DEVELOPMENT OF E-MODULE DANCE SPORT FOR IMPROVING LEARNING MOTIVATION AND PHYSICAL FITNESS PERFORMANCE OF COLLEGE STUDENTS

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UNIVERSITI PENDIDIKAN SULTAN IDRIS

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ABSTRACT

The purpose of this study was to develop an online dance sport teaching module and evaluate the effectiveness of the developed module in enhancing learning motivation and physical fitness performance among college students. The development and evaluation of the efficacy of the E-MDS module is guided by the ADDIE Model. The whole research process was conducted using the mixed method. In the module development, lecturers' interviews, student focus group discussion, and systematic literature review were used to screen the teaching content and strategies for the E-MDS needs. The expert content questionnaire, lecturer inter-observer agreement questionnaire, and student evaluation questionnaire were used to test the validity and reliability of the E-MDS, in the evaluation of the module's effectiveness in enhancing students' achievement phase, the study used a t-test on the achievement data of 400 first-year college students in the quasi-test. It is concluded that the E-MDS passed the validity and reliability tests. E-MDS is scientific and can significantly enhance students' learning motivation and physical fitness performance compared to traditional teaching. This study implies that this study can not only fill the current gap of online physical education resources in China and improve the problem of a single platform for online physical education but also provide theoretical guidance for the future development of online physical education.

PEMBANGUNAN E-MODULE DANCE SPORT UNTUK MENINGKATKAN MOTIVASI PEMBELAJARAN DAN PRESTASI KECERGASAN FIZIKAL PELAJAR KOLEJ

ABSTRAK

Tujuan kajian ini adalah untuk membangunkan modul pengajaran sukan tarian atas talian serta menilai keberkesanan modul yang dibangunkan dalam meningkatkan motivasi pembelajaran dan prestasi kecergasan fizikal dalam kalangan pelajar kolej. Pembangunan dan penilaian keberkesanan modul E-MDS ini berpandukan Model ADDIE. Keseluruhan proses penyelidikan dijalankan dengan menggunakan kaedah mixed method. Dalam fasa pembangunan modul, temu bual bersama pensyarah, perbincangan kumpulan berfokuskan pelajar, serta analisis sistematik terhadap kajian lampau telah digunakan untuk menilai kandungan pengajaran dan strategi yang diperlukan bagi modul E-MDS. Bagi menguji kesahan dan kebolehpercayaan modul ini, beberapa instrumen telah digunakan, iaitu soal selidik pakar untuk kandungan, soal selidik persetujuan dalam kalangan pensyarah (inter-observer), serta soal selidik penilaian pelajar. Dalam fasa penilaian keberkesanan modul terhadap pencapaian pelajar, kajian ini menggunakan ujian-t ke atas data pencapaian 400 orang pelajar tahun pertama kolej menerusi rekabentuk kuasi-eksperimen. Hasil kajian menunjukkan bahawa modul E-MDS telah memenuhi keperluan kesahan dan kebolehpercayaan, serta terbukti mempunyai asas saintifik yang kukuh. Selain itu, modul ini berupaya meningkatkan motivasi pembelajaran dan prestasi kecergasan fizikal pelajar secara signifikan berbanding kaedah pengajaran tradisional. Implikasi kajian ini menunjukkan bahawa modul E-MDS bukan sahaja dapat mengisi jurang sedia ada dalam sumber Pendidikan Jasmani atas talian di China dan menangani isu keterbatasan platform pengajaran Pendidikan Jasmani secara atas talian, tetapi juga menyediakan panduan teori bagi pembangunan Pendidikan Jasmani atas talian pada masa hadapan.

