

Mobiiliteknologiat ja - sovellukset opetuksessa, kaupankäynnissä ja muussa toiminnassa-



IT Kaikkialla -kurssi
Kati Clements
21.2.2014



1934 2009

UNIVERSITY OF JYVÄSKYLÄ



Licensing: Creative Commons

You are free:

to Share — to copy, distribute and transmit the work

to Remix — to adapt the work

Under the following conditions:

Attribution. You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work).

Noncommercial. You may not use this work for commercial purposes.

Share Alike. If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.

<http://creativecommons.org/licenses/by-nc-sa/3.0/>

<http://www.slideshare.net/jan.pawlowski>





The License in plain words...

- ▣ All slides in this set can be used for **non-commercial** purposes (academic, general)
- ▣ If you like to **use** my slides, just **inform me** by sending a mail:
kati.clements@jyu.fi
- ▣ If you **modify** the slides, please send me your version
- ▣ If you use the slide for a **commercial** course, contact us and we agree how to arrange this

Esityksen sisältö

1. Esittely
2. Mobiiliteknologiat pähkinänkuoressa
3. Mobiiliteknologiat opetuksessa
Case1: Open Science Resources –
Tiedekeskukset & mobiiliteknologiat
Case2: Next Generation of eTextbooks
4. Mobiiliteknologiat kaupankäynnissä
esimerkkitutkimus
Case3: Shoppailu mobiililaitteilla Suomi
vs. Kiina

Kati Clements



- Projektitutkija Jyväskylän Yliopiston Tietojenkäsittelytieteenlaitos,
- Vieraileva professori Xi'an Jiaotong Yliopisto
- EU/Kiina projektit
Open Discovery Space (20 maata Euroopasta)
eBEREA (Suomi-Kiina verkosto)
Next Generation of e-Textbooks
- Tutkimuksen kiinnostuksen kohteet:
 - Avointen oppimateriaalien laadunvarmistus oppimateriaalipankeissa,
 - Mobiiliteknologioiden käyttö opetuksessa ja kaupankäynnissä, Mobiililaitteilla shoppailu

Projektitutkija Kati Clements
Department of Computer Science and Information Systems PL 35
(Agora)
40014 University of Jyväskylä
Room AgoraD 511.1
Tel. +358 505631805
Mail. Kati.clements (AT) jyu.fi



