as to the practice of multimedia courseware information. This can give details and pursuit in the beauty of teaching multimedia courseware and contemplate in its theme or subject area. The

teaching of care management through the multimedia courseware provides knowledge for the performance of the clinical instructors that measure their skills and competency level in the delivery of the lesson. It involves innovation in the technical teaching of multimedia courseware that challenges them in their professional knowledge considering the advanced technology of teaching. This involves the planning, communication, delivery of the lesson, strategic action, teamwork, and self-management (Mallillin, & Mallillin, 2019). It addresses the issues and problems on the program of multimedia courseware principles and designs, ideas, effectiveness, and efficiency which is appropriate to the strategy, and techniques in teaching. It evaluates the mechanism, management, content, training, systematic culture and atmosphere in teaching. It provides better dissemination to seek effective multimedia design for courseware in enriching teachers on the pedagogy of teaching among their health care management students (Huang, & Liang, 2019).

Similarly, the effectiveness of multimedia courseware in teaching care management will provide knowledge in the global world. Optimizing the effectiveness of teaching exists in multimedia courseware. The progress of students' rights and civilization is acceptable and universal which is effective in influencing that standard to quality of learning among the care management students. Flexible management in teaching is a method of traditional mode where behaviors of students make them identify as people of oriented concept consciously. The flexible management concept is a mode of thinking of a change in process, potential, and innovation of driving force learning which is conducive for effective and improved students (Wang, Zhao, & Zhao, 2019). Therefore, multimedia courseware teaching is widely applied to students in their learning which provide convenience in their process and affect the environment of computer interaction as trends in technology learning, teaching and practices. The understanding of cognitive multimedia technology plays a significant role in the effect of multimedia courseware teaching which is relevant advantage skills required to the multimedia effect of teaching enhancement (Niu, 2019).

Furthermore, the multimedia courseware program is an application involving computers in sophisticated peripherals like CD-ROM players, and videos that have innovations and offer alternative ways of teaching complex topics that can improve the learning of the students. By applying the different technologies, the learning package can be used to combine images, text, sounds and videos that can direct students in the activity of the class by their teachers in the process of learning. Hence, multimedia courseware advances instruction in the methods of teaching which is an intuitive, flexible, and real-time advantage to teachers in the global world of teaching at all levels. The modern method of teaching is based on the multimedia courseware program and instruction given to students which is the key concept and design manufactured in the teaching requirements of the care management subject through multimedia outline and courseware. It is to assist teachers in their techniques and strategies as a tool for resourcefulness and creativity on the organization of their topic through multimedia integration as features to interactive colourful and variety of educational courseware (Hu, 2019). Nonetheless, the program is to develop the efficiency of multimedia courseware

instruction, lesson, and program presentation achievement. It provides satisfaction to students in their multimedia courseware instruction, presentation, and program (Raso, Aiemphaya, Noymanee, & Anukulwech, 2018).

2. Research Objectives

- 1) To identify the effectiveness of interactive multimedia courseware in teaching care management.
- 2) To know the importance of the effectiveness of multimedia courseware and its implication to care management students.

2.1 Research Questions

- 1) What is the effectiveness of interactive multimedia courseware in teaching care management among the respondents?
- 2) How does multimedia courseware enhance the student learning process among the respondents?
- 3) Is there a significant correlation between interactive multimedia courseware in teaching care management as observed by the respondents?

2.2 Hypothesis

• There is a significant correlation between the interactive multimedia courseware in teaching care management as observed by the respondents.

2.3 Theoretical Lens

This study is anchored on "Cognitive Theory of Multimedia Learning (Mayer)" as cited by David, (2015) because this theory deals with principles of multimedia that provides deep learning more on pictures and words which means to improve the imagination of the students in their learning process. Adding simply the words into the picture can better depict an effect of achieving learning in multimedia principles and techniques. The objective of multimedia instruction is to provide light and how humans work in their imagination and practices. This is the basis of Mayer's multimedia learning cognitive theory.

The cognitive multimedia theory of learning by Mayer observed the knowledge and idea that the brain cannot interpret in pictures, words, information auditory and mutual fashion exclusion in the different categories selected in a dynamic and in an organized manner to produce a mental logical construction. Moreover, Mayer underscores the significance of learning based on the content of tests that can transmit or demonstrate the knowledge of success when integrating and formation with advanced power and knowledge. The principle here is designed to give verbal and coherent information on the picture, guiding the learners in a relevant situation of different images and words or pictures reducing the load for a single processing channel that can be entailed from this theory.

