http://mobiled.uiah.fi/
The Digital Profile of a Teenage Cell Phone Learner

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Background

Mobility is the buzz word of today

- Learners are mobile
- Devices are mobile
- Learning has become mobile
- Mobile devices → tools for mobile learners to make learning take place
Background

The challenge: Determine best device for situation.

The situation: Africa ➔ world’s fastest growth rate in cell phone usage. (The African Cell Handset Market Analysis, 2006)

The same growth did not apply to computers. (World Wide Worx, Technology Research in South Africa, 2006)
Background

Background

The result: 1 phone per 1.5 learners
1 phone per 17 learners
(Monumentpark Primary School, 2006)

The solution: Using growth of cell technologies to benefit learning and learners. (Geoff Stead 2004).
Background

- Educators need to take advantage of all tools, talents and expertise to help deliver educational services.
- Many learners bring some level of cell phone skills to class.
- Skills can be used in helping create relevant coursework.
Problem Statement

Cell phones seem to be the solution. Legislators in South Africa want to put legislation in place to ban from schools “powerful technologies that are seen as a normal part of every day life” of a teenager.

(Keri Facer, 2005; Beeld, 19 August 2006)
Problem Statement

Cell phone as learning tool

- Having the tool is not sufficient \((\text{Brown, 2000; Stead, 2005})\).

- Essential component of facilitating learning is understanding learners \((\text{Oblinger, 2003})\).

- Teenagers use and interact with their cell phones in and out of a school environment.

- Little research on above has been done in South Africa.
Rationale

A profile of a teenage cell phone learner can:

- Help to explain academic and social value of a cell phone.
- Provide policymakers/educators with knowledge to successfully incorporate cell phones as an educational tool.
- Enabling educators and policy makers to create a learning environment that suits the needs of today’s digital learners.
Conceptualisation

TEENAGE LEARNER
- Social
- Physical
- Moral
- Mobile Culture
- Psychological Behaviours

The profile of the digital teenage learner

Learner and learning Behaviour of teenager

PEDAGOGY
- Cognitive
- Affective
- Psychomotor Experiences

LEARNING WITH TECHNOLOGY
- Handset Preference
- Network Preference
- Important Cell Phone Functions
- Most Frequent used Functions

Digital language
Teenagers and cell phones
Research Design

The purpose of this study was to conduct an in-depth analysis of teenager’s digital profile when using a cell phone, and a mixed method framework was adopted.
Research Instruments

- Questionnaire
- Focus groups
- Cell Phone Logbooks
Research Process

Questionnaire:

- 796 questionnaires completed by teenagers age 13-17 (mean age 16)
- Mixed demographics. Varied widely in socio economic background - drawn from a community that represents a small-scale version of the larger society.
- Administrated during school time
Research Process

Focus group:

- Teenagers of family and friends
- Known to the researcher, but did not know each other.
- Questions were intended to support those questions included in the questionnaire.
Research Process

Logbooks:

- 18 selected learners from Cornwall Hill College
- Each interaction with cell phone was logged
Results: Teenage Learner

Social:

Extremely important part of teenagers life.

“When I crashed my motorbike it (cell phone) was the first thing I checked”

Mean age - first cell phone: 11–13

63% respondent’s cell phone charges are paid by parents.
Results: Teenage Learner

Social:

57% prefer SMS - cheaper and easier to communicate a delicate matter.

“My friend and I were in a fight, we didn’t want to speak to each other so we smsed instead. Now we’re even better friends.”

43% prefer to make a phone call because it is more convenient.

“It is easier to make a phone call but cheaper to sms.”

Most memorable experiences related to social interaction.
Results: Teenage Learner

Social:

Cell phone has improved and widened friendships.

“I need to be in constant contact with friends to keep up with any social arrangements. My cell phone gives me this opportunity”

“If you do not have a cell phone your friends would not be able to contact you and they won’t bother they will meet or party without you.”