Global Information Systems, University of Jyväskylä the team



Tiia Sten



Philipp Holtkamp



Jan M.
Pawlowski



Kati Clements



Henri Pirkkalainen



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

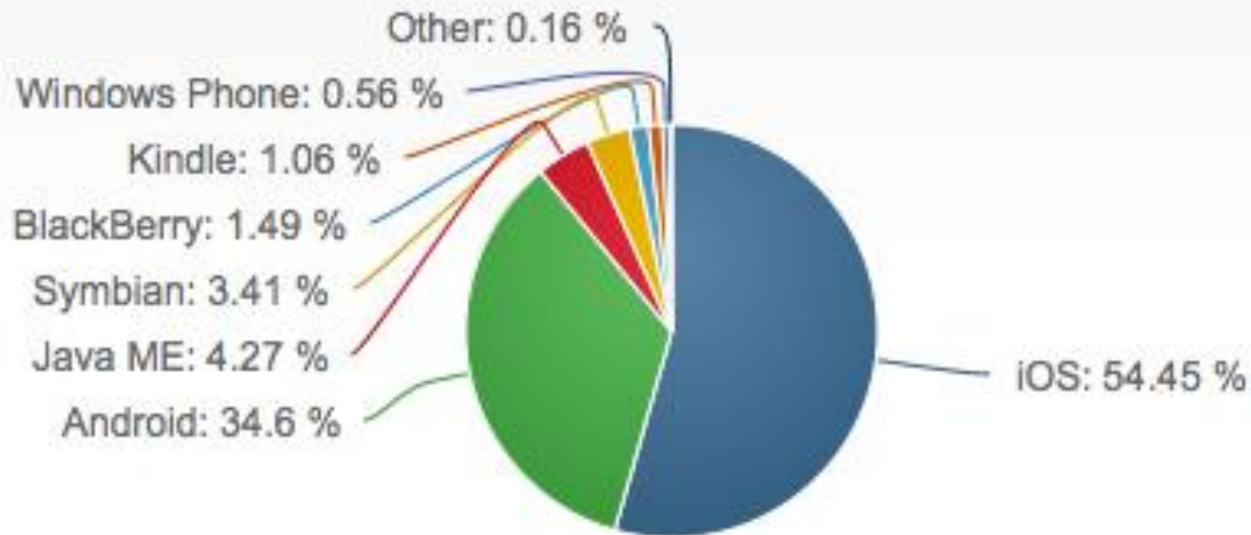
Mobiiliteknologiat



- Langattomat laitteet (matkapuhelimet, tabletit)
- Tiedonsiirto mobiiliverkon yli
- Tekstiviestit (SMS)
- App – mobiiliohjelmisto



Mobiili/Tabletti- käyttöjärjestelmät maailmassa nyt



Source:
<http://www.netmarketshare.com>



Mobiiliteknologia korvaa kaikki aiemmat mediat

Mobiililaitteella voit:

- 📖 Lukea kirjoja
- 🎧 Kuunnella musiikkia/radiota
- 📺 Katsoa televisiota/elokuvia
- 🌐 Käyttää internetiä

Mutta myös tuottaa omaa mediaa:

- ✍️ Kirjoittaa muistiinpanoja
- 📷 Ottaa valokuvia/videota
- 🗣️ Osallistua sosiaalisen median kautta yms.



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

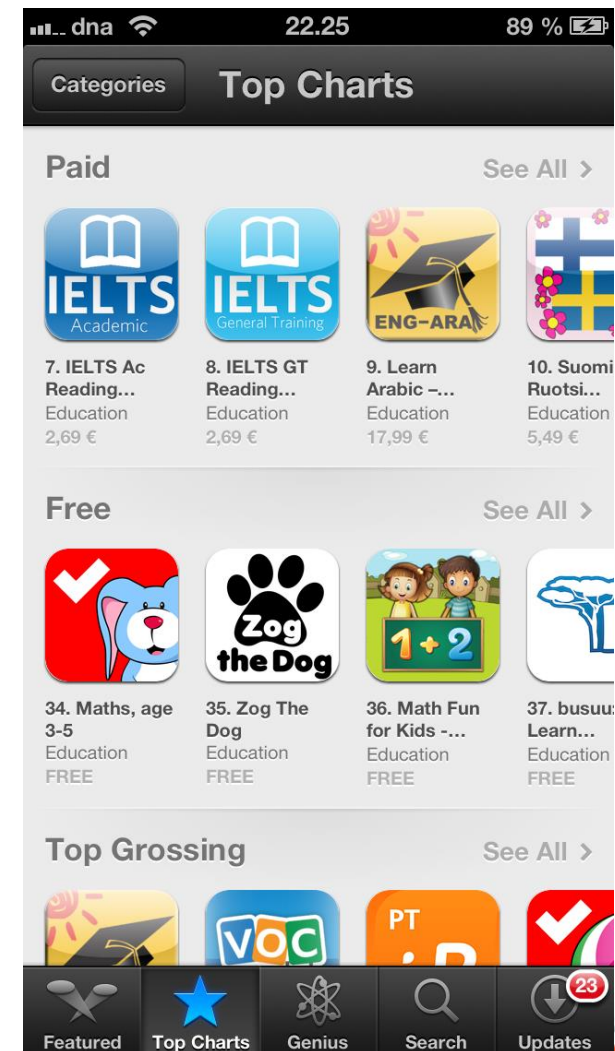
Mobiiliteknologiat opetuksessa

Testiesimerkki: Message wall

– Lähetä viestiseinälle vastaus kysymykseen:

Miten sinä olet käyttänyt mobiililaitetta opiskelussasi?