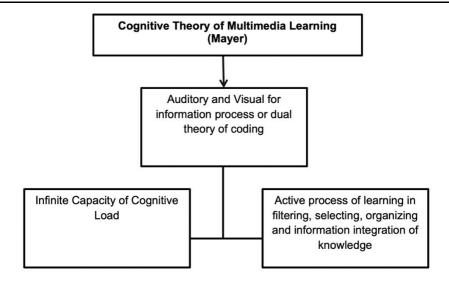


Figure 1: Cognitive Theory of Multimedia Learning

3. Methods

3.1 Research Design

This study employed the qualitative and quantitative descriptive approach which is a mixed-method to identify the effectiveness of interactive multimedia courseware in care management practices. A qualitative descriptive approach to finding out the different opinions and answers of the respondents provides a transition of the care management students' experiences in multimedia courseware (Kaihlanen, Salminen, Flinkman, & Haavisto, 2019). Hence, the quantitative descriptive approach is also used to quantify different answers of the respondents and provides a valuation pattern in the problem posted in the study (Asadollahi Kheirabadi, & Mirzaei, 2019). The mixed-method confirms the data and analysis in the effectiveness of interactive multimedia courseware among the respondents (Camerino, et al., 2019). The mixed-method will further generate a more generalized conclusion by getting not only the concise information but also garnering the perceptive and predictive patterns of attitude and behavior towards respondent's response to the teaching methodology.

3.2 Research Participants

The participants of the study are the Clinical Instructors who are handling nursing students. They are experienced Clinical Instructors because they are Doctorate and Masters' Degrees and have taught for decades. They are even registered nurses. This group of participants have the capacity and ability to analyze the effectiveness of interactive multimedia courseware for the improvement program of the care management students. They are Clinical Instructors in the public and private Higher Education Institutions (HEIs), the study comprised Ninety (90) respondents only.

3.3 Research Sampling Techniques

Purposive sampling is utilized in the study. Those Clinical Instructors are chosen because they have knowledge of the study under investigation. This approach ensures the representation of the study. It closely resembled and synthesized closely the objectives of the study. It contributed much to the success of the study in cross-checking the themes of the study. It undermines the ability to perform proper analysis in the study in achieving the manageable target data because it describes both qualitative and quantitative approaches and methods of study in the effectiveness of interactive multimedia courseware (Ames, Glenton, & Lewin, 2019).

3.4 Research Instruments

To obtain the needed data and information of the study, a formulated questionnaire interview is made based on the study under investigation. The interview guide question is composed of two parts. The first part is all about the effectiveness of interactive multimedia courseware in the care management students and how the process is effective on the learning process and enhancement of the students. The interviews from the different participants will not last for 30 minutes so that they will not be disturbed in their work as compliance to research work and ethics.

3.5 Procedures in Gathering Information

This study is acquired through a focused group discussion from the two groups of Clinical Instruction, the first group belongs to Doctorate Degree expertise and the other group belongs to Masters' Degree. This is to further elaborate on the study under investigation. The following procedures are observed.

a. Mapping

It is observed that most of the Clinical Instructors are using traditional teaching methods. With the trends of technology, traditional techniques can be improved through multimedia courseware to adopt the system of technology. It highlights the improved feedback and practices the quality of the structure map concept. It elaborates the improved and increased framing of teaching quality relationships (Roessger, Daley, & Hafez, 2018).

b. Conduct of FGD

Before the conduct of the interview, 3 Doctorate Degree Clinical Instructors and 3 Masters' Degree Clinical Instructors are tapped for the possible topic and improved system of teaching in care management.

c. Formulation of Paper

After the mapping, all the possible suggestions from the group of people are given emphasis and analyzed for proper study. There is a need to change traditional teaching to the technology of teaching the care management students.

d. Formulation of Questionnaire

The interview guide question is formulated based on the suggested criteria given by the expert Clinical Instructors. They propose multimedia courseware as a tool in teaching nursing care management students.

e. Validation of Questionnaire

5 people are chosen to validate the interview guide questions which they are experts in the curriculum development of the care management of students. Their suggestions are given emphasis before floating the questionnaire.

f. Floating of Questionnaire

After the validation process and upon the approval of the Dean of the College of Nursing, the questionnaire is floated, and a series of interviews are done until the target population is achieved. This is done through a Google form.

g. Analysis of the Questionnaire

After retrieval of the interview, thematic analysis is done for the analysis of answers from the respondents.