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LIST OF ABBREVIATIONS

A-D-D	Analysis, Design, Development
ADDIE	Analysis, Design, Development, Implementation, Evaluation
CLT	Constructivist Learning Theory
COVID-19	Corona Virus Disease 2019
DSMT	Dance Sport Movement Tutorial
E-MDS	E-Module dance sport
GASPC	General Administration of Sport of China
I-E	Implementation, Evaluaion
LMS	Learning Management Systems
MOODLE	Modular Object Oriented Dynamic Learning Environment
P.E.	Physical Education
PE	Physical Education
RQ	Research Question
SDT	Self-Determination Theory
TRAD	Traditional Teaching Method
UNESCO	United Nations Education, Scientific, and Cultural Organisation
WHO	World Health Organisation

APPENDIX LIST

CHAPTER 1

INTRODUCTION

1.1 Introduction

The current situation of physical education is influenced by several factors, including the social status of physical education, economic conditions, and the development of technology, etc. With the development of the times and the deepening of the reform, more educational ideas and concepts have appeared in front of people, and the concept of physical education has been continuously adjusted with the development of the times and the deepening of the reform. What physical education needs in the context of quality education is to help students to improve their comprehensive quality, to help students' psychological health, and to help students to strengthen their physical fitness. Only when students are physically and psychologically healthy, they can get a longer-term development (Liu, 2020). The real enhancement of students'

physical education is a kind of education that allows students to learn on their own (Lei, 2019).

According to the General Administration of Sport of China (GASPC) in 2023, physical education is already an important part of education and occupies an indispensable position as a mandatory subject in the university curriculum. Students are exposed to a wide range of sports activities.

At the same time, the conditions and level of physical education may be low due to different financial and resource constraints in different places. Traditional physical education is mainly face-to-face teaching by one teacher facing dozens of students. At some level, this traditional teaching is more like duck-filling teaching, and physical education has been groping its way forward on the road of reform. The development of physical education requires that attitudes and teaching methods and technology be updated in keeping with the progress of the times.

Dance is frequently part of the curricula of undergraduate courses, as well as the theme of dissertations, theses, and scientific articles (Brasileiro, Fragoso & Gehres, 2020). As a new sport, dance sport combines the elements of sport and dance (Dyck & Archetti, 2020), which not only emphasises the skills of dance, but also includes the requirements of physical fitness of sport. dance sport contains two dance categories, which are Latin Dance and Standard Dance. Dance sport is a popular sport, which not only helps to improve physical fitness, but also cultivates students' good morale. This is perfectly in line with the requirements of the specificity of physical education. In this study students needed to master the technical and theoretical

knowledge of dance sport, the technical knowledge includes Waltz and Paso Doble, and the theoretical knowledge included Introduction of Waltz, Waltz dance method and so on. Dance sport is explained in detail in 2.3.3 and the teaching contents of dance sport used in this study and the skills to be mastered are explained in detail in 4.2.4.

However, the variety of exercise, dance sport and PE experiences offered by sport and dance in many cases is currently seen as an entity separate from the student, and the role of the teacher should be to pull the strings (O'Connor, 2019). To achieve the educational objectives of dance and physical education requires a student-centred approach where students really learn to learn, also known as self-directed learning (Wang, 2021). How student-centred self-directed learning becomes the goal of this study and the future of physical education. This study is based on an online physical education teaching module designed by ADDIE, a teaching module where students can work independently on learning tasks. This online module relies on the development of online teaching.

Regarding the development of online physical education courses, the research process in Western developed countries is faster than in China and focuses on effectiveness and optimization studies (Tian, 2020). At present, the research on online physical education courses in China is still in the initial stage, and there are relatively few practical studies on online physical education courses. In terms of national policy support, The State General Administration of Sport's policy support for online physical education in recent years has been reflected in its promotion of the development of smart sports platforms. According to the guidance of the 14th Five-

Year Plan for Sports Development in 2021, the State General Administration of Sport emphasises the use of smart sports platforms to improve the public service system for sports.

Unlike other programmes where students can sit in front of a computer and complete an online course, physical education has its own specificities and needs to be developed in a way that balances the teaching of theoretical and technical aspects of the online physical education curriculum. At the same time, the specificity of physical education is also reflected in the effective integration of physical and psychological exercise for students. Through the analysis of online teaching of physical education courses in general universities, Liu (2020) analyzed that the content of online physical education teaching in general universities should start from the following aspects: First, curriculum needs to be in line with the specificity of physical education. Second, physical education courses should be created by substitute teachers themselves, which can be more in line with the specific situation of students.

