

Editorial

Mobile Learning

Towards Curricular Validity in the Maelstrom of the Mobile Complex

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1 Aspects of socio-cultural transformation: how the mobile and social internet links to learning

1.1 Media convergence

Within the steady stream of news about digital media two, albeit separate issues appear of particular relevance to us: one is the economic success of the social networking site Facebook and the other is the emergence of cloud computing and the attendant marginalisation of the personal computer. These are but indications of the types and the acceleration of the changes taking place in the digital world. Another issue, which is firmly located in the educational world, is the growing importance of international assessments and the ranking of schools according to results by PISA, the Programme for International Student Assessment (see e.g. <http://www.pisa.oecd.org/dataoecd/34/60/46619703.pdf>).

In our research we observe an important dynamic relating to the issue of Facebook and cloud computing which resides in what we call 'the mobile complex' (see Pachler, Bachmair, Cook 2010, pp.3ff.). In the mobile complex, individual, local activities are intertwined with the internet and its services into a ubiquitous social sphere which comprises decision-making around consumption as well as the organisation of social interactions. The dominant device of the mobile complex is the smartphone, which operates at a local level, is constantly at the disposal of users and connects them with other users, information and services worldwide. Latest statistics show that the multifunctionality and convergence of smartphones are reaching normalisation: in 2010 the number of smartphone subscribers rose by a staggering 70% in the UK with an estimated 18 out of every 100 people now owning a handset with advanced computing ability (<http://www.signup-onlinemarketing.co.uk/knowledge/news/uk-smartphone-market-surges-2010/>). In everyday life, ubiquity and permanent availability connect with individuality in a public sphere. The mobile phone in everybody's hand is the visible dimension of

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the mobile complex. The more hidden part, and its driving force, is the economic dimension, which corresponds with a wide range of aspects of everyday life: communication, entertainment, commerce, knowledge generation, health care etc.

1.2 Learning inside and outside formal education

Is there, then, also a correspondence with the second issue mentioned above, the international discussion about compulsory education and standards of attainment? For us, of course, this is a purely rhetorical question as formal education and the mobile complex just appear to belong to different worlds. Admittedly, they still belong to different institutional spheres: on the one hand, there is the new mixture of the flexible public internet sphere and its individual application in everyday life; on the other, there are formal learning environments characterised by traditional approaches to pedagogy and assessment. But even at the level of the visible surface of the mobile complex and learning we see links, in particular around a new habitus and informal modes of learning (see Kress and Pachler 2010). One increasingly prevalent manifestation of informal learning pervading everyday life across generational divides are mobile apps: one simple example is the primary school age child who plays the pre-installed games on dad's smartphone; discovering the world around the user, such as the local environment (cf. augmented reality) or planning bus or train journeys, are other examples. Apps for these purposes invariably involve a lot of learning.

2 Cultural resources and their recent transformation as common basis for media and learning

We view mobile devices and attendant activities as cultural resources; cultural resources with growing significance for learning, including learning inside traditional contexts of formal environments as well as, of course, increasingly also for learning within new contexts. Changing practices of learning, we posit, require of educators to give particular consideration to mobile devices; this includes <didactic> and curricular planning.

Learning practices are in transition: PISA, for example, identified specific biases and disadvantages around learning in schools; importantly, the study *inter alia* highlighted was the trend of changes in the media landscape and media habits of everyday life placing considerable pressures on learning.

New mobile forms of learning can be observed to appear, particularly outside of formal educational settings. The mobile complex influences the cultural practices of media use and learning (see Pachler, Bachmair, Cook 2010, pp. 175ff.). A trend towards ubiquitous and individualised mobility fostered by mobile devices within the context of media convergence can be discerned. Furthermore, learning and a

lot of other forms of meaning-making take place in new contexts, which are partly determined by users and their capacity to generate them. This is a challenge for institutionalised planning of instruction and education.

3 The papers in this special issue and new cultural resources

All papers in this special issue, which investigate the innovation of teaching and learning design through mobile devices, look for, and find ways of widening contexts. Approaches include platforms for mobile video (Unterfrauner or Wolf and Rummler) but also the traditional teaching and learning contexts of the classroom is opened up by Netbooks (Pimmer and Gröhbiel) or by several application on the pupils' mobile phones, e. g. geographical applications or photos for investigating the local environment (Bachmair et al.). One of the papers (Cushing) depicts how the disparate contexts within teacher training at college and in the classroom can be bridged with the help of mobile phones. Another paper (Taxler) outlines a conceptual frame for considering contexts as relevant for mobile learning and user-generated contexts. In his conclusion, Traxler «endorses the relationships between individual and environment as becoming increasingly richer and easier, as increasingly easy to exploit and deploy in support of existing, enhanced or reformed pedagogies, though recognising that we, not our surroundings, are now the focus and the source».

The question begs asking whether the influence of mobile devices within wider socio-cultural changes impacts on traditional institutionalised learning and, if so, how. The paper by Unterfrauner on marginalised young people in an urban context provides concrete answers. It also clearly shows that a specific didactic design is necessary that brings together mobile applications, e. g. the video, and a specific website, which receives its specificity by virtue of planned educational support within a special design, e. g. the video-ping-pong approach.

Papers in this issue give rise to the question whether banning mobile phones from school premises is the right approach to take. Is mobile learning a transient fashion or is it the future of technology-enhanced learning? Can and/or should it be assimilated into formal educational processes and practices – whereby the mobile phone becomes a cultural resource for learning – or should it remain confined to everyday life, informal settings and the work place? Is there any evidence to support the call for new and situated modes of learning in schools and other formal sites of learning by means of mobile devices within the context of media convergence? The papers of this special issue dealing with the practical application of mobile devices for learning and teaching provide a clear answer to this bundle of questions: a specific design for mobile learning is essential. It is not enough just to enrich existing instruction with a new motivating device. Mere enrichment of

existing instructional design does not lead to sustainability. The range of possible designs for mobile learning is wide.