3.6 Trustworthiness of the Study

Trustworthiness, credibility, transferability, dependability, and confirmability are important to consider in making a research. The procedures are followed as part of the ethical research. Since qualitative is narrative-based, it must be true to explain the details of the study. It requires structure differently. It must be true and must be relevant. It enhances the trueness and explains the design in the qualitative information in the manuscript (Korstjens, & Moser, 2018).

On the other hand, credibility is one of the trusts in research. The data must be credible and true. The series of answers during the interviews are analyzed properly to provide correct and credible results of the study. It aims to synthesize the study on multimedia courseware. It shows that analyses are interpreted correctly and credibly. It shows trustworthiness, information, and process (Ismagilova, Slade, Rana, & Dwivedi, 2020).

In addition to transferability obtained, the researcher provides content on the analysis in the study like the theory, design, and the purpose. Series of interviews are done just to get correct information on the tasks in the improved transferable knowledge on multimedia courseware. It proposes strategies and techniques in teaching that serve as a benchmark tool in the effectiveness of multimedia courseware (Xie, et al., 2019).

Similarly, to dependability, the study is based on previous studies in care management. Hence; the dependability of this study is obtained through a series of researches for better improvement in the system of the effectiveness of multimedia courseware. Validation has been done in establishing in the writing of this research and challenging task on the different viewpoints that constitute the study and distinguishes the different varieties of context approach in the research of study (Fitz Patrick, 2019).

Confirmability, enhancing the initiative in the credibility of the study confirms the report of the study through the test, theory, and practices in a care management setting in teaching. The awareness of the study initiates the credibility and distinct underlying in the flexible subject of the study. This confirms the study on the effectiveness of multimedia courseware as written in their report (L. Haven, & Van Grootel, 2019).

3.7 Scope and Limitations

This study is only limited to a group of Clinical Instructors. They are Doctorate and Masters' Degrees who have the expertise in the review of the effectiveness of multimedia courseware among the care management system in the College of Nursing or in any medical allied courses in both public and private Higher Education Institutions (HEIs).

3.8 Research Instruments

3.8.1 Effectiveness of Interactive Multimedia Courseware in Teaching Care Management

Scale	Description	Interpretation
4.20-5.00	Very Good	Interactive multimedia courseware is strongly effective
3.40-4.19	Good	Interactive multimedia courseware is effective
2.60-3.39	Satisfactory	Interactive multimedia courseware is moderately
		effective
1.80-2.59	Poor	Interactive multimedia courseware is ineffective
1.00-1.79	Very poor	Interactive multimedia courseware is ineffective at all

4. Results

Table 1: Effectiveness of interactive multimedia courseware in teaching care management

Variables		Interpretation	Ranking
Trends in the exposure of multimedia learning as compared to traditional learning	4.15	Good	10.5
2. Difference from traditional learning	4.27	Very Good	1.5
3. Learning is effective	4.27	Very Good	1.5
4. Lessons are easily understood	4.15	Good	10.5
5. Improves performance of students	4.10	Good	13
6. Promotes and enhances better learning	4.13	Good	12
7. Delivers course output accordingly	4.23	Very Good	4.5
8. Effective and efficient support to students	4.23	Very Good	4.5
9. Conceptualizes the faculty role in teaching	4.20	Very good	7
10. Controls structured multimedia program	4.18	Good	8
11. Illustrates and grasps complex process and coherence		Good	14
12. Adapts to the needs of the students	4.25	Very Good	3
13. Characterizes different lecture methods	4.22	Very Good	6
14. Assists in the instruction of students	4.17	Good	9
Average Weighted Mean		Good	
Standard Deviation			_

Table 1 presents the weighted mean and the corresponding interpretation of the effectiveness of interactive multimedia courseware in teaching care management. It shows that rank 1 is shared by the two indicators which are "Difference from traditional learning", and "Learning is effective", with a weighted mean of 4.27 or Very Good which means interactive multimedia courseware is strongly effective. Rank 2 is "Adapts to the needs of the students", with a weighted mean of 4.25 or Very Good which means interactive multimedia courseware is strongly effective. Rank 3 is shared by the two indicators which are "Delivers course output accordingly", and "Effective and efficient support to students", with a weighted mean of 4.23 or Very Good which means interactive multimedia courseware is strongly effective. The least in rank is "Illustrates and grasps complex process and coherence", with a weighted mean of 3.42 or Good, which means interactive multimedia courseware is effective. The overall average weighted mean is 4.14 (SD=0.206) or Good which means interactive multimedia courseware is effective in teaching care management among the respondents.