This study was conducted on the students of a college in Zhuhai, Guangdong Province, China for the public sports class, and using the ADDIE model to design and build the E-MDS, and then the data were collected from the class using E-MDS teaching (experimental group) and the class using offline teaching only (control group), and the data consisted of two parts, the first part was the pre-test scores of learning motivation and physical fitness performance, the second part was the post-test scores of learning motivation and physical fitness performance, which was

compared and analyzed after the data collection, and the conclusions drawn were used as a basis for making appropriate recommendations.

The specific steps of the study include: (i) Reviewing relevant literature, summarizing previous experiences. (ii) Using the ADDIE model to design the college online dance sport course and build the E-MDS. (iii) The practical application of the E-MDS and the collection of related data. (iv) Statistical analysis of the collected data, verification of teaching effect in terms of achievement level in learning motivation and physical fitness performance compared to traditional teaching, and making relevant suggestions, etc.

The module constructed in this study is firstly applicable to dance sport, which belongs to Artistic Sports, such as aerobic gymnastics, cheerleading, rhythmic gymnastics, etc. Secondly, this study also hopes to provide a technical reference for the research of online teaching in other sports, in order to look forward to the common progress of the research of physical education.

1.2 Research Background

Along with the development of global education informatization, information technology plays a pivotal role in improving teaching effectiveness and promoting the development of education informatization industry. The sudden attack of COVID-19 at the end of 2019 made human beings all over the world experience a heavy blow, and the education industry also received a serious blow as a result. “In this global

lockdown, education has been rebooted as a home-based, technology enabled, remote activity with zero physical contact" (Azorín, Harris. & Jones, 2020). During the epidemic, this new teaching mode was used as the main mode of operation (Lapitan, 2021). However, due to lack of internet connectivity, information technology, educational materials, and digital technology skill distance learning is difficult for teachers, students, and families in developing countries (Mustafa, 2020).

Online physical education needs more attention from physical education scholars as a necessary tool for future physical education reform. Carrillo and Flores (2020) pointed out that there are many factors that influence the implementation of online public physical education, such as attitudes, beliefs and ways of dealing with teachers and students; the most important influencing factors are the technical support, and future development of online public physical education.

"Online education" is the use of online platforms as a carrier to put the teaching content on the online platform in the form of multimedia and record the learning online, and students complete the course through online learning and communication (Gu, 2019). Online education has been hailed as an important force in the democratization of education (Adarkwah, 2021). One of the greatest advantages of online education is the low cost of dissemination, eliminating paper costs, printing costs, and transportation costs, and relying on the Internet to effectively and widely disseminate educational resources in a short period of time.

Online education activities provide more open time and space to carry out online education, but at the same time, there are disadvantages in online education

that cannot be ignored, such as lack of communication and failure to grasp students' understanding and mastery of knowledge points in a timely manner (Zhang, Liu, Sun, Huo, Guo, Chen. & Yan, 2020). The study of online education evaluation system is not comprehensive, and a diversified online education evaluation system needs to be established. In general, online teaching meets the requirements of learning in the new era and has a strong vitality, which is the trend of future education development.

The learning mode of online physical education is a necessary path for physical education reform. From 2010 to the present, there have been calls for reforming public sports in Chinese universities. For schools, online teaching keeps pace with the times, on the one hand, it saves educational resources, breaks the classroom size limitation of traditional public physical education, and makes the classroom timely; for teachers, it reduces the teaching pressure, instead of teaching the same content repeatedly in different classes, they need to refine each teaching goal to ensure the quality of course resources; for the students, they can study with a purpose and plan, and for the content that is not firmly mastered, they can take fragments of time to practice, which can maximize the autonomy.