“If you do not have a cell phone you won’t have friends and will stay at home.”
Results: Teenage Learner

Moral:

Would like new cell phone but more important to have one

Provide a mean to solve problems

“I could apologize to my girlfriend about the fight we had and its that simple”

“I was able to sort out a major problem with my girl. She could not talk so we smsed. It made it a lot easier for her.”

“My friend and I were in a fight, we didn't want to speak to each other so we smsed instead. Now we're even better friends.”
Results: Teenage Learner

Physical:

- Television
- Playing
- Reading
- WWW
- Computer
- Walking
- Team sport
- Family outing
- Individual
- Bicycling
- Swimming
- Attending
- Entertainment
- Movies
- Art galleries
- Music
- Collecting
- Ballet
Results: Teenage Learner

Physical:

- Social/Cultural: 51.2
- Physical: 51
- Inactive: 49.4

Activities
Results: Teenage Learner

Mobile Culture:

On hand availability, 73% always carry their cell phones with them

“My friends and I were on our way home when the car broke; and I ALWAYS have my phone with me; so I phoned my dad.”

“I need to be in constant contact with friends to keep up with any social arrangements. My cell phone gives me this opportunity.”

Dating

“Well I met my current boyfriend on the cell phone and we have been dating for about 12 months and we are still going strong.”
Teenage Learner: Culture

Communication with Friends

<table>
<thead>
<tr>
<th>Tool</th>
<th>Logistic</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone call</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Sms</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Chat room</td>
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<td>90</td>
</tr>
<tr>
<td>MMS</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Please call me</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>
Teenage Learner: Culture

Communication with Parents

- Please call me
- MMS
- Chat room
- Sms
- Phone call

[Bar chart showing communication methods used by teenage learners with parents, categorized as logistic and social.]
Teenage Learner: Culture

Social Interactions/Peer Relationship:

Distribution of Logbook Entries

- Friends: 69%
- Parents: 8%, 14%, 9%

Social entries vs. Logistic entries
Results: Teenage Learner

Psychological Behaviours:

Not so important to them how other people perceived their cell phone

“Everyday is special not because of the actual phone but the people I get in touch with.”

The design is less important

“Everybody likes black or silver it’s just the basic ones ... no one’s going to sulk if it’s going to clash with your outfit.”
Results: Teenage Learner

Psychological Behaviours:

Feel disconnected without a cell phone.

“I almost lost it (cell phone) at a game and I almost had a heart attack because I can't picture myself without it.”

“My phone was stolen a couple of weeks ago. I felt very disconnected from the world.”

Personalisation very important

“I need it to feel like my own, it should be different from the other.”
Results: Teenage Learner

Psychological Behaviours:

Help in identity development, make them feel important/Raise self-esteem

“It was my birthday 2 days ago, and I received so many SMS’s and phone call’s for my birthday. It means a lot to me.”

“While being in a chat room I made a new friend who had lost her baby, she could speak to me during that time of need. She had no one else to talk to and wanted to commit suicide and I helped her through it.”

Love using their cell phone

“Just being with my phone makes me feel complete. I love my phone and can't lose it, not now. I make sure I have it with me every moment of my life.”
Results: Teenage Learner

Psychological Behaviours:

- Personalisation
  - Personalisation of phone
  - Always carry cell phone with me
- Identity
- Self-image
- Other perceives cell phone
- Design of cell phone is important
- Feel disconnected without cell phone

Bar chart showing percentages of different aspects.
Results: Technology

- 91% respondents have had current cell phone for less than 2 years
- 85% their previous one
- 10% got parents upgraded phone
- Parents took out contract
Results: Technology

Handset Preference:

Cell Phone Brand Names

- Alcatel
- Ericsson
- Sony Ericsson
- Samsung
- LG
- Motorola
- Nokia

Percentage

- Own
- Prefer
### Results: Technology

#### Preferred Network

<table>
<thead>
<tr>
<th>Network</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTN</td>
<td>20</td>
</tr>
<tr>
<td>Vodacom</td>
<td>80</td>
</tr>
<tr>
<td>Cell C</td>
<td>10</td>
</tr>
</tbody>
</table>