Table 2: Test of significant correlation on the interactive multimedia courseware in teaching care management as observed by the respondents

Test of Significant Correlation	z-computed value	Comparison	z critical value	Decision
Multimedia courseware as observed by the respondents	86.5342	>	± 1.96	rejected
Two-tailed test at 0.05 level of significance with df of 90				

Table 2 presents the test of significant correlation on the interactive multimedia courseware in teaching care management as observed by the respondents.

It revealed in the table that the z computed value is 86.5342 which is greater than the z critical value of ± 1.96 which resulted in the decision of rejection, a two-tailed test at 0.05 level of significance with df of 90. Therefore, it is safe to say that there is a significant correlation between the interactive multimedia courseware in teaching care management as observed by the respondents.

Table 3: Themes and central ideas on the effectiveness of interactive multimedia courseware in teaching care management

Themes	Participants'	Central Ideas
	Responses	
1. Exposure to	Good	Comparison of multimedia and traditional
multimedia		teaching
learning	Good	Characterizes different lecture methods
	Very Good	Assists instruction
2. Innovation and	Good	Enhance better learning
promotion of multimedia	Good	Improve performance of students
courseware	Good	Deliver course output
3. Effectiveness of	Very Good	Traditional Learning
multimedia	Very Good	Lessons are easily understood
courseware	Good	Learning is effective
	Very Good	Support students

4. Concept and	Very Good	Role of faculty in teaching
control of	Good	Adapts the needs of the students
multimedia	Good	Illustrate the process of learning
courseware	Very Good	Control structure of multimedia courseware

4.1 Exposure to Multimedia Courseware Learning

Exposure to multimedia courseware learning is important in care management because they are equipped with the trend in technology as part of their learning enhancement. This provides integration of knowledge that influences students in their teaching of care management among them through the technology of multimedia courseware that enhances the focus of learning among students (Mallillin, Carag, Mallillin, & Laurel, 2020). They say:

"Comparison from latest trend to traditional teaching". (T1-P38 & P25)

"Assists in the instruction of students in their learning process". (T1-P15 & P13)

"Characterizes different methods of teaching techniques". (T-P15 & P14)

Hence, equipping them with the latest trend of teaching will provide better teaching output among the students as compared to traditional teaching which is sometimes boring because this can help the students in the learning process as far as instruction is concerned. It even provides different characteristics in strategies in teaching and techniques.

4.2 Innovation and Promotion of Multimedia Courseware

With the innovation of technology, the promotion of multimedia courseware is everywhere. This will enhance students in the upgrade of teaching methods of learning. They wanted to study the trend of high-technology learning. This has been highlighted on the adaptable teacher theory and model as formulated by (Mallillin, 2021) in the teaching profession and application. They stressed that,

"Improves performance of students in their learning process". (T2-P46 & P24)

"Promotes and enhances better learning in their career". (T2-P30 & P25)

"Delivers course output in teaching for better learning". (T2-P34 & P18)

Nonetheless, innovation and promotion of multimedia courseware can help and improve the academic performance of care management students. It illustrates and promotes better learning outcomes and output in their care management subject where it delivers course output on the expected learning among the students.

4.3 Effectiveness of Multimedia Courseware

Similarly, the effectiveness of multimedia courseware depends on the learning output of the students whether it is met or not. This depends on their willingness to learn. The multimedia advocates the teaching model for the student learning center. It focused on collaborative learning and inquiry on the learning situation. It provides initiative for clinical instructors and students in building the classroom teaching to optimize multimedia software for teaching care management to students. This promotes proper learning for students, (Du, & Liang, 2021). They wanted that,

"Learning is effective and interesting inside the classroom". (T3-P47 & P17)

"Lessons are easy to understand and very timely". (T3-P27 & P12)

"Supports students in their learning process and enhancement". (T3-P35 & P19)

"Unique techniques for learning improvement for students". (T3-P29 & P14)

Furthermore, it elaborates on the effectiveness of multimedia courseware which is interesting and enjoyable in the learning process of the students. Accordingly, it is easy to understand and very timely for their studies in care management since it supports and enhances students' learning output and performance. Still, it is a unique technique in the improvement of students' academic performance.