Mwall.mobi/



M-Oppiminen

Mahdollisuudet

- Kevyemmät koulureput?
- Tukee erilaisia oppijoita
- Tukee keskittymishäiriöitä
- Motivoi opiskelijoita?
- Bring Your Own Device (BYOD) – kohtuullisen vähän kustannuksia koulutuksen järjestäjälle
- Opettajan nopea vastausaika
- Kaikkialla oppiminen

Haasteet

- Verkkoyhteyden laatu ja nopeus
- Akun kesto
- Tekijänoikeuskysymykset
- Erilaiset käyttöjärjestelmät
- Erilaiset standardit eri näytöille
- Oppilaiden huomion pitäminen varsinaisessa asiassa

Current and Planned Usage of Mobile Devices for Corporate Learning & Development



Q: Thinking about your company's usage of mobile devices, how are these devices being used NOW and to what extent will mobile devices be used in 2015?



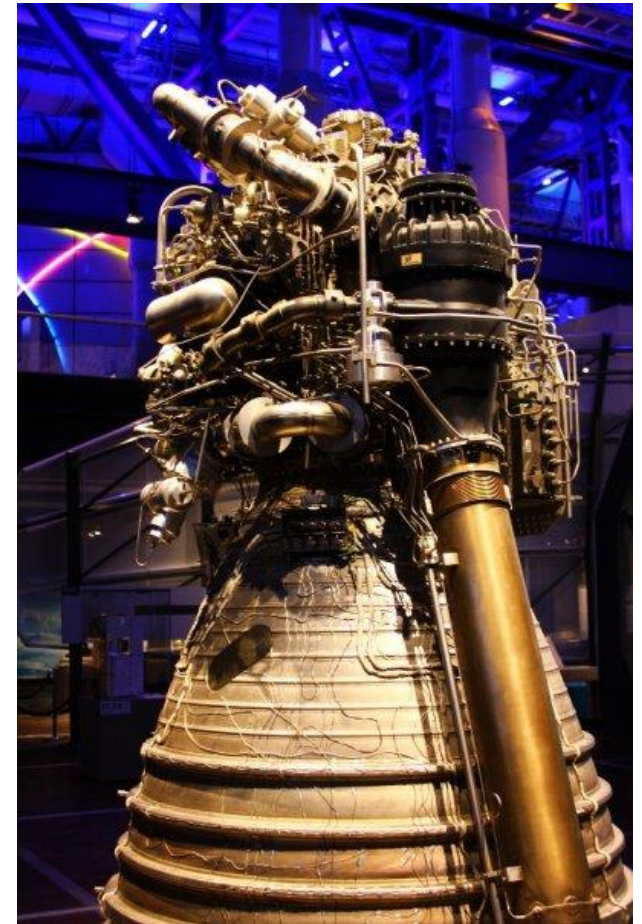
BASE: Companies that have/plan to deploy mobile devices in 2011 - Netbooks/Notebooks, Smartphones and Media Tablets (N=166)

