

LEARNING ANALYTICS IN MILITARY TRAINING SIMULATION

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LA IN MILITARY TRAINING SIMULATION

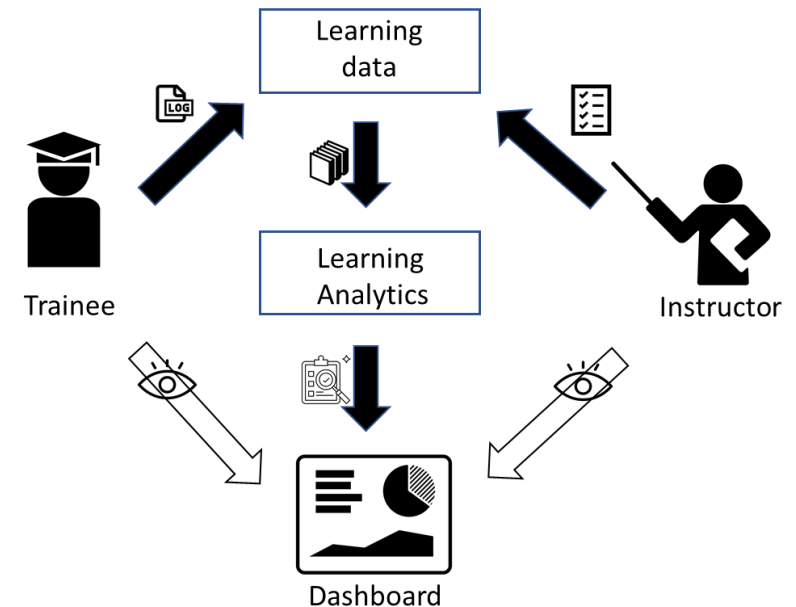
INTRODUCTION

Learning analytics (LA):

- › “Measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs”
(Long & Siemens, 2011, p. 34)

Goal:

- › Develop **LA dashboards** for defense **simulator training** to support:
 - › Instructor feedback
 - › Monitoring trainee’s learning trajectory over time
 - › Evaluating the training program



› LA IN MILITARY TRAINING SIMULATION

USE CASES

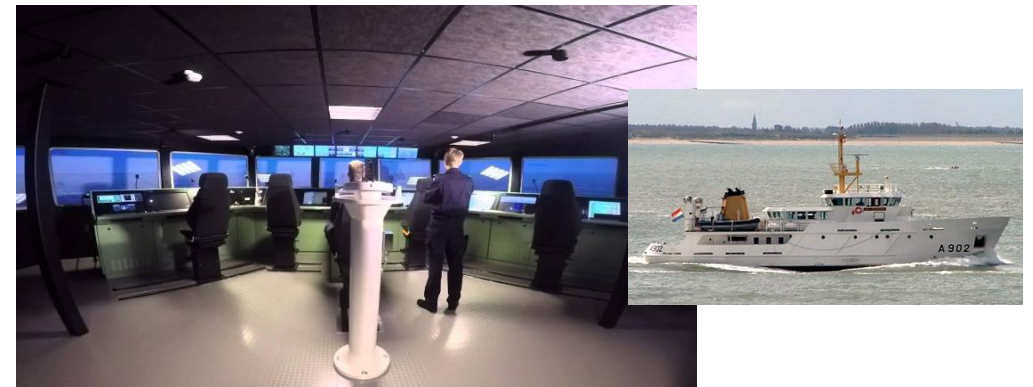
› CV90-simulator (TACTIS CAI)

- › Training: Gunner
- › Task: eliminating different type of targets using different weapons/ammunition
- › Computer Assisted Instruction (**procedural task**)
- › Instructors give feedback based on a list of (error) messages provided by the simulator



› Ship-Handling Simulator (RNNC)

- › Education: Officer of the watch
- › Task: Safe ship navigation
- › Scenario-based (**complex task**)
- › Instructors evaluate by observing/asking questions & evaluation form



LA IN MILITARY TRAINING SIMULATION APPROACH

› CV90-simulator (TACTIS CAI)

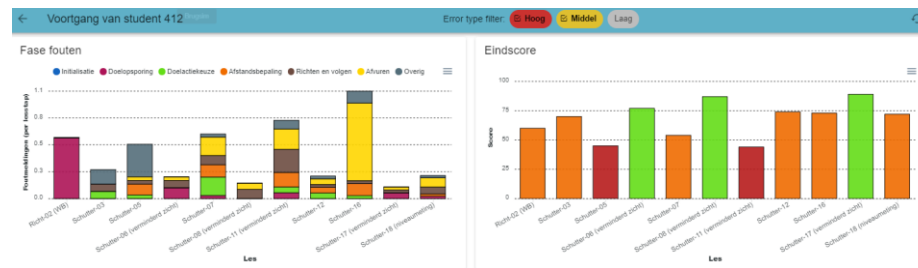
- › Started with exported simulator data
- › Data exploration for meaningful performance indicators
- › Measure subjective experience (e.g., motivation)

› Ship-Handling Simulator (RNNC)

- › Started with user requirements
- › Focus on Situational Awareness
- › Data collection: navigational data, trainee behaviour, subjective experience, instructor grades

Both

- › Data analysis
- › Dashboard design
- › Dashboard development (using xAPI, standard for storing/processing learning data)

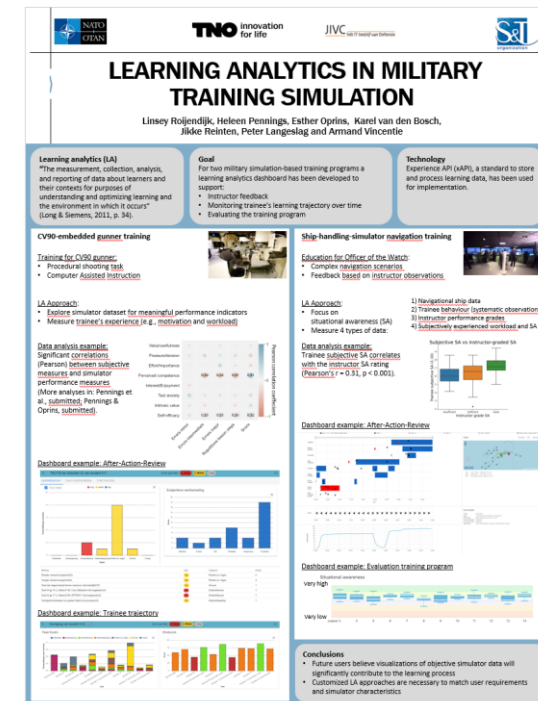


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CONCLUSION

- › Objective simulator data can support instructors and trainees to get more insight into the trainees' learning process
- › Customized approaches are necessary to match user requirements and simulator characteristics

› For more information please visit our poster





› **THANK YOU FOR
YOUR TIME**

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