![Networks Diagram](image)
Results: Technology

Important Cell Phone Functions:

- Required Cell Phone Functions
  - SMS facility
  - Colour screen
  - MP3 player
  - Bluetooth
  - Camera
  - Appearance
  - Phone size
  - Wap enabled
  - True tone
  - Screen size
  - MMS facility
  - 3G
  - Brandname
  - Games
  - Polyphonic

![Bar Chart: Required Cell Phone Functions](chart.png)
Results: Technology

Most Frequent used Functions:

- SMS
- Alarm
- Phone call
- Camera
- Reminder
- Calender
- Calculator
- Games
- MMS
- Internet
- Chatrooms
- Video recorder
- Voice recorder
- Stopwatch
Results:

Cell phone activities per day

[Bar chart showing cell activity per day for parents, with bars indicating different hours of the day, and labels for 'Weekday' and 'Weekend'.]
Results

Cell phone activities per day

Cell activity per day - FRIENDS

Weekday
Weekend

Hour

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Results: Pedagogy

Cell Phone and Schoolwork

- Cell phone will aid school work: 50% Yes, 50% No
- Would like to use cell phone as tool: 60% Yes, 40% No
- Cell phones will enhance schoolwork: 50% Yes, 50% No
Result: Pedagogy

Cognitive:

Save time

“We can do research in class and teachers can help us choose the right information. We'd have less homework and more sleep!”

“You'd be able to get facts faster therefore being able to get the work done faster + producing good quality work because you've got more time.”

Reminder

“I might be able to make notes while in class or study for a test or send homework to my sick friends.”
Result: Pedagogy

Cognitive:

Better quality work

“I can get extra info on things I'm not sure about.”

“Will have access to more information and therefore we will answer questions better.”

“I won't loose my worksheets.”

“It will make it easier therefore you have more time to make the quality better.”
Result: Pedagogy

Cognitive:

Information at fingertip

“You have access to information you don't normally have.”

“Permanent access to the internet. Any information or pictures are freely available. Can download programs to help with different subjects.”

“More access to more info. Advanced learning is development for the future.”

“You can search what a word means without a dictionary.”
Result: Pedagogy

Affective:

We are the new Generation:

“The digitization of our lives has expanded in many sectors. Why should teaching remain archaic in method?”
Result: Pedagogy

Affective: Negative feelings

Cheat in tests: 92% reported never to cheat

Distraction: 74% use it in class time

“People will cheat and surf the net when they are not supposed to.”
Results: Pedagogy

Affective: Positive Feelings

Motivation/Fun

“Because kids like to use their call phones, so they may feel more encouraged & excited about school work if we can complete it via a "cool" means of communication.”
Results: Pedagogy

Affective: Positive experiences

75% of responses included:

- It was exciting
- It made me feel good about myself
- My parents would approve of this activity
- It was funny
Results: Pedagogy

Affective: Negative experiences

25% of responses included:

- I had to deal with offensive content
- It was very difficult or complicated
- It was risky
- I felt scared, threatened, or upset
Results: Pedagogy

Psychomotor:

Easier

“Its easier to do work with a cell phone as its a multitasking device.”

Faster

“You can search what a word means without a dictionary. Typing is much quicker than writing to take down notes. Search net for relevant information.”

Typing is much quicker than writing, to take down notes.”

Neater

“Because of my hand writing it could help me write easier and make my context more legible”
Conclusion

- The digital profile of the teenage learner has a social, moral and psychological context that addresses the cognitive, affective and psychomotor domains.
- Cell phones are an integral part of the lifestyle of the teenage learners.
- It is therefore possible to use cell phone technology in education as a tool to support learning.
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