Peer education support system for teachers who have not experienced street dance

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Abstract

In elementary and secondary school education, street dance has been introduced. However, many teachers have never experienced street dance. They find difficulty to teach, check and evaluate street dance of students. Training sessions by professional dancer have been opened by the street dance promotion associations, but number of such sessions is limited. With this background, a new system is proposed to support peer education among novice teachers of street dance to check and teach important points, evaluation viewpoints and problems with each other. To design the system, preceding research has been conducted to analyze difference motions between expert and novice dancers.

1 Introduction

Since 2009, dance has become an obligatory subject in the Japanese compulsory education curriculum. Within this context street dance, such as hip-hop and locking, is the focus of attention as a form of modern rhythmic dance. Furthermore, street dance schools have increased in number, and an official street dance examination[1] (in six genres: hip-hop, locking, pop, breakdancing, house and jazz) has been established by the General Incorporated Street Dance Association.

While street dance has permeated into general society, several problems have occurred in the field of school education. The biggest problem is that the majority of teachers in the position of instructing dance classes have no experience of street dance. Although workshops for schoolteachers conducted by professional dancers are being held, there are limited numbers of professional dancers in Japan and such opportunities are extremely few. As a result, the current situation is that teachers are unable to receive sufficient guidance.

The goals of my research is that the teacher comes to teach dance in the class room. Accordingly, in this research we establish a setting for peer education between teachers who are inexperienced at dance, in which they can point out each other's problems and strong points using videos of experienced dancers as a model. In this way, we examine a system that supports both sides - those teaching and those being taught. In a previous study, the authors conducted an analysis of the street dance motions of beginners and experienced dancers [2]. We used a motion capture system to measure dance motions, in order to clarify the respective characteristics of beginners and experienced dancers. As a result, it was demonstrated that experienced dancers moved their arms and legs in bigger motions than beginners, and were able to make sharper motions. Using this previous research as a reference, we investigate a method to clearly convey the important points and evaluation

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technique required by schoolteachers when teaching street dance to their students, as well as to specify and induce awareness of the points that teachers should check with each other.

This study is conducted as a collaborative research project called the "Street Dance Education Lab", an organization for industry-academia joint research established and managed in cooperation with the Nippon Street dance Studio Association (NSSA) and the Research Center of Health, Physical Fitness and Sports of Nagoya University. The workshops used in the study are the NSSA's workshops.

2 System Proposal

The ultimate goal of this system is to enable teachers to instruct dance in school classes. As a first step, we assumed that it is important for the teachers themselves to be able to dance. Additionally, so that teachers can accumulate the experience necessary for teaching dance, it is important to follow the stages of "Watch another person dancing → Envisage the correct movements → Compare the correct movements with the other person's dancing → Clarify the points of difference between the two → Convey these differences using words, movement, etc.", which is the process used by instructors to teach dance. Therefore, we considered that "coaching" will play a vital role in ensuring that teachers who are inexperienced at dance can become able to dance and also to instruct. "Coaching" as referred to here is a technique used in human resource development, which uses dialog to stimulate the target's self-actualization and goal achievement [3]. By incorporating the mechanism of coaching into our system, we anticipate an improvement in the teachers' own dance techniques and also in their dance instruction skills.

The elements thought to be fundamental to coaching are stated below.

1. Observation

All humans have individuality, and some are quick to understand while others are slow. The fact that giving the same task will produce different results in different people is a prerequisite for developing each individual's abilities, and observation, understanding and analysis of individuals is essential.

2. Appropriate Tasks

Based on observation, extract the problems, clarify which skills you want the individual to learn, make a judgment from the current skill level, and consider and implement tasks that are neither too difficult nor too easy. Human development is certain to occur by solving tasks of an appropriate level.

3. Communication

Communication, including nonverbal communication such as motions and facial expressions, is an indispensable element of coaching. Good coaching cannot be achieved simply by forcing your own personal principles or reading through a prepared textbook, questions, etc.

4. Thinking Ability

Reflective self-analysis before undertaking coaching, and gaining the ability to solve one's own problems, are the ultimate goals of coaching. This is made possible by gradually inducing the subject to conduct self-analysis of their own issues, by clearly indicating the evaluation criteria at the beginning, and using communication to provide feedback on the observation results.

Accordingly, in this research we establish a setting for peer education between schoolteachers as an initial-stage means of support, in which they can point out each other's problems and strong points - which they would not notice on their own - using videos of experienced dancers as a model. With this approach, we investigate a support system. Although it will become necessary to examine a mechanism for inducing "thinking ability" for the purpose of further support at a stage where learning has progressed, this is outside the scope of the present study.