Case1: Avoimet oppimateriaalit Open Science Resources



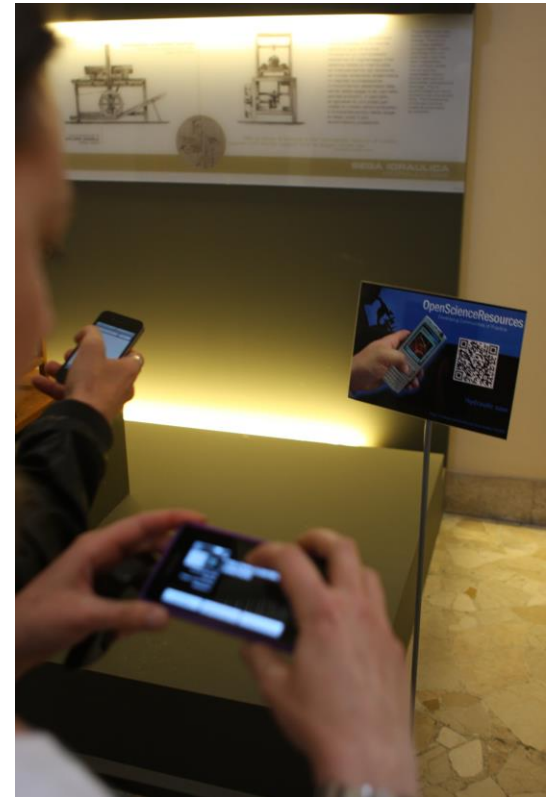
Tiedekeskukset & mobiiliteknologiat

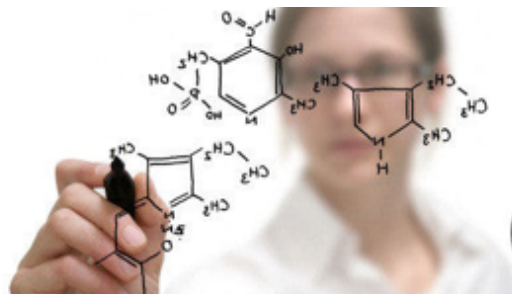
- ▣ Lisäarvoa opiskelijaryhmien tiedekeskusvierailuihin
- ▣ Informaali oppiminen





QR-koodilla näyttelystä simulaatioon





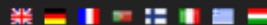
Contextualized Resource Based Learning

OpenScienceResources

[Home](#) [OSR Repository](#) [OSR Tool-Box](#) [News](#) [Help](#)

[Survey](#)

[Log out](#)



Leonardo da Vinci's "Hydraulic saw"



[Make your voice heard - Click here to take our survey](#)

Original Title:

Leonardo da Vinci's "Hydraulic saw"

Short Description:

3D reconstruction of the Leonardo da Vinci's "Hydraulic saw" model of the National Museum of Science and Technology Leonardo da Vinci of Milan

Educational objectives none



Average: 5 (1 vote)



[Share](#)

Social Tags: 3D, Leonardo da Vinci, (see all)

Social Taggers: 1 people

[Add your tags](#)

[Full metadata record](#)

[Educational Material](#)

[Report inappropriate](#)

[Comment this pathway](#)

[Add to favorites](#)

Related Pathways:

- Leonardo da Vinci's machines and The Leonardo da Vinci Museum in Milan

[add to favorites](#)

Given Metadata Age Range: 12-15, 15-18, 18-25, 25+ Aggregation Level: educational pathway Context: on the web Copyright Restrictions: yes Cost: use is free of charge Difficulty: easy Educational Asset Type: video Format: 3D Intended User Role: student, other learner / visitor, teacher Interactivity Level: low Interactivity Type: expositive Language: it Learning Time: up to 10 minutes Metadata Language: it Size: not intended for download Status: final Structure: atomic



2009
OF JYVÄSKYLÄ

Tulossa 2014 – Tulevaisuuden e-oppikirjat:



Next Generation of e-Textbooks (NGEE project)

NGEE partnerit



- Leia Media Oy (e-Paperi lukija)
- Management Class Oy (sisällöt)
- DidacTEC Oy (didaktiikka)
- University of Jyväskylä (tutkimus, standardisointi)
- eBEREA network (yhteistyöverkostot)

- Xi'an Jiaotong university (vaatimusmäärittely)
- Eastern China Normal University (Standardisaatio)



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

Oppikirjat...



- ▣ Synonyyminä tylsälle, perinteiselle opetustyyliille



...Millaisia ovat tulevaisuuden e-oppikirjat?

