The participation of women in ICT (Information and Communication Technology) is low (typically around 25%)

While societal attitudes may play a role, gender differences in basic cognitive capacities could also be important

Selective attention is a basic cognitive capacity that supports spatial cognition, which is useful for much work in ICT

Do gender differences exist in basic capacities (e.g. selective attention)?

Can gender differences be reduced or eliminated by appropriate training?

The Useful Field of View task assesses the spatial distribution of attention and the ability to pick out targets among distractors

Participants responded by indicating the direction of the previously presented target

48 undergraduates
- half male / half female
- half VGP / half NVGP
- half Science / half Arts

UFOV task was used

20 non-gamers (14 females and 6 males)

Assigned to two groups matched by gender and pre-test on the UFOV task

Pre-test (UFOV) + 10 hours of training (gaming) + post-test (UFOV)

Training material
- action video game (the experimental group)
- non-action video game (the control group)

There are gender differences in selective attention

Playing action video games improves selective attentional capacity

Women benefit more than men from appropriate training

Appropriate training (e.g. action video gaming) may be a useful way to enhance certain cognitive capacities that are necessary for participation in ICT

Can We Prepare Women for Careers in ICT Using Video Games?

Jing Feng & Ian Spence
Department of Psychology, University of Toronto
jing@psych.utoronto.ca spence@psych.utoronto.ca

Experiment 1

Video-game players (VGP) vs. Non-video-game players (NVGP)

Cognitive training with action video games

Experiment 2

Conclusions