4.4 Concept and Control of Multimedia Courseware

The concept and control of multimedia courseware are in connection with the trends of technology and upgrading knowledge of teaching techniques in the care management students. It provides an impact on the rapid change of technology in the paradigm of education. It describes the framework and concept of the courseware in multimedia interaction, feasibility of the test in multimedia interactive courseware, responses to multimedia interactive courseware, (Septiani, & Rejekiningsih, 2020), they say,

"Assist and explore the faculty in their role of teaching". (T4-P44 & P12)

"Illustrates and grasps complex processes and coherence". (T4-P38 & P9)

"Controls structured program". (T4-P26 & P11)

"Adapts to the needs of the students". (T-P20 & P18)

Indeed, the concept and control of multimedia depends on the curriculum and its effectiveness to assist faculties in their role in molding the academic performance of the care management students. It provides a better understanding of the process of learning among them. It controls the structure based on the capacity and need of the students.

5. Discussion

5.1 Exposure to Multimedia Courseware Learning

Well, exposure to multimedia courseware learning provides a learning process for students in a technical world. The trend at present is high-tech learning which assists care management students in the global competition of learning as compared to those students who are being taught traditionally and manually. The application of what they learn manifests in the courseware of learning they encounter. It helps the students to advance their knowledge in their future careers because proper instructions are given emphasis. Multimedia courseware learning provides different distinctions on techniques in providing knowledge and techniques to the learning process where it frames to their capacity and ability of learning. The technology of learning is an important aspect in exploring the positive influence of learning where students can express their feelings and emotions. It is an element of multimedia design in their care management module. It explores the outcome of their domain of learning. The methods on the exposure multimedia learning and design identify the gaps in the effect of their learning process on their cognitive, affective and psychomotor skills on their academic performance (Kumar, Muniandy, & Wan Yahaya, 2019). On the other hand, multimedia improves the concept and current methods in the exposure trend of the courseware in the integration and development of application in solving issues and sense of entertainment in the learning process of the students. The interaction of the students with the application varies on their needs and capabilities in learning as part of their curriculum. It is vital and important in dealing with information for them (Msiza, & Dehinbo, 2019). Subsequently, the objective of the exposure to multimedia courseware application is to identify the attitude of the teachers involved in the care management subject as a supplement in the courseware program. It is adopted to go with the current trend of technology, to better equip students in a high-tech world of learning. It is developed by experts for implementation and for proper execution in the improved system of learning (Soman, 2019).

5.2 Innovation and Promotion of Multimedia Courseware

One of the trends in the innovation and promotion of multimedia courseware to be used in teaching as part of the high-tech of knowledge to where traditional teaching can be improved as based on the current technology. This is a part of the innovation of the curriculum developer in the implementation of technical teaching in the technical world. The innovation and promotion of multimedia courseware can improve the performance of the students in the learning process because students nowadays are influenced by the millennial era where technology booms. The utilization of technology can enhance their learning. This can help to improve learning because of the new trend of the innovation of multimedia courseware knowledge. It delivers a better course output because of the utilization of high-tech courseware for the improved learning of students. In the millennial era information and dissemination on the innovation and promotion of multimedia, courseware has been given emphasis and design in support of the technical

means in the high-tech world. The transmission evolves to the people as a way of information and exchange values from the old tradition to new way system knowledge of technology. Updating the techniques and strategies in teaching makes a perfect design in the care management of the students in terms of content and execution. The innovation of teaching and concept is greatly significant to personal knowledge and development training in the academe and industry. The development and the increase of digital technology explore innovation and development of communication design in teaching to cultivate high-end designs of teaching and helpful in the millennial era of students. The digital technology on multimedia courseware influences the learning process of the students in the perfect transformation of static, dynamic, and dimensional knowledge which is important and necessary to all students to construct innovation training for them in a digital background of learning (Lv, 2019). The technology in teaching multimedia applications in care management promotes the development of education into high caliber quality. The courseware and the content integrated into the system management are more complicated but interesting and very challenging as part of the process of learning. The more complicated the compilation process is the more the challenge is on the part of the learners. They adapt and guide forever in their knowledge of learning. The technology virtual in multimedia teaching innovates the system in the integration and methods of teaching weaknesses and shortcomings to better achieve teaching in the care management (Deng, 2019). The technology of virtual reality emerges from the new designs and techniques in handling multimedia courseware completely in the promotion and development of handling the care management students that will bring a transformation to students in the world of knowledge and power to discover learning in a high-tech world. It gives a concrete method and application of the real technology and design in teaching for better improvement and update knowledge in teaching (Su, & Sun, 2019).

