Towards immersive situated learning with mobile serious games

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Who I am

• Researcher in Mobile Serious Games
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Have you ever watched little children learning? Or playing? Discovered any difference?

“Fun is the original educational technology.”

– Chris Crawford

• Why are children able to combine learning and playing seamlessly?
• How could we benefit from this ability, when we grow up?
Education

- Industrialized
- Build for Scalability
- Suited for the creation of „comparable” people
Is this kind of education appropriate for the social knowledge age?

The social knowledge age

- Highly dynamic global markets
- Highly connected market players
- Managing complexity
- Mass customization
- Open innovation and virtual organizations

Skills needed

• Creativity
• Flexibility
• Ability to reflect
• Ability to learn (life-long!)

How can education meet these skills?

- When students are grouped by age, not by abilities or interests?
- When all students receive the same learning materials?
How to unite gaming and learning again?

Serious Gaming

- Is a serious game just a game plus learning?
- Aim: embedd learning in immersive and natural processes

The gaming world

- Playing time
- Complexity
- Domain
- Learning curve
- Scoring
- Motivation
- Target groups
Gaming, Learning, and Communities for IT Knowledge
Call of a colleague

Problem to solve

Grüß dich, ich bin gerade auf der Homepage unseres Lieferanten. Jetzt wird der Mauszeiger andauernd zu einer Hand. Kannst du mir vielleicht mal sagen, was das zu bedeuten hat?

Tipp: Benutze den Chat, um deine Mitspieler um Rat zu fragen!

Ablehnen

Infos zum Thema

Helfen
EMERGO
Dialogue and Decision Games

- Simulation of decision situations
EMERGO
Dialogue and Decision Games

• Videobased dialogue modules
Mobiles: Smartphones and Tablets

- High availability
- Permanently online
- Connected
- Easy distribution and deployment of apps

Mobile Learning

- Broad sense: use of any mobile device for learning
- Narrower sense: embedding the learning into a context
- Some learning situations are inherently mobile
Learning in Context

- Location
- Orientation
- Time
- Process
- Communication

- GPS
- Camera
- Microphone
- Acceleration
- NFC
- Internet
Workforce in logistics is inherently mobile
Regular education is hard to perform
LogiAssist – Mobile Assistance in Logistics

- Observation of user context
- Offer of context-adapted Assistance and Training

http://www.logiassist.de/

Mobile Gaming

• More than 100 million mobile game players in the US
• Mobile games are the most popular app category

Source: http://iqu.com/blog/mobile-game-stats-you-need-to-know-infographic
What is a mobile serious game?
Mobile Serious Games

- Embedded in Context
- Exploration and utilization of context
- Augmentation of reality

LOCATORY – Augmented Reality Memory Game

Mobile Games for Cultural Learning

Mobile Learning in authentic context
- Fieldtrips
- City Rallyes
- Team tasks
- Mobile Quizzes

Creation of serious mobile games

• Technical effort high
• Technical expertise at educators low

• How to solve this dilemma?
ARLearn: platform for mobile serious games

- Open Source
- Authoring Environment
- Clients for Android and iOS

http://ou.nl/arlearn
ARLearn: Authoring

http://ou.nl/arlearn
SALOMO: Mobile Learning Game for Port Logistics

Klemke, R., Kurapati, S., & Kolfschoten, G. (2013, 6 June). Transferring an educational board game to a multi-user mobile learning game to increase shared situational awareness. Presentation at the 3rd Irish Symposium on Game Based Learning, Dublin, Ireland.

Source: hhla.de
Container terminal: complex logistic processes

Source: Voss et al. (2008)
Internal disruptions

External disruptions

The Huffington Post, 2002

usnews.nbc.com, 2012

TIB, Wa

Setsail.com

The Huffington Post, 2002
From board game to multi-user mobile learning game

Klemke, R., Kurapati, S., & Kolfschoten, G. (2013, 6 June). Transferring an educational board game to a multi-user mobile learning game to increase shared situational awareness. Presentation at the 3rd Irish Symposium on Game Based Learning, Dublin, Ireland.
**EmUrgency: Mobile Game for Basic Life Support Training**

Welcome to the Heart Run game. It will help you to be prepared in case of emergency. The instructions on your device will tell you how to save a life.

The game is based on messages which will appear on your device. When closing this message, you will already see the next one. You close this message by using the BACK Button. To open a message, you have to click on it. Messages which you have read are greyed out.

To do this, press the barcode icon below and hold the advice in front of the barcode. It will scan automatically.

Push hard and fast in the center of the person's chest to the beat of the disco song “Stayin' Alive.” It has more than 100 beats per minute — the correct rate to push on the chest during CPR.

If other bystanders are present, change the person giving chest compressions.

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ELENA: Language-learning for kids

ARLearn: spread the word and join us

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- [https://code.google.com/p/arlearn/](https://code.google.com/p/arlearn/)