

Evaluation of the Effectiveness of AR in instructional guides compared against traditional methods

Categories:

- Market research issues
- Business process innovation issues

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Current Situation

- Manufacturing Operational Process Instructions paper based
- Limited Digitisation of Operational Process Instructions with static PDFs on tablets
- Potential for poor quality part manufacture

Problems this Research Would Address

Evaluation of the Effectiveness of Immersive Technology (AR) in instructional guides compared against Traditional methods

Possible Questions the Research Would Answer

- Ease of use
- Attendee information retention
- Speed of task execution
- Accuracy of the completed task

When assessed with the following

- Paper based instructions
- Digital document instructions viewed on a Tablet
- Digital augmented instructions viewed via a Tablet device
- Digital augmented instructions viewed via an Augmented Reality (AR) Head mounted display

Whose problem would be addressed?

- This project would help companies make the decision to embrace digital methods of manufacturing instructions over traditional methods.
- Suppliers of Augmented Reality guided instruction applications could see benefits from this project, as it has the potential to show the effectiveness of Augmented Reality in industry over traditional methods.

How would this research be conducted?

- A minimum of 100 participants over a two month period will complete the assessment.
- The National Composites Centre has the content knowledge, but a third-party software supplier would be needed to support the delivery of the project.
- By using a commercially available software application, this will minimise any impact the application could have on the execution of the assessed task.

Deliverables of this Project

- A report on the Effectiveness of Immersive Technology (AR) in instructional guides.
 - It will be possible to show the assessment of digital augmented instructions over paper-based ones
 - It will be possible to assess digital augmented instructions in dexterous manual tasks

Benefits to AREA Members

- The aim of this project is to show the benefits of Augmented Reality guided instructions over traditional methods
- The gains in productivity a company could potentially see if Augmented Reality guided instructions were to be implemented.