5.3 Effectiveness of Multimedia Courseware

The measurement of the effectiveness of multimedia courseware and application is based on the input and output of the students in the classroom as a result of the learning process. Furthermore, multimedia courseware is interesting when performed inside the classroom because of its high-tech learning and strategies. The lessons are easy to understand because they can see the actual scenario and application of the learning process and are very timely on their care management subject. The pictures and the different images motivate students to the actual learning process. It helps to improve the learning process and unique strategies and techniques in teaching. Modelling the multimedia courseware in the learning process of students is capable of enhancing learning and improvement. The effectiveness of multimedia courseware is a tool to evaluate the performance of students in their learning process as a supplement to help students in their care management subject. It indicates how the learning process can be improved as centered learning inside the classroom environment (Hashim, & Jamaludin, 2018).

On the other hand, the acceptance of multimedia teaching on both teachers and students' advantages and lifelikeness in a large content of information and visualization. Dealing with multimedia courseware teaching as compared to traditional teaching makes students learning interesting and multimedia plays an important role in the learning process and becomes effective (Chenyang, et al., 2019). The development of the rapid social economy in technology is becoming rampant and increasingly being used worldwide. The ideology of the effectiveness in teaching can monopolize the insipidness and stiffness in the traditional teaching method, which provides students to be more interesting and vivid and explore students in their initiative in the learning process that become enthusiastic, remarkable, and promote efficiency and quality of teaching inside the classroom. The application and analysis of multimedia technology in teaching care management corresponds to the improvement and necessary references of multimedia in teaching (Peng, 2019).

5.4 Concept and Control of Multimedia Courseware

Because of the trends in the millennial era of technology the concept of teaching has been upgraded to equip knowledge on the high-tech of teaching care management students and the likes. The concept is based on the knowledge for the improvement of knowledge in the teaching system. This is where the birth of multimedia courseware is as part of the technology. The control of multimedia courseware is to adapt to the needs and abilities of students. The structured program in the courseware is based on the curriculum of the students due to the demands of the course in the care management subject. The courseware illustrates the situation needed in the learning process of the students to grasp the process of the complex into a coherent one. It assists and helps faculties in their role as shapers and molders of the students and in the future generations. The concept of multimedia courseware in the modernized world provides information in the intellectual diversity in teaching and promotes modernization in teaching multimedia courseware information. The development and concept in teaching is the trend in multimedia courseware is based on theory and practice. It is expected that different activities are introduced in the courseware for better learning enhancement to promote transformation and change in the theory classroom knowledge into specified skills in teaching and abilities to introduce better techniques in teaching the courseware in the real world (Cui, 2019). The multimedia courseware software makes traditional classroom teaching open for change into high-tech teaching with the use of technology. It is an important track where traditional teaching hurdles and adopts new teaching style to demonstrate better practice for student learning. The teaching is simple because everything is programmed to the best knowledge of the teacher in an effective manner. It is a courseware design for multimedia with the use of a computer projector to present the images and pictures in the lesson. It highlights the focus of the teachers in teaching care management students. The teaching process proves that the application, concept, control, and design in multimedia become an effective and efficient quality of teaching (Liu, 2019). Under the classroom mode in the process of multimedia, the courseware provides resources to identify the learning process of the students for better understanding and better output in their academic performance. This explores their knowledge, ideas, and achievement in the classroom. Multimedia courseware is designed practically in a wide use by professionals in teaching care management with proper emphasis and examples to their learning autonomous of learning and inquiry (Qian, 2018).

6. Conclusions

- 1) It shows that interactive multimedia courseware enhances the difference from teaching traditionally to high-tech teaching which results in effective learning among the students. It also reveals that learning is effective and interesting for the students inside the classroom. In addition, it is easy for the students to learn the lesson and very timely in their care management course. Similarly, support the students in their learning process and enhancement. Lastly, the multimedia courseware has unique techniques and strategies for the learning improvement of the students.
- 2) It shows that multimedia courseware enhances students in learning process through exposure to technology, innovation and promotion, concept and control, and its effectiveness in the improvement and delivery of course outline and output.

