

A Project entitled
Ball Games e-learning materials for Primary School

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Introduction

Information and Communication Technology (ICT) has turned into an important topic in the current time, specific in the educational environment (Griffin & Care, 2014). Increased access to and use of information and communication technology has been aided by the advent of knowledge societies. The school system has faced several issues as a result of this new circumstance, including changes in curriculum, assessment, and traditional teaching techniques (Dede, 2010). Many experts, when approached with this scenario, pointed out that the use of ICT has created various opportunities for teachers and the educational community. These possibilities are all tied to bettering education. Because it enables teachers to utilize new modes of communication, engagement, and, most importantly, the ability to alter the teaching process. Teachers seek for ready-made materials, extra materials, and tools to augment classroom teaching practices, according to research (Hinostroza, Ibieta, Claro, and Labbé, 2016). It is known that teachers commonly use the Internet to find teaching resources and materials. They look for material on the internet to supplement or expand on the subject and activities in the classroom. Fundamental Movement Learning Community(FMLC) provides the e-platform for the teachers. As a reference, the website provides instructional resources for the Primary School. As a result, the link brings together all of the Fundamental Movement's videos in one spot. The Fundamental Movement video may be easily searched by the teacher. Primary teachers seek for reference materials, such as YouTube, Facebook, or asking colleagues, in order to prepare for a better class. Because there is a scarcity of information on the Internet. It is tough for PE teachers to find suitable video clips for use in their classes.

E-learning has been a popular trend in recent years. E-learning overcomes the restrictions of conventional education in terms of time and place, in addition to providing richer materials than traditional classrooms to facilitate learning. Learner autonomy is critical to successful skill acquisition. As a result, one of the most important aspects of the optimum theory of motor learning is (Wulf & Lewthwaite, 2016). When compared to situations that do not give autonomous support, it has been consistently observed that practice conditions that match the learners' autonomy demands can lead to more successful motor skill development (Deci & Ryan, 2008). McCullagh (1993) conducted a study on children aged 9 to 11, and the research shows that because the kid is still developing, a demonstration is more effective than verbal advice in creating time and space. To improve the learning impact in motor skills, a demonstration is necessary (Hodges & Franks, 2002). To include spectators in the learning process and tell them of viable solutions to motor issues, a demonstration is advised. The instructor will show the movements of the motor skills in the Physical Education class.

With the development of technology and the needs of the PE teacher, online teaching materials can help PE teachers to improve the quality of teaching Physical Education. In this capstone project, the e-learning platform(appendix I) was created. The website integrated the exercise videos in teaching PE lessons for Primary Schools. To give a convenient way to Primary School PE teachers and Key Stage 2 Students to learn PE. For the Primary School PE teacher, they can use the videos for lesson planning. The website made a simple way for the PE teacher to look up information on the PE class. For the Primary students, the teacher can provide the e-learning platform to the class. Before the lesson, students can watch the videos. The flipped class method can make

students master the content of the class. As a result, the teachers do not need to spend much time introducing the tasks verbally.

Methodology

This capstone project developed 60 teaching video clips for Badminton ,Volleyball and Dodgeball. As other two PE students Chung Ka Ling and Lau Tsz Ching have shared similar ideas on the capstone project on creating online resources for primary school students, we worked as a team to facilitate our video production and make the website more integrated. Each of us managed 3 sports and each sport created 20 video clips. Therefore, there were total of 9 sports on the website, including Badminton, Basketball, Dodgeball, Handball, Soccer, Table Tennis, Taspony, Touch Rugby and Volleyball. And total of 180 video clips on one website. New sport has become more popular in Hong Kong. We put new sports in our e-learning platform as well to make the material more diverse.

Lesson Planning

The exercises are based on EDB(2013) An Overview of the Learning Topics in the Six Strands: Physical Education Key Learning Area. To make sure the exercise was followed from the PE curriculum. The exercise demonstrated class exercises for teaching motor skills, ranging from the most fundamental to the most advanced. The exercises incorporated an effective teaching method for the PE teachers. For pupils to master motor skills, a step-by-step teaching approach is more effective.

