Multimedia Educational Technology

Evidence-based design of multimedia educational technology to improve human performance and learning, with a particular focus on use of technology by older persons and cognitive load. Research involves both human behaviour analysis and the application of theories of instructional design for an adaptive and personalised learning experience.

More Information

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Competitive advantage

- Empirical evidence-based instructional design theories of embodied cognition and cognitive load
- Machine learning & data mining
- Behaviour and physiological analysis, including application of psychological theories to understand user's internal states
- Extensive eLearning and interface design experience, including adaptive personalised learning design

Impact

- Use of state-of-the-art technology to improve learning outcomes and outreach
- Empirically validated eLearning capabilities with significant learning outcomes and user satisfaction
- Fusion of cognitive load theory with real world applications
- Personalised and adaptive learning design
- Creating technology to meet targeted user needs

Successful outcomes

- Commercialisation of adaptive online learning platform with thousands of users worldwide
- Early detection of Mild Cognitive Impairment from vocal behaviour
- Application of cognitive load instructional design effects in real world settings

Capabilities and facilities

- Online learning platforms
- Theory development, testing and practical applications
- Multimodal cognitive load testing
- User needs analyses to create user appropriate technology
- VR capabilities
- Wearable/non-wearable sensors to measure behaviour

Our partners

- Smartsparrow

- Idiap Research Institute, Switzerland