Effects of different online peer-feedback approaches on students' performance skills, motivation and self-efficacy in a dance course

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A R T I C L E   I N F O

A B S T R A C T

It has become common practice to video record students' in-class dance moves. Such a teaching strategy is able to help students reflect on their dance performance by providing them with visualized feedback. Therefore, in this study, an online peer-feedback system for dance education has been developed in order to compare the effects of different modes of online peer-feedback on students' dance skills performance, learning motivation, self-efficacy, peer review quality, peer assessment correctness, and online learning behaviors. Moreover, interviews were also conducted to elicit the students' opinions regarding this teaching method. The participants were 100 college students from three classes who learned with different online peer-feedback modes: videos with peer comments, videos with peer ratings, and videos with a mixed mode (i.e., peer ratings plus peer comments). A 12-week experiment was conducted to evaluate the performances of the three approaches. The experimental results show that, in terms of dance skills, peer ratings could improve the students' group performance, while the mixed mode improved individuals' learning performance. In terms of learning motivation and self-efficacy, the correlation analysis shows that the students' intrinsic motivation, self-efficacy and dance skill performance were positively correlated. Via analyzing the peer feedback content, it was found that the feedback provided by the mixed mode group was of better quality than that provided by the "peer comments" group; that is, the former provided more detailed feedback to individuals than the latter. Furthermore, it was found that the scores provided by the mixed mode group were highly related to those provided by the teachers, while those provided by the "peer ratings" group were not. The online user behavior analysis further shows that the integration of peer commenting and peer rating is able to promote students' willingness to participate in online learning activities. The interview results also confirm these findings. To sum up, the integration of both peer rating and peer comments is an effective approach that can meet the students' expectations and help them improve their dance skills, peer-feedback quality, peer-scoring correctness as well as their willingness to participate in online learning activities.

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1. Introduction

Dance skills are not only a process of dynamic continuous presentation, but also an art form of complex body coordination, which emphasizes precise movements and positions. It is difficult to present complete movement processes, structure and abstract ideas using literal or oral information in the teaching process. Mirrors are usually used as a visualization tool for teachers to demonstrate and provide feedback, as well as for students to practice and make reflections in dance courses (Andersson, 2014). However, it is impossible for students to observe their own motions via mirrors when the dance process includes rotation, jumping, and more complex or fast motions. Therefore, learning from videos has become the most popular teaching method in recent years, as it captures the complexity of the complete movements, and provides students with opportunities for further analysis (Leijen, Lam, Wildschut, Simons, & Admiraal, 2009; Leijen et al., 2009; Schmidt & Wrisberg, 2008).

However, the majority of students are often unable to clarify what the key messages are due to so much information being provided by the video feedback (Schmidt & Wrisberg, 2008). Thus, just providing students with video feedback is insufficient (Fill & Ottewill, 2006). Without appropriate guidance, reflection is very difficult to carry out (Sööt & Leijen, 2012). In addition to video feedback, students need more guidance and assistance, such as suggestions for performance improvement. Such messages could help promote students' reflection, and thus enhance their learning performance (Barry, 2012; Wu & Kao, 2008). In most dance courses, in particular those that are categorized as general education in Asian universities, a teacher usually needs to face dozens of students; thus, the feedback a teacher can provide is very limited (Goldstein, 2007). If peer assessment can be applied, students could get various viewpoints and opinions that would help them reflect on and improve their performance (Chen, 2010). Moreover, they can also play the role of a reviewer, which engages them in observing in depth their peers' dance performances as well as their own from the teacher's perspective, and in making reflections (Falchikov & Goldfinch, 2000). Therefore, research on the combination of visual images and peer assessment has been carried out in the field of dance performance and has attracted the attention of scholars (Hsia, Huang, & Hwang, 2015; Leijen et al., 2009).

Previous studies have indicated that the combination of visual images and peer assessment, which is regarded as a potential learning model, would guide students to examine themselves and their peers, and to post comments and ratings, which could enhance individual reflection and learning performance (Santagata, Zannoni, & Stigler, 2007; Wu & Kao, 2008). It is believed that such a combination method of video recording and peer feedback would bring the largest benefit to the dance education field (Sööt & Leijen, 2012). In view of this, the previous research on a peer feedback system developed for university students was applied in a ballet and dance composition course. The findings of the study showed that online feedback gave students more courage to express their ideas (Chen, 2010). In addition, peer feedback could offer different views that would facilitate students' self-reflection, and allow them to gain recognition from both their instructors and peers (Leijen et al., 2009).

However, the majority of the learning systems applied in dance education have been evaluated without quantitative data. Even though a small number of studies have evaluated systems based on more subjective assessment, using either questionnaires or interviews, there is still a lack of substantial quantitative data (Dania, Hatziharistos, Koutsouba, & Tyrovola, 2011). In other words, how to help students learn effectively with such a learning model needs further investigation. On the other hand, researchers have indicated that teachers should apply various teaching strategies to enhance students' motivation and self-efficacy to maintain their passion for dance (Mainwaring & Krasnow, 2010). Self-efficacy refers to individuals' belief in their own ability to complete tasks and reach goals, while motivation represents individuals' internal states or conditions that activate their behaviors as well as direct their goals (Franken, 2006). When students possess good learning motivation and self-efficacy, they would give full play to their potential (Sööt & Leijen, 2012). RCampus (2014) indicated that self-efficacy could be another critical index in the rating criteria in dance education. van Dinther, Dochy, and Segers (2011) also pointed out that self-efficacy could be a determining factor in learning performance and motivation. That is, motivation can potentially keep students involved in dance performance at a high level with clear goals, while their dance self-efficacy encourages them to set better goals for learning and practicing dance performance (Kane et al., 2013). In addition, Topping (2010) reviewed various peer-assessment applications and inferred that different strategies and factors affecting peer feedback should be considered when conducting peer-assessment activities. Accordingly, the study attempted to investigate the influence of different online peer feedback modes on students' motivation and self-efficacy for dance performance, and the correlation among motivation, self-efficacy and dance performance.

The purpose of this study focuses on the effect of different online feedback modes on students' learning performance, motivation and self-efficacy. The research questions include:

(1) Is there any difference among the different online peer feedback modes in terms of the students' dance performance?
(2) Is there any difference among the different online peer feedback modes in terms of students' learning motivation and self-efficacy for dance skills?
(3) Is there any correlation among the students' learning performance, self-efficacy and motivation of dance in the general education course?
(4) Is there any impact of the different online peer feedback modes on the peer review quality?
(5) Is there any correlation between student evaluation and teacher evaluation in the different online peer feedback modes?
(6) Is there any impact of the different online peer feedback modes on the students' online behaviors?