7. Recommendations

- 1) Multimedia courseware should be upgraded from time to time to adopt its effectiveness in the learning process of the students to illustrate and grasp complex processes and coherence in the teaching process of care management students. In addition to the abrupt change of technology.
- 2) A thorough evaluation of the curriculum in care management must be done from time to time to better equip with the trends of the effectiveness of multimedia courseware and upon the needs and demands of the learning process.

Conflict of Interest Statement

The author declares no conflicts of interest.

About the Author

Dr. Johdel C. Cabaluna is a Registered Nurse and a Licensed Professional Teacher. He is an Assistant Professor at Adamson University, Manila Philippines. He is also a reviewer and lecturer in various review centers in the Philippines.

References

- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2019). Trends in global higher education: Tracking an academic revolution. Brill.
- Ames, H., Glenton, C., & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: a worked example from a synthesis on parental perceptions of vaccination communication. BMC medical research methodology, 19(1), 26.
- Asadollahi Kheirabadi, M., & Mirzaei, Z. (2019). Descriptive valuation pattern in education and training system: a mixed study. Journal of Humanities Insights, 3(01), 7-12.
- Bonito, S. R. (2019). The usefulness of case studies in a Virtual Clinical Environment (VCE) multimedia courseware in nursing. The Journal of Medical Investigation, 66(1.2), 38-41.
- Camerino, O., Valero-Valenzuela, A., Prat, Q., Manzano Sánchez, D., & Castañer, M. (2019). Optimizing education: A mixed methods approach oriented to teaching personal and social responsibility (TPSR). Frontiers in psychology, 10, 1439.
- Cui, N. (2019, February). Development of an Intelligent Foreign Language Multimedia Teaching System Based on the "New Liberal Arts" Paradigm. In International Conference on Application of Intelligent Systems in Multi-modal Information Analytics (pp. 86-91). Springer, Cham.
- David, L. (2015). Cognitive theory of multimedia learning (Mayer). Learning theories.
- Du, W., & Liang, X. (2021). The application of multimedia courseware in teaching college English intensive reading from the perspective of constructivism. *The International Journal of Electrical Engineering & Education*, 0020720920984312.
- Fitz Patrick, B. (2019). Validity in qualitative health education research. Currents in Pharmacy Teaching and Learning, 11(2), 211-217.
- Deng, W. (2019, February). Research on New Computer Software Teaching Method Combining Virtual Display Technology and Multimedia Technology. In International Conference on Application of Intelligent Systems in Multi-modal Information Analytics (pp. 949-955). Springer, Cham.
- Hashim, N. A., & Jamaludin, N. S. (2018). The Effectiveness of Multimedia Courseware in Learning Data Modelling Concepts. Journal of Computing Research and Innovation, 3(1), 30-35.
- Hu, X. (2019, November). Design of Multimedia Interactive Courseware Based on Flash. In Journal of Physics: Conference Series (Vol. 1345, No. 5, p. 052002). IOP Publishing.
- Huang, J., & Liang, D. (2019, July). Analysis of Problems and Causes in the Design and Application of Classroom Teaching Courseware in Medical Colleges and Universities. In 4th International Conference on Contemporary Education, Social Sciences and Humanities (ICCESSH 2019). Atlantis Press.
- Ismagilova, E., Slade, E., Rana, N. P., & Dwivedi, Y. K. (2020). The effect of characteristics of source credibility on consumer behaviour: A meta-analysis. Journal of Retailing and Consumer Services, 53.

