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## Title of research study: Evaluating the effectiveness of VR-based training vs. PPT-based training on simulated flight performance.

## Investigator: Chris McFarland, Ethan Levin, and Erica Faulkner

## Key Information: The following is a short summary of this study to help you decide whether to be a part of this study. More detailed information is listed later in this form.

## Why am I being invited to take part in a research study?

We invite you to take part in a research study because technology continues to develop at a pace much faster than Army training has. This study will provide the ability to gather and provide data to the United States Army Aviation Center of Excellence (USAACE) leadership on how to augment aviation training using Virtual Reality (VR).

## Why is this research being done?

This project is intended to provide recommendations to USAACE on what the best technical design of training equipment is necessary to continue with the validation of VR as a training augmentation tool. This recommended compilation of technical variables will provide senior leaders with the necessary information to confidently expand the current training approach of Flight School XXI and augment that training with up-to-date technical opportunities, especially VR.

The flight assessment you are taking part in will provide data directly from current and future Army Aviators.

## How long will the research last and what will I need to do?

We expect that you will be in this research study for a period of one hour which will include the described process below:

* Complete informed consent, demographic survey, and Baseline Simulator Sickness Questioner (SSQ): 15 minutes
* Conduct Training (VR or PPT): 15 minutes
* Complete SSQ #2 (VR Group Only): 5 minutes
* Conduct Prepared 3D (P3D) simulated flight exam in VR: 10 minutes
* Complete SSQ #Final: 5 minutes
* Debrief: 5 minutes
* **Total time: 55 minutes**

## Is there any way being in this study could be bad for me?

There are no foreseeable risks to participate in this study. However, some participants may experience a degree of simulator sickness. These symptoms may include, but are not limited to, nausea, dizziness, fatigue, and headache. If participants experience any of these symptoms or other discomfort, the experiment will be stopped, and the participant will be monitored until symptoms have ceased.

## Will being in this study help me anyway?

There are no benefits to you from your taking part in this research. We cannot promise any benefits to others from your taking part in this research.

## What happens if I do not want to be in this research?

Participation in research is completely voluntary. You can decide to participate or not to participate.

## Detailed Information: The following is more detailed information about this study in addition to the information listed above.

## What should I know about a research study?

1. Someone will explain this research study to you.
2. Whether or not you take part is up to you.
3. You can choose not to take part.
4. You can agree to take part and later change your mind.
5. Your decision will not be held against you.
6. You can ask all the questions you want before you decide.

## Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team: at [Christopher.a.mcfarland.mil@army.mil](about:blank) or [mcfarlandc@knights.ucf.edu](about:blank) .

## What are my responsibilities if I take part in this research?

## Complete this informed consent.

## Complete a demographic survey.

## Conduct a Visual Meteorological (VMC) take off, traffic pattern flight, and VMC landing to the ground. Traffic pattern altitudes and further instructions will be provided by simulated tower while in the device.

* Complete SSQs as prescribed for assigned group.
* Debrief with investigator, which is your opportunity to provide any additional information you would like that you believe could help with continued development of the research.

## What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you.

***What happens to the information collected for the research?***

Participants will be asked to sign this consent form. During this process both the investigator and the participant will sign the consent form. The informed consent document is the only document with identifiable information on it and will be filed in a locked file box and stored in a separate folder from all other participant data. There will be no identifiers to associate signed informed consent documents with other experiment data or forms.

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