Thanks to: Fabrizio Cardinali, CEN Workshop Learning Technologies, 01.2013

Safari Books Online

Subscriber Sign In | Request Quote | Site Contact | View Demo | Join Our Reading List | Our Blog

NEW PRODUCT UPDATES & TIPS

Search Content on Safari Books Online

GETTING STARTED | CONTENT | PRODUCTS & SUBSCRIPTIONS | COMPANY | NEWS & EVENTS | CUSTOMERS | DOWNLOADS & RESOURCES | CONTACT US

Home > Getting Started

GET A SUBSCRIPTION

- INDIVIDUAL**
Sign up for an individual subscription
- Unlimited or library
- Creative Edge
- WORKGROUPS**
Sign up small workgroup online (2-25 employees)
- ENTERPRISE**
Recent device enterprise pricing (50+ employees)

Safari Books Online
makes it easy for you to find the answers you need

Getting Started with Safari Books Online

Getting started with Safari Books Online is easy. This page provides an overview of information you can find on the site as well as some quick links that will help you get the information you need to make an informed decision. You may also navigate the site by using the top and side navigation bars as well as the footer.

Getting Started

- Content
- Products & Subscriptions
- Company
- News & Events
- Customers
- Downloads & Resources
- Contact Us

Content

Search

Books24x7 | ENG | ENR | Contact | Careers | Blog

ABOUT US | PRODUCTS | SOLUTIONS | SERVICES | INFO CENTER | INVESTORS | 877.545.5743

books24x7

EngineeringPro™
Get the full content of hundreds of the best books in a fully searchable, Web-based environment.

Books24x7® On the Go™
Stay connected to vital resources from your mobile device.

Find out more about Books24x7

- About Us
- Product Information
- On Demand Platform
- Books
- Subscription Options & Pricing
- Support

Books24x7
Today's dynamic business climate commands a work force to learn and do more, often demanding immediate knowledge and expertise. Give them on-demand access to a portfolio of best intelligence with Books24x7.

On Demand as easy as 1-2-3 view quick demo

Books24x7 User Login

Username: Password: Remember my login

Forgot your login information? By logging in you agree to the terms of Books24x7's Membership Agreement.

Uchapters

Basic Search

Multi-ISBN Search

Browse Catalog

10% OFF ON ALL PRINT STUDY TOOLS

Best Choices. Best Savings on **TEXTBOOKS**

- PRINT BOOKS up to 15% off
- eBOOKS always 50% off
- SINGLE CHAPTERS as low as \$1.99
- AUDIOBOOKS as low as \$1.99

FREE shipping over \$40

3 Steps to a Better Grade

- Search by author, title or ISBN
- Buy **CourseNow** from the Study Tools section or click here
- Join the other 225,000 students that are already using CourseNow

800-848-6222 | Affiliate Program | Sitemap | Privacy Policy | Terms & Conditions | About Us | Feedback & Product Code

CourseSmart
Learn Smart. Choose Smart.

Create Account | Sign In | Cart (0) | Help

course name, author, keyword, title or ISBN I am an instructor I am a student **SEARCH** Advanced Search >

Find your textbook as an eTextbook

- for Instructors**
Access textbooks anytime, from anywhere.
- for Students**
Buy and access your eTextbook instantly. Save up to 50%.

<p>Largest selection of eTextbooks</p> <p>5,695 titles available on CourseSmart in 830 course areas, across 109 disciplines</p>	<p>eTextbooks save trees</p> <p>191,519 trees saved* by CourseSmart Users * Conservatree</p>	<p>eTextbooks cost less</p> <p>\$59.57 average savings per eTextbook purchased on CourseSmart this month</p>
---	--	--

CourseSmart for Instructors | CourseSmart for Students
About CourseSmart | Customer Service | Terms of Service | Privacy Policy | 508 Compliance | Affiliates | CourseSmart Blog
©2008 CourseSmart

Google books

Search Books

Home page books

Reading Tools

Home page books

Reading Tools

Home page books

Reading Tools

McGraw-Hill Online Learning

Change Course... Our Story Courses & Programs Build Your Course F.A.Q. News / Events About Us

Tailored to fit your specific educational needs

You are here: Home > Build Your Course

Build Your Course

There are as many ways to use and customize our courses as there are ways to travel.

Let us help plan your learning itinerary.

Home | Previous page: Courses & Program Catalogs Next page: Customized, Blended Course

© Copyright 2008 - The McGraw-Hill Companies. Any use is subject to the Terms of Use and Privacy Policy

MOSBY'S NURSING SKILLS
PREPARE FOR EXPERT CARE.

