



Parameters and focal points for planning
and evaluation of mobile learning
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Analysing the mobile complex and planning school-based mobile learning: parameters and focal points

In our work, we identify four didactic parameters in order to define didactic spaces for teaching and learning. They can be seen to offer different possibilities for assimilating international youth culture and media habits, consisting of structures, agency and cultural practices with specific learning potentials, into school. The agents for this assimilation are mainly teachers and their emphases and preferences along the opposing poles of four didactic parameters.

Parameter A: Learning sets
Pole: Practice of the school –
Pole: Practices of mobile devices

Parameter B:
Relationship to the object of learning
Pole: Mimetic reproduction –
Pole: Personal reconstruction

Parameter C:
Institutional emphasis on expertise
Pole: School curriculum – Pole: Personal expertise

Parameter D: Modes of representation
Pole: Discrete (mono media, mono modal) – Pole: Convergent.

The parameters need to be seen in the context of the overall approach of the London Mobile Learning Group. One important aspect of this approach is the understanding of mobile phones as global cultural resources within individualized, mobile and convergent mass communication which includes user-generated contexts. As such mobile phones and other mobile devices function as resources for learning in formal and informal contexts. An important educational task is the assimilation of learning in informal contexts of everyday life in which students act as naïve native experts. Also, mobile devices lend themselves to situated learning, which is often militated against by the fossilized practices of schools. Mobile devices support the notion of learning as meaning-making and they bring into play the life worlds of students and create contexts that lend themselves to replacing the passive transfer of knowledge, which is still in the foreground in the approaches to teaching and learning in many schools.

Example: *text+images* workshop: searching and collecting pictures from students' life worlds and poems from the global youth culture

In a school with a majority of students from first and second generation migrant background of the first and second generation a workshop on *text+images* was offered to 13

to 15 year old girls and boys. Participation in the workshop was voluntary but classed as an official school event: it took place twice a week after school. The curricular aim was to offer an opportunity for creative writing within the context of youth culture. Access to the internet was available. A YouTube hiphop clip showing a local group of migrants was used as stimulus material. In addition, poems by the Nobel price winner in literature of 2009, Herta Müller, were presented as PowerPoint slides. The workshop aimed at relating students' personal writing to their life-worlds. The students were invited to use their mobile phones, in particular the photo and video functions to explore and document the environment around the school and at home. Students were asked to present their artefacts in the form of PowerPoint slides as they support a range of modes of representation.

In the event, one group of 3 boys and one of the girls aged 15 presented their text arrangements on PPT slides. The boys had searched through the internet for poetic texts and images on friendship and respect for human beings. They put on their slides German poems but also poems in the language of their families and communities. They added pictures of their childhood and recent photos of themselves which they had taken with their mobile phones. They aligned their arrangement of poems and images with the grid structure, which they had discovered as a basis of Herta Müller's poems. The group of girls presented an actual song, which they had downloaded from the internet. The intention had been for lyrics on the slides to be accompanied by one of the girls singing the song. After a long discussion the group decided to avoid the pressure of a live performance of the song; instead they played the song on their mobile phone. The slide with the lyrics was framed by pictures of group members and friends. In the same way the boys had done, the girls represented their life-worlds through pictures of themselves.

The third presentation came from a first generation 14-year-old migrant boy. On two Saturday afternoons he attended a course on digital video production. The course took place in a community school, i.e. outside the context of his normal school and was taught mainly in the mode of teacher-guided instruction but by a young man who was locally well know as video expert for the internet. This 'peer teacher' had experiences of internet-based at-risk communication of his own but he did not have any formal training in teaching or facilitating a workshop. The product of this workshop was a video clip. This clip contains mainly images of the boys in the group who present themselves on one hand as 'cool' (for example by portraying fight scenes) but on the other hand also as sensitive. The 14-year-old participant in the digital video production course at the community school would bring software expertise into the *text+images* workshop, especially in relation to the mobile phone's media applications. Like his peers, he presented PowerPoint slides, which he had extracted from his video.

Applying the parameters

Parameter A: Learning sets

Examined in relation to the parameter *learning set* both workshops remain rather closely linked to the practices of the school. The workshops offer sites of situated learning; they take place within the school and are facilitated by a teacher in the form of an open learning space which is rather remote from traditional instruction. The learning set of a workshop affords opportunities and provides time for mobile and other digital devices. The production of a digital artefact and its presentation to a wider school audience is the second dominant structure in this example of situated learning. The workshop is mainly shaped by the pedagogical ideas of the young amateur teacher about what instruction and learning should look like.

Parameter B: Relationship to the object of learning

The learning dynamic was based on the notions of searching and collecting, which follows the poetry model of Nobel prize winner Herta Müller. The personal construction of text is supported by the internet and mobile photos and sound application. Both media, mobile phones and computers with internet access, are available to students at any time during the workshop. The internet research motivated students. The professional teacher offers a poetry model to which the students react in part by adoption of a certain text structure and in part by way of a word writing game.