According to Professor Sun Ke, Huan Changdian, Ren Huitao, Yan Shizhan, Ji Chenglong, Zhang and Wang (2020), Online physical education is generally regarded as an important experimental teaching method and practical means to carry out physical education curriculum teaching in China under extraordinary circumstances, and although it has brought many new inspirations to Chinese physical education curriculum teaching and research workers, it is still relatively lacking in the

practical process and effect evaluation methods of physical education curriculum teaching in China.

In the future, more efforts should be devoted to deepen the research on important topics related to the construction of online education curriculum system for teaching sports information network technology, thus promoting the reform of Chinese sports teaching. Therefore, after the epidemic research related to sports network courses, need to be strengthen and should pay attention to sports network courses.

The needs of the post-epidemic era and the information age. Carrillo and Flores (2020) pointed out that there are many factors that influence the implementation of online public physical education, such as, the attitudes, beliefs and ways of dealing with teachers and students; the most important influencing factor is the technical support, future development of online public physical education. COVID-19 has led to the accelerated growth of online physical education programs and has forced institutions of higher education to reexamine how they provide high quality and equitable physical education (Beard & Konukman, 2020).

People gradually realize that the traditional online learning platform cannot meet the needs of modern online learning due to its single form of course resources, unreasonable course arrangement, poor interactivity and lack of learning effect evaluation, especially in some special periods. Therefore, choosing a suitable online teaching platform and building reasonable online teaching resources are the prerequisites to ensure the effect of physical education teaching.

1.3 Problem Statement

Currently, there are three main issues, including government directives, stakeholder needs, and current situation.

First is the government directive. The issue is motivation for reform is insufficient and online teaching still doesn't get enough attention. Government directives are a form of top-down external pressure that can motivate or force reform behaviour to occur. However, motivation is essentially an internal drive, depending on whether the organisation, individual or group recognises the need for reform from within (Anwar, 2023). At the present time, although the State General Administration of Sport (2021) emphasises the use of smart sports platforms to improve the public service system for sports, many colleges and universities are still unable to keep up with the awareness, and at the same time, these colleges and universities are unwilling to invest high amounts of construction funds, resulting in the reforms being carried out very slowly or outright impossible to carry out.

Zhang (2020) pointed out that as of now, many universities do not have a clear understanding of online teaching, and do not find out where the advantages of online teaching lie, and to teach online, schools also need to invest money to improve teaching conditions, so this leads to many universities being reluctant to teach online and holding an opposing attitude. The range of issues brought about, especially during the epidemic, did have a significant impact on physical education, and more importantly, some schools were hastily forced into formal online education without

preparation, resulting in most schools and students expressing reluctance to take online physical education courses after the epidemic.

At the same time, online physical education is not valued and accepted to a low degree, the curriculum development is difficult (Zhang, 2020). It goes without saying that online physical education is the future direction of physical education development, the establishment of perfect online sports still needs the efforts of future sports workers.

Second is stakeholder needs. The issue is the current provision does not meet needs (Guo, 2021). Nowadays, the development of online public physical education in China at this stage is in its infancy, with incomplete facilities in all aspects. The available teaching resources are limited and need to be developed continuously. Guo (2021) pointed out that four main aspects of public physical education courses in the context of COVID-19 are insufficient curriculum resources, lack of information literacy of physical education teachers, restricted teaching environment and doubtful learning outcomes of students.

Although there are many categories of online courses offered in China, online courses about physical education account for a relatively small number, and the content is relatively homogeneous and not clear enough for course classification. Through the survey, the number of online physical education courses is much lower than other subjects, and the development of a single type of course, the proportion of physical education skills courses is smaller than the proportion of theory courses and

other situations, the development of physical education courses is not optimistic (Peng, 2019).

Also, current provision ignores the specificity of physical education. Physical education is different from other education in that it is a dual physical and psychological education, which cannot be ignored, however majority of online physical education ignores the special characteristics of the physical education curriculum. According to Qin (2021), Physical education requires a certain amount of physical and mental load; physical exercises combined with thinking activities; and teaching of movement techniques. Therefore, physical education should be combined with its own characteristics to establish suitable online teaching, so that information technology can better serve physical education. This study was to take advantage of the E-MDS module while building a new model of an online physical education learning platform that takes into account the specificities of physical education, thus allowing them to meet the real needs of the present.

