
COST Action IS1410

The Digital Literacy and Multimodal Practices of Young Children (DigiLitEY)

Report on Year 2



<http://digilitey.eu>



Contents

	Page
1. First Training School	3
2. DigiLitEY Meeting 4	4
3. Working Group Meetings	17
4. Think Tank 2	24
5. Thank Tank 3	26
6. Think Tank 4	32
7. STSMs	39
8. Presentations	40
9. Media	43
10. Research proposals	45
11. Publications	47

Training School

The second year began with DigiLitEY's first training school, which took place at the University of Minho in Portugal, 6th – 8th June, 2016.

This was attended by x participants. The three-day programme can be found here:

http://digilitey.eu/wp-content/uploads/2015/09/DigiLiEy_TS_Program.pdf

The School was very successful. The proceedings of the Training School were published as an e-book:

The Digital Literacy and Multimodal Practices of Young Children: Engaging with Emergent Research Proceedings of the first Training School of Cost Action IS1410, University of Minho, Braga, Portugal, 6th to 8th June 2016

https://www.shef.ac.uk/polopoly_fs/1.660127!/file/1st_TrainingSchool.pdf

DigiLitEY Meeting 4

The fourth meeting took place in Prague, November 7th and 8th, 2016 and was attended by over 90 delegates.

The first morning was spent in Working Group meetings (see reports). The afternoon of the 7th opened with a panel discussion on the Internet of Toys, chaired by Dr Giovanna Mascheroni, WG4 Co-ordinator. The panel speakers were:

- Stephane Chaudron, Expert in Digital Childhood
- Dr Donnell Holloway, Edith Cowan University, Australia
- Professor Jochen Peter, University of Amsterdam
- Dr Dylan Yamada Rice, Dubit, UK
- Mata Petrikas, CEO, Vai Kai

The contents of the speakers' presentations were summarised in a report subsequently published as a collaboration between DigiLitEY and the Joint Research Council of the EU Commission.

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC105061/jrc105061_final_online.pdf

The first day closed with a keynote by Dr Sara Grimes, Associate Professor at the University of Toronto on the emerging challenges and opportunities of digital play technologies for young children.

On the second day, the COST Action joined with the European Communication Research and Education Association (ECREA) 2016 Preconference: Research of Children, Youth and Media.

The pre-conference began with a keynote by Stephan Dryer on children's rights in ICT regulation, followed by Professor Sonia Livingstone, who spoke about her new project 'Global Kids Online.'

The DigiLitEY strand then featured 15 different paper presentations by researchers from a range of countries. A plenary at the end of the day enabled participants to reflect on the rich findings from these studies.

A Special Issue of the Journal *Cyber Psychology* is to be developed from the pre-conference, to be co-edited by Dr Natalia Kucirkova and Professor Charles Mifsud.

Working Group Meetings

Working Group 1

Activity 1, discussion of the literature review involved all of the WG1 members present in Prague. Activities 2 and 3, the two research projects that are currently undertaken by WG1 were held as separate meetings with a short briefing of the other group at the end.

Activity 1

At the meeting the current state of the literature review was presented and discussed. Kristiina Kumpulainen and Helle Strandgaard Jensen have conducted a systematic search and analyzed 39 articles that were selected on the basis of the search..

It was agreed that the WG pays for Helle to spend two days in Helsinki in mid February to finish the literature review for the COST webpage together with Kristiina. There is currently a second literature review on the way for the action's handbook. Helle and Kristiina will discuss the relationship between the two text (webpage vs handbook) with Jackie Marsh and the editors of the Handbook and decide which of the two that will include literature in other languages than English.

Activity 2

Research project: "Tips and Tricks for digital parenting"

The meeting of the "Tips and Tricks" project in Prague involved 16 people from: Australia; Belgium; Bulgaria; Croatia; Denmark; Ireland; Italy; Latvia; Luxembourg; Portugal; Slovakia; Switzerland and UK. During the meeting of the "Tips and Tricks" group the following activities have been carried out: (i) Check of the data collection. Data have been collected

and shared by Austria; Belgium; Bulgaria; Denmark; Australia; Portugal; Switzerland. The following countries are collecting data: Luxembourg; Italia; Croatia; Latvia and Slovakia; (ii) Discussion of critical issues. The main critical issues discussed were: the management of data collected in national languages; the methodology of data analysis; the need of national portraits of media system and communication channels used by institutions and associations.

The following issues resolutions have been adopted

- Data collected in national languages will be accompanied by a summary of the content of documents, articles or guidelines on the basis of a shared template.
- The methodology of data analysis will be discussed in two small meetings.
- The national portrait will be based on the template of the JRC research project on digital literacy among children 0-8 carried on for EuKidsOnline.
- Planning of future actions. The future actions planned are:

Small meetings: Donell Holloway and Bieke Zamman will meet in Australia in December 2016 (meeting not funded by the Cost Action); Cristina Pone; Nicoletta Vittadini; Stephane Chaudron and Jelena Jurisic will meet in January 2017 in Portugal. The two meeting have the aim to developing the methodology of data analysis and to adapting the national portrait template to the need of the "Tips and Tricks " project.

Results of the small meeting will be shared and discussed with all the group members through a skype call or a mailing list.

