

## **UC Merced**

### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

The Jig-saw of Part-task Training in Dynamic Task Environments

#### **Permalink**

<https://escholarship.org/uc/item/6dm5f99f>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 41(0)

#### **Authors**

Denga, Ropafadzo

Gray, Wayne

#### **Publication Date**

2019

Peer reviewed

# **The Jig-saw of Part-task Training in Dynamic Task Environments**

**Ropafadzo Denga**

Rensselaer Polytechnic Institute, Troy, New York, United States

**Wayne Gray**

Rensselaer Polytechnic Institute, Troy, New York, United States

## **Abstract**

Part-task training is a technique which involves separating the target task into parts and presenting them during training. This approach has been used to train users to perform optimally in dynamic task environments. The present study investigated the effects of fractionation, a part-task training approach, versus whole-task training to improve performance in the video game Tetris by focusing on an important sub-task element of the game. Seventy-eight young adults were trained on Tetris with one of three training regimens: 1) Part-task training with feedback, 2) Part-task training with no feedback, and 3) Whole-task training in which participants practiced the whole game to obtain the highest overall score. Results show that baseline performance influences training gains and feedback may not be helpful for learning. Training gains from the different training regimens show that tasks with highly interdependent components may benefit most from whole-task training.