Student's Confidence Level Towards The Use Of Technology Integration In Learning Movement Skills

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Abstract

The purpose of this study was to investigate the effects of a multimedia sports courseware in teaching movement skills, which will be developed based on the Simpson's Psychomotor Domain Taxonomy. Integrated with a video analysis technology and simulation, the courseware would be developed for sport subjects in the sports science syllabus. However, this paper highlights one objectives of the study, which investigated students' confidence level towards the use of technology integration in learning movement skills. Overall, 30 undergraduate students–majoring in sports science in one Malaysian university–were involved. The tool was a questionnaire supported by some interviews and observation. The results showed that student's feel more confidence to perform their skills and using this technology integration strategy training had a significant positive effect in movement skills learning. Conclusion was that as expected, this courseware promote students to a more advanced learning process that can trigger positive effects in their movement skills learning.

Keywords: Confidence Level, Learning Movement Skills, Technology Learning Materials.

1.0   Introduction

The advancement of technology has enhances the teaching and learning (T&L) process over the last 20 years. Since then, thousands of new educational software have been developed and used widely. However, educators need to understand the purpose and types of technology before they can effectively incorporate it into their T&L (Ling Siew Eng *et al*., 2012). This process has evolved towards the technology–a mean that not only helps to improve the quality of learning, but makes the process meaningful as well (Victor and Robin, 2007; Papastergiou, 2010; Adjah Naqkiah Mazlan, Jamalludin Harun and Zainal Abidin Zainuddin, 2014).

But not all of the advancement is narratives because many issues arise in all learning process and the T&L of movement skills in sports is no exception. In sports, its concerns all about the variety of movement, which range from basic to deeper ones and indeed it's involve learning and training process. Learning and training are complex and

complement processes. Started from the early ages, learning had to find continuously motivational factors in order to become effective and evolutive. But if there are some practical skills to be acquired, training must be also involved, in order to complete this symbiotic relationship between the two complement levels of knowledge, theoretical and practical abilities (Popovici and Marhan, 2008).

According to the actual study through the early stages which is about the problem in learning movement skill among students in higher education, one of the findings shows that sometime students were pressures with difficult situation and they were not confident with their skills because they were not exposed to the activity before. In addition, the will of the learning is limited and bound. Thus, students were not able to concentrate because they did not understand the skills required, and hence, could not perform. Findings from students interview also code that almost of them were not experienced and did not have proper information to enable them to perform the skills as taught. Overall, students mostly agreed (high range: mean 3.578 ± 0.612) that they were more interested in the materials provided with the integration of technology- a mean that such as using multimedia, simulation, video analysis and so on. The positive effect when using the variety of technology have been demonstrated in many previous studies, including in the works of Gal, Latifur and Bhavani (2007), Bahadir and Sedar (2010), Mitja and Bojana (2010). The more interactive and interesting advancement of technology in T&L process were increase students motivatation (Ling Siew Eng *et al*., 2012) and indirectly enhance students confidence level.

2.0   Research Objective

The main purpose of this study was to investigate the effects of a multimedia sports courseware integrated with a video analysis technology and simulation in teaching movement skills, which will be developed based on the Simpson's Psychomotor Domain Taxonomy. However, the objective of this study paper was undertaken to find out the extent of students' confidence level towards the use of technology integration in learning movement skills.

3.0   Methodology

In this study, quantitative design was implemented in advance to get an initial overview of the matter. Subsequent qualitative data serve to verify the findings with deeper insights. Thus, to identify student's level of confidence after using this software, surveys via questionnaires, interviews and observation will be implemented. The questionnaire involved 30 undergraduate students–majoring in sports science in one university in Malaysia; out of them, nine were purposefully selected to participate in the interviews and observation. Each of the questions in the questionnaire and observation were divided into three types of construct (basic movement, general movement and specific movement) and consists of ten questions for each construct. The example of questions regarding the questionnaire and observation are shown in Table I and Table II.

Table 1 Examples of Questions in Questionnaire Regarding Student's Confidence

Construct of Movement	Number of Question	Items
Basic	Q4	I'm confident to produce movement, focusing entirely on basic movement.
	Q7	I'm confident to do the movement by my own ability.
General	Q11	I'm sure to do without the guidance of movement skills.
	Q17	I'm even more eager to do the movements.
Specific	Q27	I'm confident to produce movement with guidance on the available information.
	Q28	My confidence grew with existing training.

Table II Examples of Questions in Observation Regarding Student's Confidence

Construct of Movement	Number of Question	Items
Basic	Q4	Students seemed confident to generate movement, focusing entirely on simple movement.
	Q7	Students appear confident in his own ability alone is able to perform the movement.
General	Q11	Students are confident to do without the guidance of movement skills.
	Q17	Students seem increasingly eager to move.
Specific	Q27	Students seem confident to produce movement with guidance on the available information.
	Q28	Students' confidence seemed to grow with existing training.

The interviews question related to level of confidence among students is organized by presenting semi-structured questions. The questions for the interview are done based on the same constructs as questionnaires. However, the questions are more open for researchers to focus on the key questions and the student is free to respond. The example of questions is shown in Table III.

Table III Examples of Interview Questions Regarding Student's Confidence Level

Construct of Movement	Items
Basic	• Are you sure this software helps to generate new movement with available information? • Are you confident this software helps to generate movement by learning according to the existing phase?
General	• Does the software support and boost your confidence to perform movement skills without coaching? • Does this software helps you confident to make the move and produce difficult movement?
Specific	• Does this software help you confident to move with the existing experience? • Are you sure this software helps to diversify the movement from following existing information?