Parameter C: Institutional emphasis on expertise

The emphasis was deliberately on the students' expertise in media, global and commercial youth culture and on their competence in compiling multimodal symbolic elements from existing repositories into multimodal text units. The workshop revolved around the young tutor's high level of internet literacy and video production. In the role of the teacher he dismisses the mobile phone as an amateur video production device. The internet research expertise of the students dominated text production which resembled a process of creative compilation. The students didn't have the experience to use mobile devices and tools for searching and investigating. Presentation software was used to support the creative compilation of research results.

The amateur teacher is clearly orientated on learning outcomes, which he defines in relation to software competence. The boys attending the community school respond to this clear structure.

Parameter D: Modes of representation

The workshop in the school is structured by available media, mainly internet access complemented by students' artefact production with mobile phone applications. The intended relationship of text production to youth culture led the students straight to the internet. Because the text model by the Nobel price-winning poet is based on a 'search and collection' procedure of written words this inherent structure provides an impetus for the students to research the internet.

Searching for words supported a word game on the board. The young people wrote arbitrary words on the board, which produced a mix of words in the languages spoken by the members of the group. This self-representation led to mobile pictures. The PowerPoint slides combined the variety of representational modes: written text and images from the internet, mobile pictures and short written comments into a presentable unit.

Focal points of a pedagogical approach to mobile learning

The *focal points* represent the educational and didactic options within the four parameters of the LMLG in the form of guidelines and combine them with the breadth of available mobile applications.

1. Why?

Mobile learning is the didactic response to the changes in culture, media structures and habits and learning of children and young people:

1. The new and dominant media culture of everyday life: individualized, mobile and convergent.
2. The increasing relevance of informal learning and decreasing reach of school-based learning.

2. How?

The key elements of mobile learning are:

1. To integrate informal learning by means of the mobile phone:
Through the optional workshop, software and media competences are brought into school through 'learning by doing'. An untrained 'native expert' advises students and the teacher on software skills. The mobile phone itself does not play an explicit role. Simple picture-portraits taken with the mobile phone are used for self-reflection.
2. To set up episodes of situated learning by means of the mobile phone:
The media ensemble of computer/internet, PowerPoint, board and mobile phone support situated learning. Media convergence is a basic feature of the workshop as a set for situated learning.
3. To generate learning and media contexts by means of the mobile phone:

Students carry out group work as a media-induced context. For search and collection of information they prefer the internet and they add photos taken with their mobile phones to their PowerPoint slides via internet repositories. The mobile enables the coding of the contexts of their personal life-world for identity formation purposes.

4. To construct conversational bridges by means of the mobile phone:
The mobile photos featured on the PowerPoint slides portray several personal issues, e.g. smoking in school, friendship, love and relationships, childhood. The photos on smoking functioned as a visible conversational bridge between youth culture and the school workshop. A discussion took place whether the slides should be changed.

Through associative word play on the board the students established a conversational bridge by writing words in their heritage languages. The professional teacher used mobile photos to objectify this playful use of language and the use of different languages. In the discussion of these photos the teacher reinforced the students by encouraging them to collect poems in their heritage languages.

5. To support students as experts of media use in everyday life within the school by means of the mobile phone:
A wide range of media expertise influenced the group work on searching and collecting information. The native expert teacher, who led the workshop at the community centre, was motivated to bring in his software skills, which were not restricted to the mobile phone. His media expertise stems mainly from informal learning in everyday life. It is unequally appropriated by students and applied to the workshop by way of differentiation.
6. To set up responsive contexts for development and learning by means of the mobile phone:
Personal development became visible in the interrelationship of internet search, an associative word game across several languages on the chalk board, photos from childhood and PowerPoint presentation. The main input came from the recognition of the different heritage languages in the school and between group members. The main indicator was the reduction of provocative slang expressions and the rise of confidence and mutual respect.

3. What features and applications?

A variety of multimedia mobile phone applications and the mobile phone as miniaturized com-

puter and interface within media convergence

1. Personal disposition at any time
The immediate availability of the mobile phone was relevant when the group of girls failed to bring the sound track of their chosen song to the presentation of the group work. The girls decided to record the soundtrack with their mobile and to play it back. Without photos of the spontaneous word game in different languages taken on a mobile phone the group would not have been able to reflect the different languages used for research and personal expression.
2. Media applications for taking videos, photos, music
The native expert decided to do without mobile video applications because he considers them to be inferior in quality. The boys and girls subordinated the photo and music recording application on the mobile phone to searching and collecting on the internet via a computer
3. Applications for managing everyday life, such as calendar, alarm, spatial navigation functions
Telephony was very important for group coordination, especially to motivate participants to join the voluntary workshop and to remind missing group members about date and start times of future sessions.
4. High capacity repositories for a variety of representational modes
High storage capacity on the device was largely irrelevant for mobile devices because the majority of students worked with internet repositories for mobile photos.
5. Access to a diverse range of personal communication (SMS, MMS, telephony)
Telephony was important for group coordination and to provide mutual motivation to attend the workshop.
6. Access to the internet with its specific modes of communication and with its knowledge and media archives
Internet access operated via school computers. Girls and boys are always searching for interesting offers within the context of global youth culture. Personal photos were uploaded to, and downloaded from internet repositories.

References

Pachler, N., Bachmair, B. and Cook, J. (2010) *Mobile learning: structures, agency, practices*. New York: Springer