New modes of assessment or mentoring at university level are also discussed as are episodes of situated learning within teacher-guided instruction (Bachmair et al.) and forms of enhancing learner-centred instruction (Pimmer and Gröhbriel). The designs of mobile learning investigated raise questions around the use of mobile devices within traditional contexts or for generating new contexts. Examples include combining instructional sites with websites (Unterfrauner; Wolf and Rummler) or using the mobile as «conversational bridge» between the classroom and at home. In the latter case the mobile changes traditional homework (Bachmair et al). Focusing on specific aspects of teaching and learning and on features of a mobile learning design the question of evaluation and its instruments has to be raised as a matter of urgency. The paper by Seipold and Pachler opens the debate on specific issues of evaluation of mobile learning.

4 The ecological turn

The mobile complex adheres to a logic that is difficult to discern at face value; a logic that is firmly rooted in market economic principles and utilitarianism. Commercial drivers are, therefore, strong in the world of mobile devices, applications and services. Similarly, we discern a strong influence of economic principles in educational discourse as evidenced, for example, by the increasing focus on international league tables which can be seen to be fundamentally based on the desire to maximise the exploitation of human resources economically and to ensure the economic relevance and workplace orientation of educational activities. This rationale is reflected in everyday life which has also become dominated by market forces.

We see it as our task to show that this economic orientation of the mobile complex as well as of education are not the only possibilities. The former, the mobile complex, we see facilitating a wide range of human activities, in particular self-representation, target-orientated endeavours and play. The latter, formal education we see as being fundamentally about broad and balanced opportunities for child development. This partial rejection of the economic imperative behind mobile learning and formal education we term the «ecological turn».

The educational task, therefore, is to define cultural resources from the human perspective of children and their personal and social development. Personal and social development for us is the crucial criterion for applying the learning options inherent in the mobile complex educationally. How can our premise of children's personal and social development best be concretised? There exists a real danger of the rhetoric around practices of cultural participation in a technologically augmented social world within the wider frame of the mobile complex defining

children's personal and social development as decorative marketing promotion of a happy childhood.

In view of this inherent danger, we propose and use the term user agency. By agency we mean the way in which children act and react to their pre-given world. Children's agency is changing. As second key term we use cultural practices through which children develop. School is such a cultural practice as is the use of media in everyday life. Viewing the mobile complex dialectically interwoven with children's agency and relevant cultural practices, the educational task is to identify those cultural resources which support children's personal and social development. This approach is based on an ecological interpretation of resources within a cultural frame (see Pachler, Bachmair, Cook, 2010, pp. 155 ff.). The practical educational endeavour is targeted on mobile resources in learning practices which support children's agency and meaning-making of the world.

This very condensed exposé of a socio-cultural ecology of mobile learning is based on the triangle model of socio-cultural development with the three nodes of societal and technological structures of the mobile complex, user agency and the cultural practices of media use and learning. This triangle model for considering mobile cultural resources represents core ideas of the London Mobile Learning Group (<http://www.londonmobilelearning.net>), of which the three editors of this special issue are founding members.

4 Issues discussed in the papers

4.1 Cultural ecology

Three of the articles in this special issue argue deliberately within the socio-cultural ecology of mobile learning: Bachmair, Risch, Friedrich and Mayer; Seipold and Pachler; and Wolf and Rummler. The paper by Bachmair, Risch, Friedrich, and Mayer depicts teaching and learning practices in regular German schools and comprises two instructional units, one from a German elementary school and one from a Gymnasium (grammar school). In the foreground of this paper stands the question of how to concretise the planning procedure for teachers. With a different theoretical frame Pimmer and Gröhbiel focus on the support of learner-centred tuition in pre-school and elementary school learning. They provided the classes with mobile notebooks.

The contribution by Seipold and Pachler applies the socio-cultural approach to mobile learning for analytical purposes and evaluates existing practices of mobile learning through this lens.

The paper by Wolf and Rummler primarily looks at the convergence side of the mobile complex. It shows how to set up a learning context by means of mobile video linked to an educational internet platform.

With a different theoretical frame but also with the intention of delivering a mobile context for learning, the paper by Unterfrauner shows how to support marginalized young people. Within an EU project an online mobile learning platform for mobile videos was installed.

4.2 An epistemology of context

Traxler's conceptual paper analyses the phenomenon of contexts in which or by which mobile devices, social activities and learning work. With the category of context the new modes of mobility within the mobile complex receive a central category. Normally the discussion of learning is on user-generated content. Content is a term with obvious links to learning. User-generated context, however, is not easy to detect as cultural resource for learning.

4.3 Learning and instruction

The papers by Cushing and Couldby and Davis consider the application of mobile phones for college/university-based learning and instruction. The latter examines the use of mobile technology for interprofessional, formative, work-based assessment among health and social care students. It was a project which ran over five years. Its special focus was on assessment. Cushing's report discusses how to apply mobile phones within teacher training. In teacher training students have to leave the university area and practice within schools. The main function of the mobile devices was to enhance the communication between the students and the university staff mentoring them.

5 Conclusions

What can we conclude from the papers in this special issue? First, the papers demonstrate that mobile devices can meaningfully serve as interfaces between traditional and new contexts. And, second, specific designs for mobile learning and teaching seem essential in order to achieve sustainable results.

6 References

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