EDUCATIONAL

WILEY PLUS

For Living For Learning


WileyPlus is the complete, online solution that is designed around the activities instructors and students perform in and out of class each day.

Student-Approved...

80% of students surveyed said they would recommend WileyPlus to their other instructors.

Expect Positive
Learn. Engage. Succeed.

Uusia julkaisumahdollisuuksia



Paper has excellent qualities;
controlled consumer content experience,
no need for charging, natural light reflection.

But printing and logistics costs are high.
Information gets old. Recycling is a hassle.

To help publishers bring to consumers up-to-date quality print
effectively and efficiently, Leia Media has developed **The Living Paper**

Leia ePaperi ratkaisu

Helppokäyttöinen ja kustannustehokas

PapyrOS Cloud



Mobile app



Leia ePaper

- 9,7" color
- 6 mm thin
- Light <0.5 kg
- Wireless
- 4 - 64 GB
- Solar cell
- 1,9 Ah battery



1934 2009
UNIVERSITY OF JYVÄSKYLÄ

Best of paper and digital

Benefit:	Paper	Leia ePaper	Tablet
Channel control	✓	✓	-
No charging	✓	✓	-
Reader focus	✓	✓	-
Reader privacy	✓	✓	-
Good for eyes	✓	✓	-
Readability	✓	✓	✓ -
Ease of use	✓	✓	✓ -
Interactive	-	✓	✓
Up-to-date	-	✓	✓
Distribution cost	-	✓	✓
Personalization	-	✓	✓
Ecological	✓	✓	✓

Lyhyesti sanottuna...NGEE

– Next Generation Educational E-books Project -

- Käyttäen eOppikirjoja julkaisukanavana tablettien, e-kirjalukijoiden ja älypuhelinien kautta löydetään uusia liiketoimintamalleja kaikille toimijoille oppimateriaalien tuotantoketjussa.
- Tulevaisuuden oppikirjojen tulee olla
 - Adaptoituvia
 - Räätelöityjä
 - Kestävää kehitystä tukevia
 - Yhteisöllistä ja avointa opetusta tukevia
 - NGEN malli perustuu EPUB3 standardiin



Case3: Mobiilitekniologiat kaupankäynnissä



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

Miten älypuhelimta käytetään shoppailuun?

- Etsitään kauppaa/myyjää?
- ▣ Soitetaan myyjälle?
- ▣ Vertaillaan hintoja
- ▣ Luetaan arvosteluja ja tuoteselosteita
- ▣ Etsitään alennuskoodeja
- ▣ Etsitään alennusmyyntejä
- ▣ Käytetään löytynyttä alennuskuponkia
- ▣ Valitaan, tilataan ja ostetaan tuote



Messagewall

Mwall.mobi/

Lähetä viesti:

📦 Mitä sinä olet ostanut kännykällä?



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

The Kännykkäshoppailu – Suomalaisten ja kiinalaisten käyttäjien vertailututkimus

Shaoshan Xie , Kati Clements, Juha.Laine, Markku Tinnila, Qi Li, Jan Pawlowski



Tutkimuskysymys:

Miten suomalainen ja kiinalainen mobiililaitteella tapahtuva shoppailu eroavat toisistaan?

Teoreettinen tausta:

Asiakas käyttäytymisen ärsyke vaste malli (Musta laatikko –malli)
Customer Behavior Stimulus Response Model (Black Box Model)

Metodi:

Haastattelututkimus (Laadullinen)



M-Liiketoiminnan erikoispiirteet

- Kaikkiallistaminen – Läsnä kaikkialla.
- Välittömyys – Ajankohtainen tieto, aina.
- Paikantaminen – GPS paikallistamispalvelut
- Automaattiset toiminnallisuudet– Push-markkinointi
- SIM – Omistaja/shoppailija on helposti tunnistettavissa
- Mobiilimaksutavat – esim. Afrikassa rahan siirto onnistuu kännyköillä

(Tiwari et al., 2006)