- Research steps: the next research step will be the completion of data collection; the realisation of the national portrait; the data analysis at national level
- Outputs. The planned outputs are: present an abstract for the Cost Action handbook; propose a special issue on the research project to Cs Journal of Media, Performing Arts and Cultural Studies published by the Università Cattolica del Sacro Cuore in Italy

Activity 3

Research project: A Day in the Digital Lives of 0—3 Year Olds.

In WG 1 we discussed about A Day in the Digital Lives of 0—3 Year Olds -project and how to put the study into practice in a number of European countries. The aim of the study is to identify the way in which digital technologies inform the daily lives of young children. The

purpose is to conduct comparative study in order to identify similarities and differences in this age group across Europe. In each research location families are interviewed and videoed during the research visits (three visits by two researchers). At first, researchers will make preliminary interview and pilot videoing. After that they collect data about children's activities during the day (min. 6 hours) and create a half hour compilation video Day in the life where child is in some kind of relation to digital technology. In the last visit, the compliance video will be watched and discussed with family. Study will be reported to WG1 COST. During the working group meeting we developed the study further. We decided to collect three case studies in each country but even one case study will be welcome. We emphasised family perspective where research location is principally home, and where parents' own engagement in digital technologies are also considered. We agreed that in the beginning of next year, ethical approvals procedures and identification of families starts and by the end of the summer all data collection visit are completed.

Working Group 2

During the 4th meeting of the DigiLitEY COST Action, members of the management committee and other interested delegates interested in the themes and workings of WG2 met over two sessions that took place on Monday, 7 November 2016. These two sessions were organized in a way to reflect the objectives and actions of the group, as well as the interests of particular group members. In particular, with attention paid to considering young children's digital literacy and multimodal practices not only in official early years or school settings, but also in informal learning spaces, the first session was devoted to paper presentations on children's and teachers' beliefs and practices of informational literacy and digital learning in libraries. The second session focused on the presentation and discussion of the group's present and future activities.

Papers on digital literacy and informal learning spaces were presented by Dr. Emmanouel Garoufallou and Dr. Sirje Virkus, whose work has been focusing on digital literacy, early years learners and information literacy. Dr. Garoufallou and Virkus presented the following papers, on behalf of their research teams:

- "Information Seeking Behavior of Primary Teachers in Greece: A Pilot Study"

Emmanouel Garoufallou^{1,2}, Stavroula Antonopoulou^{2,3}, Ioanna-Ersi Pervolaraki^{1,2}, Rania Siatra¹, Georgia Zafeiriou¹, Sirje Virkus⁴

¹Department of Library Science and Information Systems, Alexander Technological Educational Institute (ATEI) of Thessaloniki, Thessaloniki, Greece. Email: mgarou@libd.teithe.gr

²Alcala University, Spain. Emails: {mgarou, gzafeiri}@libd.teithe.gr; ersi212004@yahoo.gr; rsiatri@gmail.com

³American Farm School, Perrotis College, Thessaloniki, Greece. Email: santon@afs.edu.gr

⁴School of Digital Technologies, Tallinn University, Tallinn, Estonia. Email: sirje.virkus@tlu.ee

- “Information Seeking Preferences (use of digital tools) of Preschool Children: Preliminary Results”

Ioanna-Ersi Pervolaraki^{1,2}, Emmanouel Garoufallou^{1,2}, Rania Siatra¹, Georgia Zafeiriou¹, Sirje Virkus³ and Stavroula Antonopoulou^{2,4}

¹Department of Library Science and Information Systems, Alexander Technological Educational Institute (ATEI) of Thessaloniki, Thessaloniki, Greece. Email: mgarou@libd.teithe.gr

²Alcala University, Spain. Emails: {mgarou, gzafeiri}@libd.teithe.gr; ersi212004@yahoo.gr; rsiatri@gmail.com

⁴School of Digital Technologies, Tallinn University, Tallinn, Estonia. Email: sirje.virkus@tlu.ee

³American Farm School, Perrotis College, Thessaloniki, Greece. Email: santon@afs.edu.gr

- “Sharing classroom responsibility: the cases of informal learning environments”

Damiana Koutsomiha¹ and Emmanouel Garoufallou²

¹American Farm School, Thessaloniki, Greece. Email: dkouts@afs.edu.gr

²Department of Library Science and Information Systems, Alexander Technological Educational Institute (ATEI) of Thessaloniki, Thessaloniki, Greece. Email: mgarou@libd.teithe.gr

The three presentations focused on issues relating to teachers' knowledge and experience with digital information literacy; preschool children's use of digital tools; and, informal education programs that facilitate children's digital learning across spaces. Collectively, the presentations highlighted the multiplicity that emerges both in available programs and in children's use of digital tools across formal and informal learning spaces. The need for acknowledging this as well as for teachers to develop as information literate was emphasized by the presenters, who also concluded that professionals like the librarians may effectively support such process. During the discussion that followed, session participants discussed the necessity of expanding teachers' professional roles from educators to educational researchers; incorporating children's use of digital tools in formal and informal learning practices; and opening up the notion of information literacy to the use of digital tools and resources that may facilitate children's engagement with different types of text and sources of information.

The second WG2 session centered on the presentation of the key objectives and activities. Before the presentation and relevant discussion, Rebecca Parry and Fiona Scott informed participants of a special issue they will co-edit for the journal *Media Learning and Engagement in Early Childhood*. During the rest of the session, the main activities of the WG were presented. Those included the preparation of the review of literature (submitted for publication as a white paper on the Action's and WG2's website), the collection of data on teachers' beliefs and practices, and the compilation of reports on official policies on digital literacy in the early years, both in formal and informal settings.