3.1 System Overview

In the proposed system, we consider that it is important to follow the process used when instructors teach dance. However, because schoolteachers, who are the target of the support system, are inexperienced at street dance, it is difficult for them to envisage the correct movements when watching another person dance. Therefore, two users will use the system with the following process, similarly to the process of coaching.

1. Observation: One member of the user pair is the Evaluator, and the other member is the Learner. The Learner dances, and the Evaluator visually compares this to a video of an experienced dancer. By doing so, the Evaluator can envisage the correct movements, and can be guided to the stage of thinking about the differences between the Learner's dance and the correct movements.

2. Appropriate Tasks: At this point, the Evaluator inputs "where" and "how" the Learner and the experienced dancer are different into the system, and appropriately tailored advice is displayed.

3. Communication: Next, the Evaluator conveys this advice to the learner. By doing so, the Evaluator experiences the sequential process of "teaching", and is able to induce learning.

4. Thinking Ability: The Evaluator is prompted to ask the Learner questions. By making the Learner aware of how far they have succeeded, or what parts they have not yet mastered, the Learner can be made to grasp their current situation. Additionally, via questions from the Learner, the Evaluator can find out the Learner's worries, and is able to respond with more appropriate advice.

In this sense, in our system the Learner is a learner of dance, and the Evaluator can be said to be a learner of dance instruction.

The advice shown to the Evaluator (points to pay attention to, etc.) was devised based on our previous study. In addition to this, we determined the contents with reference to points that are indicated in the official street dance examination.

We consider the period of using this system to be around one month (usage of once or twice a week). Acquisition of basic dance techniques is attempted by comparing the differences between the experienced dancer and the Learner during the first half of the usage period. In addition, we indicated the differences between beginners and experienced dancers in our previous research. When beginners dance with an awareness of such differences, they are able to come closer to the level of the experienced dancers. Therefore, during the second half of the usage period, in which users have gained some extent of dancing ability, further improvement is aimed at, inducing the user to learn the most important points to pay attention to with regards to certain motions.

3.2 System Contents

During the first practice session of using this system, the user is made to watch a video of an experienced dancer before dancing. By doing so, schoolteachers who have no dance-related knowledge are able to envisage the correct way to dance. Subsequently, the system is used in accordance with the following process.

· The Evaluator compares the video of an experienced dancer with the Learner

· The Evaluator inputs the areas of difference between the movements of the experienced dancer and the Learner, from a list of options

*E.g. Elbow movements, leg movements, rhythm, etc.

· The Evaluator inputs more detailed points of difference from a list of options

*E.g. Smaller movements, different ways of moving, out of rhythm, etc.

· The system displays advice to the Evaluator

· Following the advice from the system, the Evaluator conveys to the Learner their areas and points of difference, and what they should do to improve

The role of the system changes during the second half of the usage period. The Evaluator inputs the most important points to pay attention to among the respective motions. By requiring the Evaluator to think in order to input such points, the system induces awareness of the key elements.

· The Evaluator compares the video of an experienced dancer with the Learner
· The Evaluator inputs the most important points to pay attention to, from a list of options
   *If the Evaluator makes a mistake, the correct answer is displayed
· The Evaluator inputs more detailed ways of improvement, from a list of options
   *Questions are displayed until the correct answer is given
· The system displays advice to the Evaluator
· Following the advice from the system, the Evaluator conveys to the Learner how they should move the relevant body parts

In order to foster "thinking ability", which is important in coaching, the Evaluator is prompted to ask the Learner counter-questions (e.g. which parts they do not understand, how much they understand, etc.) during the fourth stage. Through this process, the Learner is made to think about how far they have succeeded, and awareness can be stimulated. Furthermore, the Evaluator can understand what the Learner is thinking about. In addition, the Evaluator is made to consider how to appropriately convey their answers to the Learner's questions.

3 conclusion

In this research, we established a setting for peer education between schoolteachers who are inexperienced at street dance, in which they can point out each other's problems and strong points, and examined a support system. As future work, we need to conduct evaluation experiments using the system. We consider the period of using this system to be around one month. After the end of the period, since precise numeral evaluation is not possible, we will conduct a questionnaire survey using the system, targeted at people with no experience of street dance.

The questionnaire survey will be carried out towards both experimental users of the system and experienced dancers. Experimental users of the system is the person who are inexperienced at street dance. Experienced dancers is the person who has more than 4 years experienced at street dance. Experimental users of the system will be questioned about aspects of the system (whether they actually became accustomed to teaching people to dance using the system). Experienced dancers will be questioned about aspects of dance (whether the experimental users of the system developed dancing ability).

4 References

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