

DigiLitEY Project Meeting 6
Riga, 21 – 22 June 2018

Minutes for Working Group 2 Meeting
22 June 2018, 09.00 – 12.30

Working Group 2 focused their meeting on specific technologies, applications, and tools that may be used in early years’ formal and informal learning spaces, while also considering digital media use from a social justice perspective. This was materialized in three paper presentations, one workshop, and a panel discussion. Paper presentations, led by Tatjana Vogel and Gudrun Marci-Boehncke (Germany), Gabrijela Aleksic (Luxembourg), and Isabel Machado Alexandre (Portugal), discussed the utilization of particular applications like “The Unstoppables” and iTeo, as well as of robots. Those were approached as tools to facilitate the development of children’s coding and digital skills, but also their linguistic, cultural, and critical awareness. The workshop that followed, facilitated by Gudrun Marci-Boehncke and Tatjana Vogel (based also on the work of Jasmine Eder – Germany), provided WG2 meeting attendees the opportunity to experience coding through online and other digital applications (Calliope mini, code.org, Lego, etc.). And, the panel discussion on Girls and STEAM, organized by Becky Parry (UK), Fiona Scott (UK), and Rachel Fountain Eames (UK), brought forth issues of gender, identity, and digital media engagement as central to theorizing digital literacy learning and pedagogy, especially in the early years. Collectively, the presentations, workshop, and panel discussion reflected the range of perspectives in understanding and examining digital practices in early years’ settings and thus invited the audience to consider the different possibilities that emerge in each and across these perspectives. The detailed schedule and abstracts of the presentations, workshop, and panel discussion follow below.

9:15-10:45	<p>Paper Presentations (25’ for presentation plus 5’ for discussion on each paper)</p> <p><u>9:15-9:45</u> - <i>T. Vogel & G. Marci-Boehncke</i> - Being „The Unstoppable” in using digital media: How to include inclusion in digital media learning in early years</p> <p><u>9:45-10:15</u> - <i>Gabrijela Aleksic</i> – Emergent multilinguals learning languages with the Ipad app iTEO: a study in primary schools in Luxembourg</p> <p><u>10:15 – 10:45</u> - <i>Isabel Machado Alexandre</i> – Robots and Children</p>
10:45-11:30	<p>Workshop <i>J. Eder, G. Marci-Boehncke</i></p> <p>Understanding computer language by coding-experiences – Discover the world of coding with Lego Education, Calliope, and Co.</p>
11:30-12:15	<p>Panel Discussion <i>Facilitator: Becky Parry</i></p> <p>Girls Make STEAM: Can children’s media encourage young girls to take up STEAM?</p>

Abstracts of Presentations and Workshops

1. T. Vogel & G. Marci-Boehncke - paper presentation

Being „The Unstoppable” in using digital media: How to include inclusion in digital media learning in early years

Digital media provide high potential in participatory working conditions. That is true for all learners, but especially relevant for those with physical or other difficulties. It is first of all right for the medias different technical assistance such as read-aloud or dictation function and others. Besides, they provide ideal conditions for participatory learning settings with different Apps. One of them is "The Unstoppables" - created by the Swiss foundation for the cerebral paralyzed child. A group of children - all different, some blind, some paralyzed, but together very strong and looking for their kidnapped dog - are the heroes of that digital parcours. The users of that free App have to enable the virtual kids to get their dog back, understanding the strength of each child and helping to compensate the weaknesses. The App offers ideal chances for digital as well as inclusive learning, starting at the age of four.

Our presentation will introduce the universal design of learning (Rose & Meyer 2006) as a model to plan instruction for formal spaces. Since inclusion as a significant goal for nowadays learning spaces is limited in the same way as digital media use - mainly by the prejudices/attitude and beliefs of teachers or other learning coaches - it seems to be worthwhile to combine both topics in educational settings. (Blackwell, Lauricella/Wartella 2014; Charley 2015; Hemmings & Woodcock 2011; Loreman, Sharma & Forlin 2013).

We will present how students planned work with primary school children K 6-10 to learn more about respect, tolerance, and equal rights within the UN-Charta as well as about language itself and coding. Digital as well as analog behavior to understand computer and inclusion will be topic of the (I)TPACK-oriented (Koehler & Mishra 2005; Marci-Boehncke in print) educational model.