Working Group 3

The meeting started with a presentation by the WG's invited speaker, Professor Ofra Korat, Bar Ilan University, Ramat Gan with expertise in Language Education. Professor Korat presented the state of art of Israeli digital books, as compared to the situation ten years before. Her presentation was followed with a 'state of the art' presentation from selected countries represented in the WG. Trude Hoel presented about Norwegian digital books and Jan Van Coillie about digital books in Belgium.

A sub-group of the WG targeting digital reading materials had an additional meeting in the afternoon to discuss a content analysis of available book apps. In February and March this year Trude Hoel from Norway and Adriana Bus from the Netherlands further developed hypotheses about the role and quality of digital reading materials, through Skype and email, including:

- (1) children in Europe spend more and more time with on-screen media at the expense of book reading sessions with adults,
- (2) many books are available across countries without translation in local languages and localized content,
- (3) the market is left to commercial, internationally operating companies resulting in low literary quality, and lack of innovative content and esthetics.

They planned to invite other members of the WG from Malta, Israel, and Belgium to summarise their findings based on the content analysis that they carried out so far. Starting from these summaries, Hoel and Bus will write a discussion paper as a starting point for a final report and handbook chapter.

Working Group 4

The group heard the presentation from Seth Giddings on The Toy Act. A fruitful discussion followed.

The rest of the meeting was dedicated to the discussion of the small comparative project on the representations Internet of Things (IoT) toys, the next meeting in Milan and publications.

IoT toys

The coding guide and coding template have been revised taking into account the suggestions made by Donell Holloway (who has already tested the template) and those made by participants in the discussion.

Data collection: 15th November-25th December in most countries; until 7th January in Spain and other countries where Los Reyes/Epiphany are celebrated.

Data delivery: 10th January

Participating countries: Austria (and potentially Germany), Finland, Iceland, Italy, Lithuania, Malta, Portugal, Romania, Slovenia, Spain, UK and Australia. Though not a member of the COST Action, Tijana Milosevic is interested in the topic and would like to collect data in Serbia.

Outputs: of the comparative research: a report to be published on the website in spring 2017, one or more journal articles, potentially a book chapter for a volume on IoT toys (see next).

The report will be finalised during the next WG4 meeting which will be held in Milan on the 2nd and 3rd of March.

Publications

WG4 has produced or will produce the following outputs:

- The literature review will be finalised this December
- A special issue of MED *Italian Journal of Media Education* “Young Children, Touchscreens and Literacy Practices” will be published by the end of November
- The comparative report from the IoT toys study + journal article(s) on the same data
- A volume on IoT toys, edited by Giovanna Mascheroni and Donnell Holloway. This has to be done by February 2019. A call for chapters will be circulated asap.

Other issues

The group members present in Prague decided that WG4 should focus on the Internet of Toys. Young children’s digital citizenship will be dealt with by WG2.

Working Group 5

Working Group 5, as a cross-sectional group to other WGs, did not hold a dedicated meeting in Prague, but discussions were held across working groups, primarily to encourage members to contribute their work and expertise to the DigiLitEY COST Action "[Methodology Database](#)". During the Prague meeting Rosie Flewitt (co-chair of WG5) met informally with WG members to review on-going work around the Methodology Database and to discuss the work plan for 2017-18.

Policy Meeting

A policy meeting was organised by Brian O'Neill and Anca Velicu, the Stakeholder Managers.

Attendees

- Professor Jackie Marsh, University of Sheffield. DigiLitEY
- Prof Ola ERSTAD – Norway. DigiLitEY
- Dr David SMAHEL, Masaryk University. DigiLitEY
- Dr Anca Velicu, Institute of Sociology Romanian Academy, DigiLitEY
- PhDr. Zdeněk Metoděj ZÁLIŠ, Safer Internet Centre, CZ
- Mr. Ondrej Neumajer (expert, involved in the draft of the Czech strategy digital education),
- Mrs. Vladimira Pavlicova, from Center for International Cooperation in Education of the Ministry of Education (responsible with Erasmus+ School Education, eTwinning, European Schoolnet)
- Mrs. Daniela Ruzickova, Department for General Education, ICT Curriculum Specialist

Daniela Ruzickova and Ondrej Neumajer were both involved in building the national strategy for ICT education and they are currently involved in its implementation.

After a short presentation from each participant, Jackie gave a short presentation of the COST Action (the objectives, the working groups, the current projects and expected output of each WG).

Zdeněk ZÁLIŠ talked about his institution's main aim, which is to digitally educate children and parents; they have a major difficulty in approaching these latter. In an alternative and complementary approach, they started a new program that addresses children and grandparents needs for literacy in digital technology and in raising their awareness of online risks for young children, as studies showed that, alongside parents, grandparents play an important role in children's digital life. Therefore, SIC aims to have more digitally literate grandparents, but also to create a bridge between children and parents. In doing this, SIC searches for some games –a game is considered as an 'opening door' – that would appeal to elderly people and young children alike (e.g. kinetic games, that would also increase their ability to communicate).

The issues that Zdeněk ZÁLIŠ identified as emerging currently are privacy issues and financial issues (lost of money); mobile technology plays an important role in these emerging issues.

In this regard, SIC took a systemic approach, by first assessing the level of education on the issues they identified and secondly trying to increase this level, as they expect educated people to have more effective use of the internet.