Third is the current situation. The issue is the current online physical education has shortcomings in terms of content and teaching platforms, it does not fully meet the requirements of university physical education courses and cannot reach the teaching objectives well (Liu et al., 2019). The current content of online physical education is yet to be enriched, teaching content is too homogeneous to meet the characteristics of multi-sport symbiosis of physical education and is not better integrated with online teaching.

At the same time, the use of online physical education platforms is not student-centred. Huang (2019) indicated that online physical education is not fully student-centered, considering students' individuality and differentiation, and the course content is relatively single.

The current approaches about online education in China are mainly O2O (Offline To Online; Liu, 2018; Zhang & He, 2020), SPOC (Chen, 2018; Yu, 2019), MOOC (Zhong & Guo, 2022), flipped classroom (Wang, 2018; Yao, 2019; Xiao, 2019; Wu, 2019; Bo, 2019; Liu, Huang, Chen & Quan, 2019; Fan & Duan, 2019; Pan, 2020) and blended learning model (Qin, 2018; Chen, 2018), among others.

Although some online teaching platforms have emerged in China, they also have many shortcomings, for example, they have problems in practical operation in terms of funding, curriculum development and teachers. For example, the modules in the MOOC platform's online teaching information model for physical education do not meet the specificity of physical education better, and due to the lack of intuitive interactive templates in the online platform, it does not fully meet the requirements of university physical education courses and cannot reach the teaching objectives well (Liu et al., 2019). The implementation of flipped classrooms in university physical education public courses is hindered by poor student autonomy and the limitations of teachers' ability and online learning environment.

Annis (2020) argued that the difficulty of online public physical education lies in constructing a tool for participating in formative evaluation of teaching, which should have video discussion forums, virtual bulletin boards teaching resources, and

other features that can be accessed at any time. Carrying out online physical education is a serious task for teachers, and making good use of the relevant resources of the online platform can well reduce the burden of teachers (Liu et al., 2019). It requires the joint efforts of students, teachers, universities, and society to establish a perfect online public physical education system, which is the responsibility and obligation of every sports worker in the future, as well as the responsibility and obligation given to us in the post-epidemic era. So, it is of great significance to increase online physical education teaching resources and upgrade and improve the teaching platform and modules of physical education courses. This is also one of the purposes of this study.

1.4 Research Objective

Based on the problem statement, this research is designed to:

i. RO1. To identify needs to develop the E-MDS module.

ii. RO2. To develop and to identify the validity and reliability of the E-MDS module.

iii. RO3. To identify the effectiveness of E-MDS module in terms of achievement level in learning motivation and physical fitness performance compared to traditional teaching.

iv. RO4. To identify the difference in the mean score between the pre-test and post-test learning motivation and physical fitness performance in the E-MDS course group and the traditional offline dance sport course group.

1.5 Research Question

According to the objectives of this study, 4 main research questions (RQ) were prepared to complete this study. The research questions for this study are as follows：

i. RQ1. What are the needs to develop the E-MDS module?

ii. RQ2. What is the validity and reliability of E-MDS module?