2. Gabrijela Aleksic – paper presentation

Emergent multilinguals learning languages with the iPad app iTEO: a study in primary schools in Luxembourg

The present small-scale study investigates language learning in primary schools in Luxembourg and the ways in which this process is mediated by peers and the iPad app iTEO. This study draws its data from the larger longitudinal qualitative research project iTEO (2013–2017) and is based on 13 hours of audio and video-recordings. The participants are 6–7-year-olds learning German and French. Grounded in sociocultural theory, this paper examines, first, the ways in which the emergent multilingual primary school children scaffold each other’s learning of German and French while collaboratively producing oral texts on iTEO and, second, investigates the affordances of this app for learning. The findings show that the children’s language learning was mediated by peers, the task and the app. The children used a range of learning and teaching strategies while completing tasks framed by their teacher. iTEO and the task together mobilised the children’s resources, encouraged autonomy and promoted discussion about language.

3. Isabel Machado Alexandre – paper presentation

This talk presents some of the robots available in the market, which can be used in both formal and informal spaces. The idea is to devise new activities that enrich and augment daily school and home activities through the application and introduction of such devices in order to provide new means of digital literacy. A case study will be presented in a formal setting.

4. J. Eder, G. Marci-Boehncke – workshop (45')

Understanding computer language by coding-experiences – Discover the world of coding with Lego Education, Calliope, and Co.

Coding in primary schools is a topic that has been increasingly discussed in recent years as part of school development issues. Although coding is still a recent trend in school (cf. Campbell/Walsh 2017, 10), it is increasingly being demanded in national media curricula (cf. Medienpass NRW). A media education with the aim of developing media literacy is an indispensable part of everyday life because the general structural change within the media system and the associated mediatization of society as a whole (cf. Krotz 2001/2007) seriously affect the development of adolescents. One of the tasks of media education is to acquire a degree of technical operation. However, media competence involves much more than the technical handling with digital devices (cf. Marci-Boehncke 2011, 9). In this sense, coding plays a significant role, because development of expertise in this area helps to understand how digitality works. A coding competence develops a basic understanding of our surrounding digital world, which allows us to enter into reflected handling with media (cf. Garmann/Warnous 2016, 3). Coding skills are skills for everyone who lives in the information society (Tuomi et al. 2018, 421).

We would like to dedicate ourselves to this topic by asking accompanying the question to what extent the subject of coding looks at basic knowledge of language and makes it tangible for students in a playful learning environment. Programming not only provides children the opportunity to build an understanding of the fundamentals of computer science. Also, students can discover elementary characteristics of language. Aside from thinking about how the language works, with which a computer acts, the opportunity arises to make comparisons with our everyday languages. We focus the fact that a computer acts because of commands (cf. Curtis 2013). The symbolization that takes place in these commands combines digitality and natural languages (cf. Cassirer 1953 & Rath 2001).

Within a theoretical introduction, we will clarify a (historical) outline of other language systems towards a computer-based language. In this case, we will show how language even works and how important it is to our thinking and the programmed actions of computers or robots. Resultant on this basis, possibilities of implementing coding activities in primary school are shown. At several stations, we introduce different types of digital mediation. We will try out the content of Lego Education WeDo 2.0, the Calliope mini, the program "Scratch", and the apps "Swift Playgrounds" and "Code.org". The programs and Apps are easily accessible and provide many different learning and gaming occasions for formal and informal learning spaces, which help us to understand our world better. We will see that the ability to code includes a range of issues, from more technical concepts to social practice (cf. Humble 2018, 5).

5. PANEL DISCUSSION

Girls Make STEM:

Can children's media encourage young girls to take up STEM? (45')

Dr Becky Parry, University of Nottingham

Rachel Fountain Eames, University of Birmingham

Fiona Scott, Sheffield Hallam University

In this session we present two recently completed research projects which shed interesting light on young girls' orientations to science, maths and technology and how this might relate to their engagements with children's media.

The first project is an ESRC-funded PhD project by Fiona Scott on preschool children's engagement with Television and Related Media. Fiona draws on vignettes which highlight the ways in which 3 and 4 year old girls draw on broadly science-based media content within their play.

The second project is focused on a new animation, 'Bitz & Bob' by CBeebies which explicitly aims to encourage very young girls to take a greater interest in STEM. Funded by the Midlands Three Cities Doctoral Research Placement Programme, we undertook interviews with 8 key members of the commissioning and production team as well as analysing several episodes, press materials and online audience feedback. Our data provides an insight into the decision-making process from conception to final production and draws on some of the ways in which girls and girlhood are constructed in wider public discourses. We suggest that programmes such as 'Bitz & Bob' are successfully challenging some gender stereotypes whilst being careful not to replace boys with 'tomboys'. This raises important wider issues about the role of the funders, commissioners and makers of children's media, their intentions and how they are manifested in the finished texts.

Following our presentations we will facilitate a discussion with the working group, drawing on what we know from wider research about the way in which such representations and role models are taken up by young children.