Libraries are very important resources that SIC consider should be used in approaching as many persons as possible. Czech Republic has a very developed network of libraries, with ¼ of population registered. Therefore, SIC would like to team with libraries, and try to imagine some events that would entertain and educate alike, as SIC considers just education is not efficient. In this project they also target young children and grandparents together as SIC considers they complement each other: children know quite a lot about risk issues (privacy, security) but they don't care whereas grandparents care, but they don't know.

Ondrej Neumajer welcomed the COST Action and its current and further outputs as being important in the stage of implementation of the national strategy for ICT education.

Daniela Ruzickova deplored the fact that just few organizations are involved in digital education regardless of the children's age. Moreover, she said that the Czech policy makers generally use foreign data and research reports as there is a paucity of local results. Therefore, she considers as very useful the objective of WG5, to keep an updated database with all the local and international reports and studies.

David Smahel, talking as one of local researchers, disagreed with Daniela's opinion, and shortly described the current and future research projects of the team in Brno that he is leading (e.g. EU Kids Online 2 and 3, next survey in 2017, young children and digital technology).

He admitted that there could be a lack of communication between researchers and local policy makers (and other stakeholders) as currently in academia there is a pressure to publish in English even the local studies, which causes a weak dissemination of the research at the local level.

Jackie agreed that there is a problems with materials available only in English and outlined the lack of funds for translation within the COST program. She shortly presented other complementary projects possible useful for local stakeholders (e.g. MakeEY project, to start in January, 2017 and the pilot project of a MOOC for digital literacy). She also names the European Schoolnet as a possible good mediator for the MOOC.

Vladimira Pavlicova commented that an international MOOC for Czech Republic primary teachers would be problematic because of their weak engagement in it. Alongside with the problem of language, she named the problem of culturally adapted content. Ondrej Neumajer agreed, stressing that this kind of MOOC needs not only translation but localization. Still, Daniela Ruzickova considers that the biggest issue is the language.

B also highlighted another issue, which is the protective approach many teachers from primary school adopt, as they consider school has to remain a free-technology space for counterbalancing the heavily loaded technologically space of home. In this regard, B considered it is difficult to tell them how to use technology in education (not only a lack of information, but a misfit of the pedagogical view).

David mentioned another issue, again at the level of perception and attitude about technology, this time from the policy maker people. More specifically, he talked about a Czech project for bringing tablets in schools, a project that failed because of a lack of knowledge from the teachers' part in using these devices for educational purposes. The problem was that only the devices (hardware) were considered as important (and sometimes, the software) in this process, setting aside the importance of teachers' training.

Ondrej Neumajer added that, beside training, there is a need for teachers to cooperate and collaborate online in professional networks.

Ola Erstad said that the problems of perceptions and attitudes are more or less the same in Nordic countries as those mentioned by Czech stakeholders, except that in his country, children already have access to technology in school.

Daniela Ruzickova said that for changing these attitudes, there is a need for a good definition of digital literacy and an explanation of how it links with outcomes (computational thinking, coding skills etc.). These are at a formal level in the National Strategy, but there should be implemented and made known to teachers.

Zdeněk ZÁLIŠ talked about a project (Codeweek) that encouraged the collaboration based on shared interest in coding as the best approach that unifies formal and informal (based on interest, in his definition) education. The platform codeweek.cz is run by volunteers and consists in a map where each school that organizes an event has to apply and pin the event on the map (loading all information) and everyone could look at the event and join to it (if possible) or just to know about it.

Zdeněk ZÁLIŠ considered that this kind of project could be generalized, by creating a platform to share all the outputs / experiences/ approaches in various projects linked with digital education. Besides the development of good practice that this project encourages, such a platform would be a rich database for future analysis in terms of having an accurate picture of what is happening and what can be learned from these events (e.g. we can identify emergent interests based on these events).

David drew attention to the fact that for policy makers it is difficult to distinguish between various European research programs of research (EU Kids Online, COST Action etc.), which leads them to have unrealistic expectances from researchers.

Ondrej Neumajer added to what David said, that policy makers are not able to think and imagine how ICT will help in education, which leads them just to a formal acceptance of this digitalization of schools.

Daniela Ruzickova agreed with Ondrej Neumajer and considered this to be due to the fact that policy people who have information based on popular/istic literature (which is accessible, as it largely spread and easily understandable being written in a popular language) that is mainly panic focused. There is therefore a need for researchers to write in a more friendly manner.

Moreover, not only policy people have this panic-framed approach toward technology but also teachers in kindergarten and, as it was said before, these teachers will try to keep young children away from digital technology, not necessarily because it's good or bad, but because they perceive that there is too much of this at home.

Ola Erstand mentioned that in his country policy people surpassed this good vs. bad approach and become more pragmatic: as kids are already engaged with technology and the changes in labor markets ask for kids to have digital skills, policy makers started to think from this perspective of the future labor market and not from the current 'danger'.

Jackie added that sometimes the popular press misinterprets studies that it uses, as it is the case when press reported on PISA results which suggest that in countries that are ICT saturated, children don't perform so well in school. But in fact there is a methodological problem in stating this from the data available, but the press did not mention that issue.

Working Group Meetings

There was not a second large meeting of the network in Year 2. Instead, it was agreed that working groups would meet separately to progress their work. The reports of these working group meetings are as follows:

Working Group 1

WG1 Writing Meeting - February, 2017, University of Helsinki, Finland

The Working Group co-ordinators met to progress the Literature Review of WG1. This is now being finalised, ready for publication in summer 2017.

