Team Learning In Motion Capture Operations And Independent Rigging Processes

Ahmad Azaini Manaf, Mohd Rosli Arshad, & Kamal Bahrin

Abstract: This article discusses team learning activities among motion captures operators and how such occasions contribute to the producing successful on recording human movement. This paper specifically monitors between each team behaviors reacts, communicate members in performing successful optical motion capture tasks. Among task's component discussed in this article were team members ability to operate the equipment, calibrate, and most significantly, the social interaction between team in avoiding numerous of errors in motion capture operations. The tests were influenced of the reason of high requirement by animation industry in Malaysia, where most graduates are required highly skilled in multiple software platform. This study aim to obtain practice-based factors among team learning , which can be implement to the simulated start-ups environments, which can be applied and simulate beyond current education systems.
Method— The motion capture test activities were advertised among undergraduate students, with unrestricted level of undergraduate and postgraduate students. Two tasks given, team-based task, and individual-based tasks. All participants were required to attend the tests which in 5 days duration. The required background of all participants skills in Motion Capture operations were not required, only with minimal multimedia knowledge background. Most of demographics were mixture gender participants with 11 animation students of (8 freshmen) and (3 sophomore) and divided into 3 teams. All task was based on test-time learning to all participants. Each team learning activities also observed with repeated Motion Capture operations and include individual tests.
Results—The time-based team result showed all team successfully calibrated all process setup in Motion Capture accordingly, where the outcome indicated each team member communicate effectively in perform all operations tasks. In opposite of independent tasks, the findings indicated individual tasks took longer duration as compared team-based task. As a result, team of learners positively contributed to efficient productivity than individual learners. As conclusion, the study discovered the importance of practice-based learning in teams for staging production work and found new elements by acknowledging the differences and similarities in each team members work cultures and environments.

Index Terms: Team Learning, motion Capture, Efficiency, Motion Capture Operations, Team management, Test-time team learning.

1. INTRODUCTION

Motion capture is a tool for animation studios and student alike in increase their production efficiency in creating animations and avoiding lengthy and difficult keyframing processes. The usage of motion capture varied nonetheless it only focuses recording movement of humans or based on humanoids. This is to obtain as realistic movement as possible, as mostly used animation films, games, or for actor replacement purpose in stunts or visual effects. Many gaming
and visual effects studios has embraced advanced technology of the real-time tracking on the human motion process which has performed greater accuracy than the meticulous traditional approach [4]. Also discuss from previous researches, the practice-based learning in motion capture were required constant changes as learning object. In this case, essentially anticipated by a new characteristic recognized by the learners [8]. These classifications demonstrate on how participants perceive understanding of the learning situation, were it was expressed into collaborative tasks and verbal actions. Consequently, it contributed to the participants professional development despite of their various level of educations and background experiences. The summary overview of this test conducted, where the participant was trained by experience facilitator, by performing various teaching methods towards teams and direction towards data management. Then, the team members were left independently to operate the software. The main outcome of this research was to measure test-time understanding among of team learning. The team learning approach was based on previous studies, [4] where it combines both of supervised learning and test-time optimization, where it was applied with using Motion Capture system.

- *Ahmad Azaini is a senior lecturer of Animation program in Universiti Malaysia Sarawak, PH+60102267064. E-mail: azainimanaf@gmail.com*
- *Mohd Rosli Arshad is a senior lecturer of animation program in Universiti Kuala Lumpur, PH+60192686875. E-mail: mrosli@unikl.edu.my*
- *Kamal Bahrin is a Senior Manager at Kromosomlab Sdn. Bhd., PH+60198757585. E-mail: kamal@kromosomlab.com*

2 METHOD AND PROCEDURES

2.1 Learning Tasks

Learning tasks can be divided in production- and development-oriented [1] learning tasks. In this test, -oriented learning approach was implemented to obtain a reaction from the common Motion Capture (MoCap) production and setup processes. The researcher found the learning environment studies in nursing environment were adapted in this test. This is to alleviate the learning manner among operators in working together in a team to perform effective Motion Capture process. Based on previous studies, developmental-oriented learning is sparked from the gap between current practice and with technological advanced environment of the nursing team [2] have to some extent have similarity towards animation team, which the concept applied to this test. The test co-organized with collaborative effort from Kuala Lumpur animation company, Kromosomlab Sdn. Bhd. with preparation 3D pre-rigged model in Fig. 1. The model Suri were originally created by the managing director of the company Kromosomlab, in native Blender format and exported into filmbox format or .fbx. Then, the 3D models were converted into Maya format, due to effective operating environment of the lab.