Besides that, in this paper, the means will be described based on three levels: range 1.00 – 2.49 (low), 2.50 – 3.49 (intermediated) and 3.50 – 5.00 (high).

4.0   Findings and Discussion

The tool in this study was a questionnaire supported by some interview and observation. However, the findings and discussion will be presented into two parts:

4.1   The Results of Questionnaire and Observation

Table IV Mean and Standard Deviation of Questionnaire and Observation Regarding Student's Confidence Level

Construct of Movement	Questionnaire		Observation	
	Mean	SD	Mean	SD
Basic	4.28	0.66	4.39	0.60
General	4.08	0.84	4.29	0.55
Specific	4.37	0.65	4.44	0.62
Total	4.24	0.73	4.37	0.59

Table IV shows the mean and standard deviation of questionnaire and observation as the supported findings of quantitative data regarding student's confidence level towards the use of technology integration in learning movement skills. Based on these findings it is clear shown that the result from questionnaire are totally same in level or range with observation findings as a supported data. Specific movement was the highest values in questionnaire result (mean 4.37±0.65) and supported by observation result (mean 4.44±0.64). This was followed by basic movement findings that each recorded value (mean 4.28±0.66) and (mean 4.39±0.60). The general movement recorded value (mean 4.08±0.84) and (mean 4.29±0.55) for the questionnaire and observation results.

Interestingly, all construct of movement were in the highest level of range and total value also recorded highest range for both results: mean 4.24±0.73 and mean 4.37±0.59 each. Overall, the findings indicate by using technology integration or variety of technology materials in learning absolutely helps in enhance student's confidence level and the findings are more than expected.

4.2 The Results of Interview

In addition to quantitative data, qualitative data were also obtained through interviews session regarding student's confidence level towards the use of technology integration in learning movement skills. All the data were analyzed according to the constructs of movement: basic, general and specific-through the development of a theme.

In this paper, the theme were presented and focus more on specific movement because this construct recorded the highest range in students confidence level and discussion part were highlight some view as supported findings. According to questions about "Does this software help you confident to move with the existing experience?", the theme obtained are as :

- Helped more confident to move easily and avoid mistakes. (5 person)

Example comments:
Yes. When I refer to this software its can easily understand to correct a wrong movement.

Strongly agree. Because indirectly it gives hint to move rather than gives instructions directly.

Exposure through the video more clearly to understand. Know how to act.

- Provides an initial overview and confident to establish and carry out movements. (2 person)
- Assist and provide learning more open and understandable. (2 person)

Based on this findings, its shows that students more confident to create their movement by their own phase and they interested with materials that provided. Using the integration technology such as this software: multimedia, simulation and video analysis-it could motivate students to try new movement activities; it could even serve to demonstrate strategies as well as to model performances (Mohnsen, 2008; Adjah Naqkiah Mazlan, Jamalludin Harun and Zainal Abidin Zainuddin, 2014). Beside that, students get more benefits such as through the use of video, students were more able to understand the complex task by focusing on the video recording and many researches such as Hughes and Franks (2008), Lorenza (2009) and Huang and Li (2010) claimed that students could also replay as many times as required, which could facilitate them to correct errors.

Additionally, specific movement were the highest range because in generally the T&L process demands learner to construct their knowledge by interacting with the environment and this process has evolved towards the technology. Students mostly interested in advance and need to exposed with life long learning to build up their confidence indirectly.

According to next question regarding specific movement in interview session which is "Are you sure this software helps to diversify the movement from following existing information?", the theme obtained are as :

- Help to be more confident with the appropriate information and give a hint acting to diversify. (3 person)

Example comments:
Very helpful. Because this software provides additional information to the movement that I do.

Help because I can imagine the perfect movement.

Agree. I'm confident to create movement by combining several skills such as making the front roll and back roll without a hand set. But I always refer to the video or tutorial. And always used analysis part to manage my movement.

- Help to respond to movement and always ready for action. (2 person)
- Triggering ideas for the improvement of learning and confidence. (2 person)

Based on this findings, its shown that students were more interested if early impression were given. The complex task or specific movement need an initial overview of the actual situation and this final findings achieve the highest expectation by using the integration of technology: multimedia, simulation and video analysis in learning process. The positive effects when using the technology software have been demonstrated in many previous studies, including in the works of Gal, Latifur and Bhavani (2007), Bahadir and Sedar (2010), Mitja and Bojana (2010). However, students need to exposed to the activity because with self experience, its help to enhance the confident level and always ready to react to responses.

Overall, the findings shows that students confidence level exist among student towards the use of technology integration and its surprisingly achieve the highest range. Therefore, the process of T&L should be implemented effectively and more advanced to trigger positif effect.

5.0 Conclusions

This paper raised the question of students' confidence level towards the use of technology integration in learning movement skills. Even though the findings shows good result which are recorded all construct in highest range, there still can be improved to enhance confidence level such as students need to be exposed to the risks, consequences or negative effects. However, in generally the results showed that student's feel more confidence to perform their skills and using this technology integration strategy training had a significant positive effect in movement skills learning. Conclusion was that as expected, this multimedia sports courseware for teaching movement skills that be developed based on the Simpson's Psychomotor Domain Taxonomy, and also be integrated with the video analysis technology and simulation has succeeded in establishing student self-confidence.

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