Stimulus – response model (black-box model) (Sandhusen, 2000)

ENVIRONMENTAL FACTORS		BUYER'S BLACK BOX		BUYER'S RESPONSES
Marketing stimuli	Environmental Stimuli	Buyer Characteristics	Decision Processes	
Product Price Place Promotion	Economic Technical Political Cultural	Attitudes Motivation Perceptions Personality Lifestyle	Problem recognition Information search Alternative evaluation Purchase decision Post-purchase behavior	Product choice Brand choice Dealer choice Purchase timing Purchase amount

Laadullinen empiirinen tutkimus

- 16 haastattelua yhteensä – Suomesta ja Kiinasta.
- Haastattelut nauhoitettiin, litteroitiin ja analysoitiin Ärsyke-vaste malliin verraten



Haastateltujen tiedot

id	Occupation	Nationality & country of living	Sex	Age	Mobile phone brand
01	Working, travels for work a lot	Finland	Female	26	Samsung
02	Working as an accountant	Finland	Female	30	iPhone
03	Stay-at-home-mum and a student	Finland	Female	31	Nokia
04	Student now, but working before	China	Female	27	iPhone
05	Student	China	Female	23	MI
06	Student	China	Female	25	HTC
07	Student now, but working before	Finland	Male	25	MI
08	Student	China	Male	20	HTC
09	Student now, but working	Finland	Male	23	Nokia
10	Student now, but working	Finland	Male	24	Samsung
11	Works in a coffee shop	China	Male	25	Nokia
12	Senior Engineer	China	Female	37	iPhone
13	Senior Engineer	China	Female	34	Samsung
14	Manager of a company	China	Male	35	Samsung
15	Doctor of a hospital	China	Male	36	MI
16	Student	China	Male	25	MI

Kännykkäshoppailun prosessimalli

Asiakkaan näkökulmasta
kännykkäshoppailussa voidaan nähdä
seuraavat kuusi vaihetta:

Motivation

Selection

Order

Payment

Delivery

Customer
service



1934 2009

UNIVERSITY OF JYVÄSKYLÄ

Tutkimustuloksia

- Suomalaiset mobiilikäyttäjät ovat kiinalaisia paljon konservatiivisempia. Kiinassa etenkin naiset ostavat päivittäin vaatteita, kosmetiikkaa ja elektroniikkaa kännyköillään, kun taas Suomalaiset turvautuvat kännykkäshoppailuun vain kiireessä tai liikenteessä.