Working Group 2

WG2 Writing Meeting – 30-31 January 2017, Athens, Greece

Members of WG2, involved in developing a review of research on digital literacy practices in early years/primary education and informal learning spaces, met at the Athens Concert Hall – Megaron (Athens, Greece) on the 30th and 31st of January 2017 with the goal of exchanging ideas on and completing the review. Meeting attendees included (in alphabetical order): Emmanouel Garoufallou, Lena Ivarsson, Michael Klein, Stavroula Kontovourki, Damiana Koutsomiha, Gudrun Marci-Boehncke, and Eufimia Tafa. Riitta-Liisa Korkeamaki and Sirje Virkus, who had contributed to the write-up of the review, were not able to attend, while others who has contributed to the review by summarizing relevant studies are acknowledged in the published version (see below). During the two meeting days, attendees finalized as a whole group the organization and content of the review, as well as refined its connections to relevant DigiLitEY publications. Much time was devoted to the theorization of the review based upon available resources and to the discussion of specific implications for research and pedagogical practice. Time was also allocated to attendees to work in three separate groups as per identified thematic areas, which constitute the three main sub-sections of the review: early literacy practices in the digital

era, teachers' views and teacher education, and digital literacy of young children in informal learning spaces. These were the main categories under which fell studies and research identified for this review. After the meeting in Athens, WG2 members collaborated further to complete the review and submit it for publication on the DigiLitEY website (<http://digilitey.eu/wp-content/uploads/2015/09/WG2-LR-March-2017-v2.pdf>).

Future Plans

WG2 will continue to develop actions to promote its goals and objectives as these relate to young children's digital practices in early years settings, schools and informal spaces. Upon the completion of the review of research, members of WG2 have discussed further possibilities for journal publications along similar lines. Those publications would involve a smaller number of authors and be more focused in their purpose and scope. Future publications will thus expand on identified knowledge. In this framework falls a chapter proposal by Stavroula Kontovourki and Eufimia Tafa, titled "Pedagogical approaches to digital literacy practices in the early years" to be included in the Handbook of Digital Literacies in Early Childhood.

Among WG2 priorities is also the design and advancement of a research inquiry that has been piloted since 2016 to elicit early and primary teachers' beliefs, attitudes, and practices of literacy in the digital era. By March 2017, researchers (DigiLitEY members and other interested parties) from 10 different countries have shown interest and or engaged in developing an interview protocol and in collecting data through semi-structured interviews that focus on teachers' practices of digital literacy in and out of educational spaces, and the connection of those to their broader understandings of their professional roles and identities. At the DigiLitEY meeting in Prague, there has already been a suggestion of expanding the inquiry to address other professionals' beliefs, attitudes and practices (e.g., librarians, museum curators) and consider ways to foster collaboration among those. Steps to advance this project will also be discussed at the DigiLitEY MC meeting in Bologna, Italy in August-September 2017.

Working Group 3

WG Co-chair Kucirkova had a SKYPE meeting with Prof Rowe to discuss the scope and remit of a review on children's writing on screen. They agreed a set of parameters and possible research questions. Kucirkova has received some training from IOE's institutional librarian about the process of conducting systematic reviews. Given that UCL IOE requires an ethics permission for conducting systematic reviews, Kucirkova has put the application together and submitted on the 7th of March. Prof Rowe's student Laura Piestrzynski is helping with the initial searches and the team is in regular contact via email.

Working Group 4

Meeting in Milan, 2-3 March 2017

The group discussed the first round of data collection for the 'Internet of Toys' Study. Refinements to the data collection were discussed, to be added to the repository on the Google Drive.

The construction and writing of the report to be produced by the group was discussed:

Title of the report: The Internet of Toys: discourses around communicative and play practices of young children

Attribution, non commercial, share alike license

1. Setting the conceptual framework (2000 words)
 - a. History of smart toys, that leads to a definition of Smart toys/Internet of Things toys in terms of a spectrum (introduce to the dimensions of the diagram that sets the boundaries of our field) empty diagram (700 words)
 - b. Conceptual changes (online/offline, digital/non-digital play, ownership of the toy vs ownership of the toy data. Other dichotomies: personalised but shared/personalised as individualised/ smart as connected/smart as educational) (1200 words)
 - c. Historical discourses around children and tech (700 words)

- d. Methods (400 words)
2. The composite world of IoT toys (including the diagram) (1300 words)
3. Global/local flows (linguistic implications) (700 words)
4. Risks (type of risks, type of media, actors, voices etc.) (1500)
5. Opportunities (type of opportunities, type of media, actors, voices etc. (1000 words)
6. Gender (case studies) (700 words)
7. The absent child and the responsible parent (neoliberal discourses and positioning of parents as responsible for children's safety, wellbeing, health, education) (1500 words)
8. Conclusions (700 words)

Case studies for the gender chapter:

Girls: My Friend Cayla and Happy School Nuneco

Boys: Anki Overdrive, Skylanders

Neutral: VaiKai, Osmo

Future projects of WG4

The group agreed on the following research project

- second wave of media coverage/commentaries in the Christmas season 2017 (data collection: 15 November 2017 to 10 January 2018)
- interviews with producers (adaptation of the walkthrough method through the child's rights framework) include also startups or failed toys, include internet companies such as Google (if possible)

September 2017-January 2018: finalising the design of the method, interviews schedule, selection of case studies

February 2018 – October 2018: interviews

Analysis meeting in Milan early November 2018 (after ECREA). + book symposium

Plans for future publications:

Policy for publications on these data:

1. 2 maximum 3 authors per paper (2 preferable)
2. Include acknowledgement of the COST Action WG4 in each publication
3. include the Literature Review and our joint report in the reference list

Already published:

Chaudron, S., Gioia, R. D., Gemo, M., Holloway, D., Marsh, J., Mascheroni, G., . . . Yamada-Rice, D. (2017). Kaleidoscope on the Internet of Toys: Safety, security, privacy and societal insights. Luxembourg: Joint Research Centre (JRC), the European Commission's science and knowledge service.