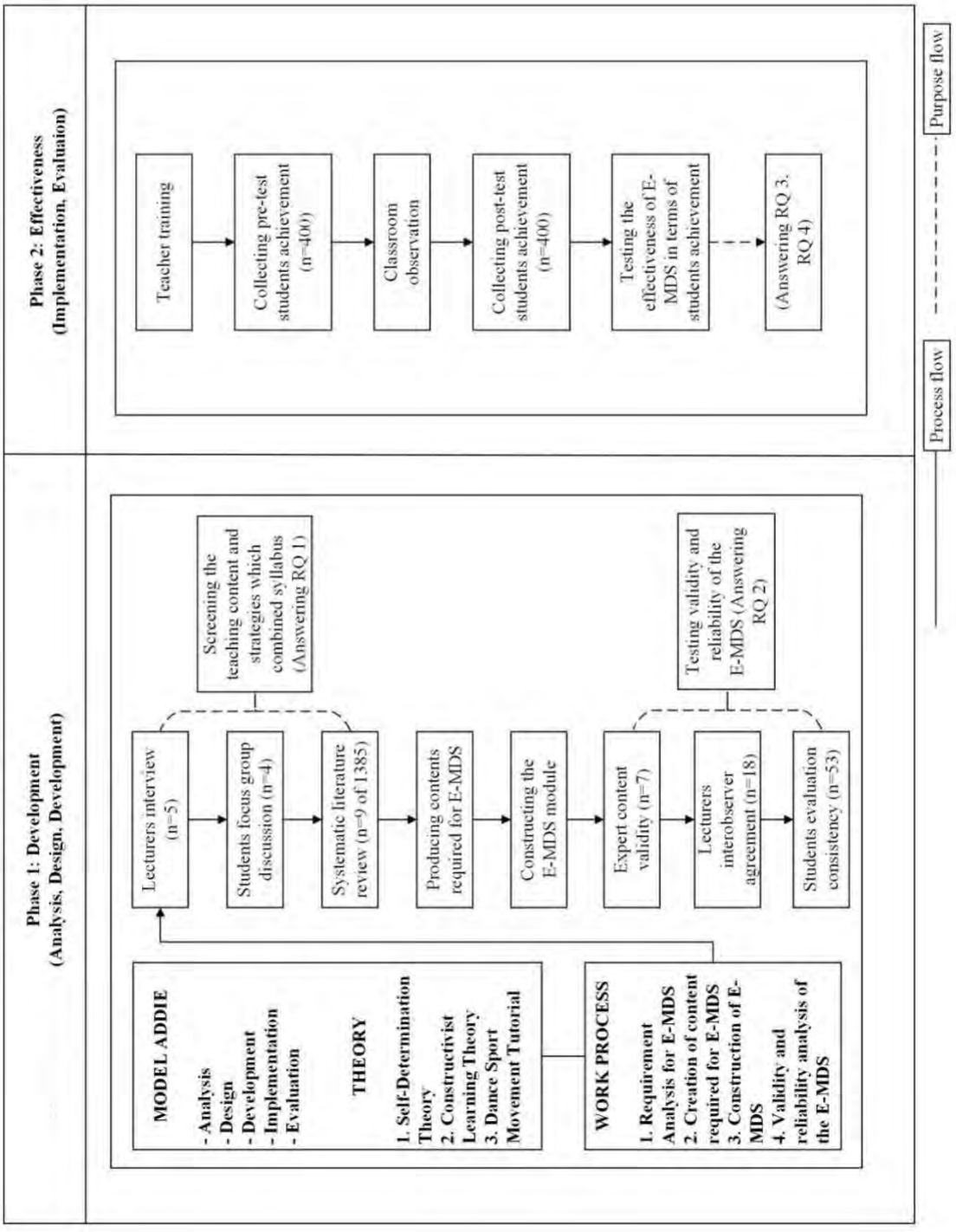
iii. RQ3. What is the effectiveness of E-MDS module in terms of achievement level in learning motivation and physical fitness performance compared to traditional teaching?

iv. RQ4. What is the difference in the mean score between the pre-test and post-test learning motivation and physical fitness performance in the E-MDS course group and the traditional offline dance sport course group?

1.6 Conceptual Framework

Figure 1.1

Conceptual Framework



This research was based on the scientific steps of the ADDIE model, guided by Self-Determination Theory, Constructivist Learning Theory, Cybernetics Theory and Dance Sport Movement Tutorial. The research process consisted of two main phases; the first phase was the development of the E-MDS module, which was done in the "A-D-D" (Analysis, Design, Development) process. The second phase was the testing of the effectiveness of the E-MDS in terms of students' learning motivation and physical fitness performance, which was done in the "I-E" (Implementation, Evaluation) process.