- Kaihlanen, A. M., Salminen, L., Flinkman, M., & Haavisto, E. (2019). Newly graduated nurses' perceptions of a final clinical practicum facilitating transition: A qualitative descriptive study. Collegian, 26(1), 55-61.
- Korstjens, I., & Moser, A. (2018). Series: practical guidance to qualitative research. Part 4: trustworthiness and publishing. European Journal of General Practice, 24(1), 120-124.
- Kumar, J. A., Muniandy, B., & Wan Yahaya, W. A. J. (2019). Exploring the effects of emotional design and emotional intelligence in multimedia-based learning: an engineering educational perspective. New Review of Hypermedia and Multimedia, 25(1-2), 57-86.
- L. Haven, T., & Van Grootel, D. L. (2019). Preregistering qualitative research. Accountability in Research, 26(3), 229-244.
- Liu, H. (2019). Applying Computer Assisted Instruction Technology to Assist Hurdle Running Teaching: An Approach of Physical Education Network Teaching Resources Based on Massive Open Online Course and Flipped Classroom. Open Access Library Journal, 6(11), 1.
- Lv, C. (2019). Research on the Innovative Development of Visual Communication Design under the Digital Background.
- Msiza, N., & Dehinbo, J. (2019, June). A System to Visually Demonstrate the Key Concepts of Multimedia Fundamentals for Undergraduates. In EdMedia+ Innovate Learning (pp. 1185-1198). Association for the Advancement of Computing in Education (AACE).
- Mallillin, L. L. D. (2020). Different Domains in Learning and the Academic Performance of the Students. *Journal of Educational System*, *4*(1), 1-11.
- Mallillin, L. L. D. (2021). Teacher Theory and Adaptable Model: An Application to Teaching Profession. *European Journal of Education Studies*, 8(12).
- Mallillin, L. L. D., Cabaluna, J. C., Laurel, R. D., Arroyo, P. A. C., Señoron Jr, T. M., & Mallillin, J. B. (2021). Structural domain of learning and teaching strategies in the academic performance of students. *European Journal of Education Studies*, 8(9).
- Mallillin, L. L. D., Carag, E. A., Mallillin, J. B., & Laurel, R. D. (2020). Integration of knowledge through online classes in the learning enhancement of students. *European Journal of Open Education and E-learning Studies*, 5(1).
- Mallillin, L. L. D., & Mallillin, J. B. (2019). Competency skills and performance level of faculties in the higher education institution (HEI). *European Journal of Education Studies*.
- Niu, X. (2019, July). Research on Multimedia Teaching in Universities Under Human-Computer Interaction Environment. In International Conference on Human-Computer Interaction (pp. 330-340). Springer, Cham.
- Peng, L. (2019, June). Analysis on the Application of Multimedia Technology in the Teaching of College Ideological and Political Courses. In International Conference on Applications and Techniques in Cyber Security and Intelligence (pp. 2117-2121). Springer, Cham.

- Qian, D. (2018, January). Instructional Design of Multimedia Courseware Design and Production Based on Flipped Classroom in Universities-Take the Trigger as an Example. In International Conference on Technology in Education (pp. 142-153). Springer, Singapore.
- Raso, D., Aiemphaya, K., Noymanee, N., & Anukulwech, A. (2018). Computer Multimedia Assisted Presentation Program Teaching Courseware. SAR Journal, 1(3), 71-76.
- Roessger, K. M., Daley, B. J., & Hafez, D. A. (2018). Effects of teaching concept mapping using practice, feedback, and relational framing. Learning and Instruction, 54, 11-21.
- Septiani, A. N. N. S. I., & Rejekiningsih, T. (2020). Development of Interactive Multimedia Learning Courseware to Strengthen Students' Character. *European Journal of Educational Research*, 9(3), 1267-1280.
- Soman, M. (2019, October). Attitude of Prospective Teachers towards Web-Supplemented Courseware. In Proceedings of the 2019 The 3rd International Conference on Digital Technology in Education (pp. 147-149).
- Su, Z., & Sun, W. (2019, May). Research on Teaching Innovation of Art Design Based on Virtual Reality Technology. In 2019 International Conference on Management, Education Technology and Economics (ICMETE 2019). Atlantis Press.
- Wang, Y., Zhao, C., & Zhao, R. (2019, February). The Impact of Modern Educational Technology on College Teaching and Its Application Strategies. In International Conference on Application of Intelligent Systems in Multi-modal Information Analytics (pp. 999-1006). Springer, Cham.
- Xie, C., Zhang, Z., Zhou, Y., Bai, S., Wang, J., Ren, Z., & Yuille, A. L. (2019). Improving transferability of adversarial examples with input diversity. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (pp. 2730-2739).

Johdel C. Cabaluna EFFECTIVENESS OF INTERACTIVE MULTIMEDIA COURSEWARE IN TEACHING CARE MANAGEMENT

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Social Sciences Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a Creative Commons Attribution 4.0 International License (CC BY 4.0)