Holloway, D., Green, L. (2016) The Internet of Toys. *Communication Research and Practice* 2(4), 506-519.

Mascheroni, G. (2017). The internet of toys. Parenting for a digital future. Retrieved from: <http://blogs.lse.ac.uk/parenting4digitalfuture/2017/01/27/the-internet-of-toys/>

Zaman, B., Holloway, D., & Green, L. (2017). The Internet of Toys: Implications of increased connectivity and convergence of physical and digital play in young children. Retrieved from <https://digilitey.wordpress.com/2017/01/16/the-internet-of-toys-implications-of-increased-connectivity-and-convergence-of-physical-and-digital-play-in-young-children/>

In press/forthcoming:

1. Cyberpsychology journal article (Tijana, Christine, Patricia, Charles) on privacy risks
2. Giovanna and Donnell Responsible parent/Absent Child: paper to be presented at AoIR
3. Christine Internet of Toys and children's rights: paper to be presented at AoIR

Future publications:

IoToys book – to be edited by Donnell Holloway and Giovanna Mascheroni

Ideas for future journal articles that build on the report and our findings:

1. Internet and children's rights
2. Responsible parent and absent child

3. Redefining the concept of play/toy
4. Redefining what media and digital literacy mean in relation to IoT toys
5. Global/local perspective
6. Balancing risks and opportunities
7. IoT toys and children's wellbeing (physical and mental health)

Blog post on digilitey.wordpress.com announcing the report

Propose a panel for the Digitising Childhood Conference in Perth.

A small group will meet in Luxembourg on 26 April at 11.00

Working Group 5

During the second part of 2017 Working Group 5 has continued to develop the "[Methodology Database](#)". This is an open source searchable database, where users can [enter](#) their own studies, or search the resources using keywords, such as author, method, date, country etc. The database continues to grow and currently includes over 100 research entries from studies conducted primarily in Europe (although not only) around the digital literacies and practices of 0-8 year-old children. Work on building this resource will continue throughout the duration of the DigiLitEY COST Action network.

A second area of focus for WG5 has been the launch of a new initiative to promote innovative research methods via a series of blog publications related to methodological issues. These entries are intended to present in multi-media format current methodological issues and strategies in a style that is accessible to practitioners, parents and emergent researchers. Several entries have been already commissioned and will be published over the coming months.

Finally, planning has been undertaken for a Training School which will focus on collaborative and multimodal methodologies. This will take place 11-13 June 2017 at the Universidad Autónoma de Madrid / La Cristalera Residence.

Next steps in the WG will include focusing on ethical issues in relation to research and practice in young children's digital literacies and practices. Specific actions to achieve these goals include: (a) a workshop centered on ethical dilemmas during the 2017 Training

School; (b) preparing and launching a cross-national on-line survey around ethical dilemmas and issues; (c) a WG meeting focused on ethics.

Think Tank 2

Digital Literacy CPD for Early Years Practitioners

19-20 January 2017, Dublin City University, Ireland

Present:

Bernadette Dwyer, Eithne Kennedy, Elizabeth Dunphy, Fiona Giblen, Grainne Mc Kenna, (School of Language, Literacy and Early Childhood Education, Institute of Education, Dublin City University,(DCU)), Deirdre Butler, (School of STEM Education, Innovation, and Global Studies, Institute of Education, DCU), Mark Browne, (National Institute for Digital Learning, DCU), Cathy Burnett, (Sheffield Hallam University), Rosie Flewitt, (Institute of Education, University College London), Julia Gillen, (Lancaster University), Stavroula Kontovourki, (University of Cyprus).

The Think Tank opened with presentations on early childhood education policy and practice in each respective country (Ireland, UK, Cyprus). Across presentations, a number of complex issues pertaining to early years settings and practices were raised, including:

- Connections between public-private sectors
- Disparity of experiences in care and education settings; differences between sectors (preschool and primary)
- Existence (or not) of official national policies, but not much consideration on the implementation thereof
- Multiplicity of curricula (or lack thereof) depending on targeted age group/sector
- Differences in teacher qualifications and requirements across areas and age levels
- Responsibility for different sectors assumed by different agencies (e.g. Welfare Services, Ministries of Education, etc.)
- State provision and affordability (family responsibilities)

Following the presentations, discussion ensued on the identified needs and potentials of continuous professional development, as delineated in the COST Action White Paper on CPD for early years' practitioners. Participants identified the following as key to define:

- the very notion of digital literacy
- the need to design a new MOOC rather than using an existing one
- the need to include in a MOOC examples of technologies with which people are more comfortable and also to help teachers become comfortable with an online learning environment.