The process steps in "A-D-D" (Analysis, Design, Development) were as follows: In analysis phase, the researcher did the lecturers interview (n=5), students focus group discussion (n=4) and systematic literature review (n=9 of 1385), which' purpose was to screen teaching content, teaching strategies and answer RQ1. In the design phase, the researcher combined with textbook and syllabus (Dance Sport Movement Tutorial) to produce concrete teaching content and strategies. In the development phase, the researcher constructed the E-MDS module. Afterwards, through questionnaires by experts (n=7), lecturers (n=18) and students (n=53), the validity and reliability of the E-MDS was tested, and RQ2 was answered.

The process steps in "I-E" (Implementation, Evaluation) were as follows: In implementation phase, the researcher did teacher training first and collected pre-test students achievement (n=400). After classroom observation, the researcher collected post-test students achievement (n=400). In the evaluation phase, the researcher tested the effectiveness of E-MDS in terms of students achievement which's purpose was to answer RQ3 and RQ4.

1.7 Significance of the Study

1.7.1 For Teachers

This study is beneficial to teachers and to all those who work in teaching-related roles. Specifically, this study allows for a change in the position of the teacher, who is more of a support and facilitator. Teachers can help students construct and manage lessons, and the change in the teacher's position has a facilitating effect on teaching and learning. In addition, E-MDS as an online physical education teaching tool can cope with some unexpected period of time, teachers can completely use this way to teach physical education to students and will not affect the whole teaching progress because of the special period, which is one of the significances of this study.

1.7.2 For Students

This study is beneficial for students. This is because the results of our study show that online dance sport combined with the specificity of physical education teaching is effective in improving students' motivation and physical performance in physical education. This study is closer to the actual needs from meeting the cognitive needs of learners. At present, physical education teaching is still unable to achieve a completely student-centred teaching state, this study allows us to see the progress in this area, the students as the main body of active learning, no longer simply accept

and be indoctrinated, they hold more initiative, the change in the position of the students for the teaching and learning of all the promotion effect.

1.7.3 For Education in China

This study promotes the reform and optimization of online physical education teaching resources, it takes advantage of E-MDS to construct a new model of online physical learning platform to fill the current situation of lack of online physical education resources for sports in China. There is almost no practical research on E-MDS in sports in China, and there is almost no practical research on E-MDS for physical dance in the world, which is also the innovation point of this study, and provides a theoretical basis for future online teaching of physical education.

1.7.4 For Ministry of Education

The development of online physical education is still immature, and ministries of education in many countries, particularly in developing countries, have not invested sufficiently in building online resources for physical education. The E-MDS used in this study provides a theoretical and practical basis for the construction of online physical education resources in developing countries due to its open source and free of charge and low technical threshold, which can avoid the troubles caused by insufficient educational funding or low computer level of platform users, so that the governments of these countries can build online physical education resources with

low economic inputs based on the programmes proposed in this study and, in turn, contribute to the process of online physical education reform in the future.

1.7.5 For Education in The Post-epidemic Era

This study provides online technical guidance for teaching physical education in the post-epidemic era, where the sudden attack of COVID-19 has accelerated the demand for online educational resources in global education. The E-MDS teaching module in this study not only meets the needs of teaching in the post-epidemic era, but also fully integrates the practical characteristics of physical education.

1.7.6 For Other Physical Education Programmes

Although this study was conducted on dance sport, this programme is suitable for other sports that can be learnt in this manner, especially sports performance, so this is one reason why this study can be used as a replication and reference and is one of the implications of this study.

1.8 Limitations of the Study

For this study, the main limitations are as follows：

Firstly, there were gender limitations in the study because the students were restricted to female students. Female students were chosen for three main reasons.

The first reason is the difference in the physical fitness performance test items. According to The National Student Physical Fitness Standard (2020) in China, there are differences between males and females in the test items, for example, in the endurance items, which are measured by the 800-metre run for females and the 1000-metre run for males, which will make it difficult to directly compare the test results between the two genders. To ensure the operability and stability of item comparisons during the physical fitness performance test, and to ensure the fairness and comparability of the assessment results, the researcher chose to conduct the test only for female students. This can avoid the inconsistency of the test content and standards due to gender differences, thus making the data more accurate and meaningful.

