FLEx—Iowa State University’s Mobile Technology Classroom

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FLEx—Iowa State University’s Mobile Technology Classroom

Abstract
Iowa State University’s FLEx (Forward Learning Experience) program is a mobile technology classroom housed in a 16-foot trailer, designed to introduce K-12 students, educators, and families to advanced technology and design thinking concepts. Since the fall of 2014, the FLEx has engaged over 35,000 participants through 171 events across the state of Iowa.

Disciplines
Engineering Education | Information Literacy | Science and Mathematics Education | University Extension

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CHALLENGE
21st Century skills for employability and technology literacy

FLEx
An mobile platform providing a Forward Learning Experience (FLEx) through emerging and immersive new technology incorporating engaging innovative design strategies

IA Core & 21Cv Universal Constructs: "4Cs"
• creativity
• critical thinking
• complex communication
• collaboration

Connects to standards:
3-5-ETS-1, 2, & 3
MS-ETS1-1, 2, 3, & 4
HS-ETS1-1, 2, 3, & 4

Design thinking strategies:
“rapid prototyping concepts and models”

FLEx BENEFITS
Experiential learning targeted to K-16 programs:
STEM, 4H, AEA, PLTW, ELP, OPPTAG, WISE,+
All simultaneously realize full-scale virtual and real prototyping for an immersive, hands-on Forward Learning Experience.

21ST CENTURY seeing, thinking, and making extend design space into a shared mental place inhabiting the same space as the design... designing from without to also within.

• 1st person, 3rd person, even adapted
• Awareness / Presence / Embodiment
• procedural (ego)
• survey (exo)
• landmark (visual and ego)

Spatial awareness to situational awareness to navigational awareness parallels both ethical models and educational theories such as constructivism, experiential & situational learning

Perspectives are extended and even reversed, which can be simultaneously objective, conceptual and perceptual and even shared perspectives.

2013 Preview Exhibit, F'14 - Pilot, P10-02 Extension Program
180 engagements (mostly outbound trips)
44,000+ students, educator and families directly engaged
2015 Fieldstead Design Outreach Grant (SKX)
2015 NEDA Innovation Showcase Award
2016 ISU Extension Pilot Funds ($75K plus 40% contract)

Larger Grant and longitudinal studies / research
Upgrade Technologies: Capacities & Scale
Curricular Integrations & Expand Partnerships
Portability & Form Factor Improvements

INVENTORY OF FLEX 1.0

THE ROAD TRAVELED approx. 180 visits & 45,000 constituents

NEXT STEPS

Implementations & Results

Pilot Program Evaluations

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http://edorigami.wikispaces.com/Bloom%27s+Digital+Taxonomy
http://www.onintelligence.org
http://www.onintelligence.org
http://www.onintelligence.org
The World Beyond Your Head by Matthew Crawford 2015

http://commons.wikimedia.org/wiki/File:Reality-Virtuality_Continuum.svg