The second part of the day included a presentation by Professor Deirdre Butler on MOOCs. This was followed by a discussion with Professor Mark Browne of the National Institute for Digital Learning on issues pertaining to the development of MOOCs, such as learning outcomes for the MOOC; issues related to design and content; delivery platforms; interactivity, sustainability and support; flexibility for users in accessing the courses; and cost and funding.

These issues were considered on Day 2 of The Think Tank where participants reflected on a range of topics, such as the design, function and purpose of the MOOC, the research process underpinning the design of the MOOC, building social structures around the MOOC, and scoping exercises, interviews and surveys with early years practitioners. Funding possibilities were discussed and each participant was to seek out the funding opportunities in each country and report back to the group.

Think Tank 3

Parenting in a Digital World

March 27th, 2017, London School of Economics, UK

Participants:

From COST Action DigiLitEY:

- Prof Sonia Livingstone (LSE, dir. Of Parenting in the Digital Age project)
- Prof. Kristiina Kumpulainen (University of Helsinki, co-chair WG1)
- Prof. Jackie Marsh (University of Sheffield, Chair. COST Action DigiLitEY)
- Prof. Brian O'Neil (Dublin Institute of Technology) (DigiLitEY Stakeholder Manager)
- Dr. Anca Velicu, Institute of Sociology, Romania (DigiLitEY Stakeholder Manager)

From Industry:

- Kay Benbow, CBeebies
- Rachel Bardill, CBeebies (Editor of Digital Development)
- Paul Cording, Vodafone

Others From Academia:

- Peter Nikken, Nederlands Jeugdinstituut
- Stephane Chaudron, JRC
- Lorleen Farrugia, University of Malta
- Susanne Eggert, JFF – Institut für Medienpädagogik

Government department/ NGOs:

- Lubos Kuklis, Slovakia Media Regulation Authority
- Elizabeth Milovidov, Digital Parenting
- Eszter Salamon, European Parents' Association
- Martin Schmalzried, COFACE

Section 1: Introductions

The opening section started with a short welcoming message given by Brian O'Neil in which he reiterated the fact that a key point in COST Action is the engagement with key

stakeholders in order to properly understand their needs. He also explained the three ambitions of the present meeting: a) to identify the issues that need to be addressed in research/ policy in the area of parenting under 8s in a digital age; b) to identify ways in which the interests of parents can be taken on board by the Action, both at the level of collecting their questions/ needs and disseminating the results; c) to identify ways in which parents might be engaged with in the dissemination process. A round of introductions followed, with each of the participants presenting a short overview of their work.

Prof. Jackie Marsh presented an overview of COST Action IS1410 DigiLitEY.

Prof. Kristiina Kumpulainen made a presentation of the of Working Group 1's work to date. In her talk, Kristiina identified the three main objective of WG1, that are: 1. To develop a literature review on children's under 8s digital literacy and multimodal practices in homes and communities (led by Profs. Kristiina Kumpulainen and Helle Strandgaard Jensen); 2. To undertake two research projects: 2.1. Tips and tricks (project led by Prof. Nicoletta Vittadini and Dr. Donell Holloway) that consists in providing parents with an informative leaflet and 2.2. "A day in a digital life of 0-3 years old" project (led by Dr. Julia Gillen) which consists of a detailed case study of young children's digital literacy practices undertaken over a day using video and audio recording, followed by a comparative and cross-national analysis. The third long-term objective of WG1 is a constructive dialogue with industry partners.

Professor Kumpalainen gave an overview of key findings from a review of research in the field. Key points she made were:

- Many children in Europe grow up in media-rich homes.
- Digital technologies and media are an important (but not dominant) part of children's lives.
- Many parents see digital technologies and media as positive but challenging at the same time.
- Benefits are less straightforward for parents to recognise than risks.
- Parental mediation strategies included: co-use; active mediation; restrictive mediation; supervision; technical safety; guidance.
- Mediation linked to age nature and no of devices, gender education socio-economic status and computer/ internet skills child's age and online behaviour, the number and nature of media devices in the home, and the parents' gender, education, cultural/socioeconomic background, and computer/internet skills.
- Much research undertaken with white, middle-class families/ children – gaps in relation to ethnicity, socio-economic status, children with special needs.
- Children typically demonstrate agency over technology: digital activities interact and support children's "offline" life interests as children use digital media as an enlargement of their activities.
- Children learn from parental and peer mediation and the mediation of grandparents.
- Parents not aware of their children mirroring their behavior.

- Children use devices/ software not configured for their use Using devices that are not configured for children's use increases their risks of problematic experiences with pop ups and in-app purchases.
- Educators display little knowledge of children's digital experiences outside of school.
- There is limited school work related to digital literacies.
- Parents would welcome stronger and more collaborative relationships with early years settings in relation to digital literacy.
- Research base is limited, narrow, as well as partially stereotypical and outdated.

The literature review will be published later in the year.

The final presentation of this section was given by prof. Sonia Livingstone who talked about her project Parenting for a Digital Future. Sonia stressed on the project's blog that is a tool for conveying key messages and knowledge to parents, but not only to them. To a certain extent, the blog is a project in itself that challenged researchers to engage with the main stakeholders, who are parents. As the researchers observed that the anxiety of parenting for the digital age is in fact linked with parenting in general, and that parents look for 'the right way', Sonia and her colleagues wished with the blog to show that there are many more than one right way; thus she invited many bloggers to publish their experience on the issues on project's blog. In the main part of her presentation, Sonia talked about: 1. The gaps in researching parenting for digital future (in contrast to the more researched area of teachers and school mediation of the 'digital' child), 2. The methodology used (e.g. the JRC study employed ethnographic study of 70 families; very diverse types of visits); 3. Some results: e.g. one of the big challenges of the parents is to imagine how world will look in 20 years and to prepare the child accordingly. 4. Sonia finally identified some of the gaps in research (e.g. the needs of parents with children with special needs, or BME parents) and some important places to look for enlightened view on the issue (e.g. blogger parents).