The second reason is cultural and social factors. In the context of dance culture, dance, especially sport dance, is seen as an activity that females are better at or more interested in. For example, football is mostly chosen by male, and dance is mostly chosen by female. Based on these cultural perceptions, there are almost no male students choosing dance sport courses for ordinary Chinese colleges. Male gender stereotypes suggest that dance is a female-only activity with fewer opportunities for

male participation, especially in specific dance forms (e.g., dance sport) where female students dominate (Yan, 2023).

The third reason is the comfort level of student participation: some female students may prefer to learn and practice dance sport in a female group, and this preference may be more pronounced especially in an online instructional environment. In such environments, female students may feel more comfortable and relaxed because they can avoid feelings of embarrassment or discomfort due to the presence of classmates of the opposite sex (Dooling, 2019). In addition, online courses may have more privacy and social isolation compared to face-to-face forms of instruction, and certain female students may perceive studying with female peers as less distracting and enhancing concentration and motivation to learn. Particularly in disciplines such as dance, where there is expression of physical movement, female students often want the freedom to demonstrate and practice their dance skills in a pressure-free, non-judgmental environment, which can help them overcome any possible social barriers or self-consciousness issues.

Secondly, in order to ensure the stability of the team of lecturers and the student population, the study was conducted in only one college in the entire district. One college was chosen for two main reasons, the first being demographic similarity. The student population of the chosen college is similar to that of the whole of China in terms of gender, age, and background, while the lecturers and the syllabus and textbooks used, as well as the qualifications of the lecturers, are similar to those of lecturers across the country, so that more general conclusions can be drawn from the study of one college. The second is the practical limitations of the study. With limited

financial or human resources, the researcher may not be able to cover all colleges in the entire country. Choosing one representative college can reduce resource consumption while ensuring that the research data are representative. The next limitation is time constraints; the study may take a long time to cover multiple colleges, and choosing one college can help speed up data collection and analysis.

1.9 Operational Definition

1.9.1 E-Module Dance Sport(E-MDS)

The full name of E-MDS is E-Module Dance Sport which is an e-module that applies dance sport to online teaching and learning, and it was built through the ADDIE building process. In this study, E-MDS was based on MOODLE platform to design the modules of college dance sport courses. The teaching strategies of E-MDS were realised through courseware modules, video modules, interactive modules and evaluation modules, which served as the main modules for resource building. The teaching content of E-MDS consisted of 12 weeks of theoretical and technical teaching. In this study, E-MDS was used as an instrument for teaching and learning.

1.9.2 Learning Motivation

Learning motivation is the innate conviction that directs individual learning goals, motivates learners to put in consistent effort, reinforces prior knowledge, and strengthens and improves learning outcomes, which is as the purpose or desire of the student to engage in and put forth effort in the process of learning, as demonstrated by the student's selection of a particular learning activity and their efforts in pursuing it. In this study, learning motivation was defined as guiding students' purpose or desire to engage in and put forth effort on the physical learning goal set by teachers in the learning process and it was also seen as a tool to measure students attitudes towards the E-MDS and traditional teaching, which contained intrinsic motivation, identified regulation, external regulation, and amotivation.

1.9.3 Physical Fitness Performance

The concept of physical fitness performance is that physical fitness performance is reduced to strength, speed, endurance, flexibility and so forth, which reflect the comprehensive expression of human activities. Physical fitness performance needs to be reflected in the form of external movement of the human body or test indicators. In this study, physical fitness performance was used as a instrument to measure students changes in physical quality through the E-MDS and traditional teaching, which specific inclusion: one-minute sit-up (strength), 50-meter run (speed), 800-meter run (endurance), seated forward bend (flexibility).

1.9.4 MOODLE

MOODLE (Modular Object-Oriented Dynamic Learning Environment) is an open-source Learning Management System (LMS) for creating online learning platforms and virtual learning environments. It provides educational institutions, teachers and students with a flexible tool for course management, distribution of learning resources, online discussions and assessments.