Video Shotting

The video clips showed the process of the exercise. The video clips included the sports skills and activities demonstration in 9 sports. Some student volunteers have

been the dummies on the video. To show pupils the flow of the exercise. Also, the video included the demonstration of the sports skills. To demonstrate the correct action of the skills to the PE teachers and the students.

Video Editing

To make the video more convenient for watching, the videos have been edited and add subtitles. The videos included the simple text explanation to make sure the pupils can understand the content of the exercise.

Website Creating

On the website, all videos of 9 sports are put into one website. The materials are integrated into one website to make PE teachers easier in searching PE lesson materials.

The website also included a questionnaire for the pupils. The viewers can give comments on the website to keep the page in high-quality mode.

Trial Publication

The e-learning platform was sent to some current teachers for viewing. The website provide teachers to comment. Adjustments can be made after the comments are collected.

Modification

After the teacher viewed the e-learning platform, some comments said the videos were messy that all videos put into one page. Then, the website has been adjusted. The videos have classified by the sports(Figure1.) and the skills(Figure2.).



Figure 1. Classification in Sports



Figure 2. Classification in Skills

Classified different sports and different skills to make the page more convenient in searching.

Outputs



Figure 3. E-learning material for Primary School

The e-learning(Figure3.) was included over 180 video clips in 9 sports. Besides the traditional sports, the website also added new sport to provide a multi-angle materials for the PE teachers. The current teachers who tried to use the website said the website can improve the teaching quality in PE lesson. Also, the website provide an easy way to search some reference materials in lesson preparing. Therefore, the website provide a platform for Primary School to watch the videos before the lesson. Also, they can watch the videos anytime if they are interested in learning other sports. To help students to develop the habit in self-learning.

At the future, the e-learning platform will be improved. More different sports will be added into the website, such as other traditional sports and new sports. Also, the rules of the sports will be added into the website. Therefore, a new version for the Secondary School will be updated.

The e-learning platform improved the teaching quality in PE lesson. The website maintain high-quality to make everyone loves playing sports.

Reference

Bureau, E. (2013). An overview of the learning topics in the six strands: Physical education key learning area. *Bureau E. Hong Kong: Government Logistics Department.*

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/Psychologie canadienne*, 49(3), 182.

Dede, C. (2010). Technological supports for acquiring 21st century skills. *International encyclopedia of education*, 3, 158-166.

Griffin, P., & Care, E. (Eds.). (2014). *Assessment and teaching of 21st century skills: Methods and approach*. Springer.

Hinostroza, J. E., Ibieta, A. I., Claro, M., & Labbé, C. (2016). Characterisation of teachers' use of computers and Internet inside and outside the classroom: The need to focus on the quality. *Education and Information Technologies*, 21(6), 1595-1610.

Hodges, N. J., & Franks, I. M. (2002). Modelling coaching practice: the role of instruction and demonstration. *Journal of sports sciences*, 20(10), 793-811.

McCullagh, P. (1993). Modeling: Learning, developmental, and social psychological considerations. *Handbook of research on sport psychology*, 106-126.

Wulf, G., & Lewthwaite, R. (2016). Optimizing performance through intrinsic motivation and attention for learning: The OPTIMAL theory of motor learning. *Psychonomic bulletin & review*, 23(5), 1382-1414.

香港教育大學（2021）：《體育科教材套》，檢自

<https://sites.google.com/friends.eduhk.hk/fundamental-movement-pe-hk>

Appendix I



此網上教學資源是根據教育局體育組學習領域課程指引編製，目的是為小學體育科教師及小學生提供網上教學資源，促進教師們的專業發展，並提升課堂的教學效能。同時為學生提供網上學習資源，有助其體育技能發展。

此網上教學資源的教學對象為小學生。教材分為九項球類運動，合共提供約一百八十條配以簡單文字解釋的教學短片。希望透過教學設計示例，讓學生對活動技能有更深入的认识，並能在活動中展示熟練的活動技能及知識。

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<https://sites.google.com/view/ballgame/%E4%B8%BB%E9%A0%81>