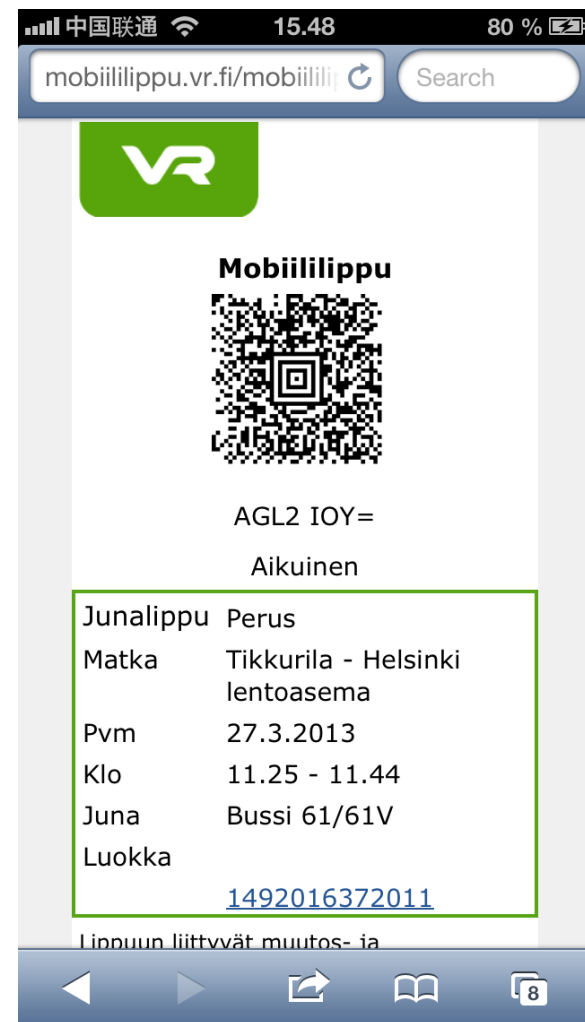
Eroja – Pakettien toimitustavat







- Kiinalaiset tavarantoimittajat ovat huomattavasti suomalaisia kätevämpiä. Useimmat tulevat perille vähintään 2 päivässä, jotkut jopa samana päivänä kun taas suomessa tavaraa voi joutua odottamaan viikon ja siltikin toimitus voi olla itselle huonoon aikaan.






Tutkimustuloksia: Toimitustavat

- ❏ Mobiililiput ovat Kiinassa vielä tulevaisuuden juttu, kun taas suomessa niitä käytetään jo junissa, busseissa, elokuvateattereissa, lentokoneissa yms.
- ❏ Kuitenkin esim. Kiinan rautatiet ovat menossa kohti mobiililippuja



Motivation for Mobile Shopping	Our study says	CN	FI
<p>Ease of use, easier to use than PC[30] [31]</p>	<p>Disputed: Chinese consumers confirm this, Finnish consumers think PC is still easier (lack of easy-to-use apps was mentioned) “At home, the computer is more convenient”(Finnish woman, age 31)</p>		
<p>Convenience, consumers can initiate the transaction anytime and anywhere on the move at their convenience[30].</p>	<p>Confirmed: This was most appreciated by Finns. Chinese lack a working 3G network, which is one of the reasons why they like to use their phones from home where there is wifi access. However Chinese do find shopping with mobiles convenient. “If I buy things from the web or with a mobile phone, the reason is a sudden need. For example a bus ticket, a train ticket or a parking fare or something that I need while I am on the move.”(Finnish woman, age 26)</p>		
<p>Instant notification and delivery via e-mail, SMS, EMS, or IM[30].</p>	<p>Confirmed: This was most appreciated by Finns, who can shop for electronic tickets which are then delivered to their phones. In China, this is a system still being developed for trains, planes, buses and the metro. “With my mobile phone, I have bought bus tickets sometimes in Helsinki. It works with SMS.”(Finnish woman, 31)</p>		

<p>Enjoyment [32,31]</p>	<p>Disputed: Mobile phone shopping was only really used as “entertainment” by Chinese women. Other groups did not use mobile shopping as ‘entertainment’. “Chinese girl’s favorite hobby is searching Taobao.”(Chinese woman, 22)</p>		
<p>Continuance intention and Habit[33]</p>	<p>Disputed: Many Chinese women seem to be buying through habit. None of the Finns interviewed were using mobile shopping for this reason. “My roommate buys something almost every day, but at least once per week.” (Chinese woman, 22)</p>		
<p>Price sensitivity[30,33,28]</p>	<p>Disputed: Low price was mentioned by almost all of our Chinese interviewees as a motivator. Finns, however, are much less price-motivated. “I would buy electronics from 360buy because it’s cheaper.” (Chinese man, 23)</p>		
<p>Using mobile for payment</p>	<p>Confirmed: Both Chinese and Finns found this to be a great motivation, especially for people who might forget their wallets (like stay-at-home mums) “Joining purchases to my phone bill would bring an advantage for the mobile phone [over PC].” (Finnish woman, 31) “It’s very convenient to use Zhifubao [Chinese Paypal equivalent] on my mobile”(Chinese woman, 21)</p>		

Kiitos!

Ota yhteyttä:

Jos esimerkiksi kaipaillet kandi/graduohjaajaa tai aihetta

Kati Clements

050-5631805

Ag D511.1.

Kati.clements@jyu.fi

Skype: kati.maki.kuutti

<http://aroundtheworldwithafinn.blogspot.fi/>



1934 2009

UNIVERSITY OF JYVÄSKYLÄ