Group discussion around the question: What are the key research questions that need addressing in this area?

- At the interaction of research and practice: how to reach parents? This is part of a more traditional struggle (of schools) in relation to reaching the parents. So one of possible approach is to get parents' opinion on how they would want to be motivated for more engagement.
- Discussion on the ethical condition of the research: the necessity of starting from a non-biased preconception in order to collect reliable data on parents' practices; for instance, some parents, and not only from poor families, but often in wealthy ones, really value the possibility to use digital technology as baby-sitter; still, rarely they would report this because of the social expectation not to engage in this practice.

- Discussion on the best methodological approach for measuring children's digital skills: what is the level of parental awareness for children's digital skills?
- There is a need for more research on parents' media use and their interaction with children (because children mirror parental behaviour and also young children's development is highly influenced by parents media consumption (e.g. some parents' use of mobile devices and their resultant lack of visual contact with children could affect child's development)).
- There is a need for researching some new phenomenon, such as parent-sharing; it is worth researching it from the children's perspective (e.g. objectification of the child as 'the outcome' of a perfect family); there is some current research at the University of Michigan on the topic.
- In an active research paradigm, one should also focus on coming back to parents after collecting data from them and providing feedback for parents on the results of the research. Moreover, a worthy topic for research is to find out how involving parents in research might influence their mediation practices, increase their awareness and their digital literacy (longitudinal research).
- More research is needed that focuses on the family as a whole, involving siblings and grandparents, as previous research showed the importance of the first born in changing the parenting style
- New media experience and algorithmic thinking and understanding also require new research (affordances theory).

Group discussion around the question: What might parents' interest be in relation to the Action, and how we could reach out to them?

- A starting point for the discussion was that parents do not get the appropriate guidance; there is lots of material, but the question remains about how to involve parents and inform them about these materials.
- Proposed solutions were, based on the experience of previous workshops that engage together parents and older children (older), to try this format with younger children and to get children and parents to do activities together. For instance, online classes could be a shared activity. Unfortunately, parents don't prioritise these activities (maybe because they don't understand them or their importance). Therefore, any solution should give them space and time to understand the issues in their own personal context.
- An innovative approach to addressing young parents' awareness of how should they use and mediate children's use of digital technology is to include guidance and information on the digital life of children & parents in a 'box' given to new parents. The participants reiterated the importance of starting from the very beginning, because children mirror parental behaviour and, from a developmental perspective, the child learns through interaction with the parents; in the child's first year, it's not necessarily about the literacy skills of children, but of a child's development.

- In relation to the question of how could we reach out to the parents, the participants stressed the importance of social services and how to involve them in reaching out to parents and offering information.
- Other solutions:
 - Develop a more efficient use of platforms (such as Google) for reaching out to the industry and in spreading the message among parents.
 - For offline parents: to partner with local small communities and go to them (not expecting them to come to you); this is also useful for parents with special needs, who could be reached by the group they already belong to.
 - Pub-quizzes with questions on digital safety.
 - The format of information and guidance needs to be considered: written material cannot be the best approach for some parents.
- Challenges in approaching parents:
 - The gender bias often present when attempting to engage with parents.
 - Because of competition for funding, the associations don't necessarily cooperate in putting together data and solutions/ best practices and this is problematic.
 - There is a need for ensuring materials are offered in all European languages, and other key languages e.g. Arabic.

General discussion

- There is a need for parenting intermediaries who can build services for parents.
- Digital is a focal point in relation to parenting – it is fundamentally about parenting values and the role people take as parents.
- Parents look for the right way – however, there are lots of different ways of parenting and they need to stop looking for the right answer.
- Parents scaffold the child's entry into the wider world and help the child to build resilience in the digital world.
- Media is changing fast and parents report that they can't keep up. Parents are trying to raise their children for the future and they raise anxieties about their wider future, tied to the digital.
- Parents struggle with privacy issues.
- There is a need to look at families beyond the traditional focus e.g. geeky families, children with special educational needs, parents with alternative lifestyles – art/creative, religious groups, ethnic minorities, political and religious groups of parents and their strategies (alt right has consequences on how you bring up children), migrant refugee children - what are their digital rights?
- Devices are getting more personalised and much of children's use is hidden to the parents.
- Parents change mediation styles – can be related to age/ gender of child.

- Parents' views are sometimes different and different parents' interactions with children can be different
- Parents are not always aware of the quality of content already available.
- There is a need also to consider the knowledge and attitudes of social workers and health visitors with regard to children's digital literacy - need to reach ante-natal classes
- Can volunteer schemes be developed in schools to support parents; development of knowledge?

Proposed action

It was agreed that there needed to be a public campaign developed for parents that would provide some key but simple messages about monitoring and supporting children's digital literacy practices.

This would be taken forward at the COST Action meeting in Bologna, 31st August – 1st September.

Think Tank 4

What is narrative in Virtual Reality (VR)? How can VR be used in Education?

25th April, Dubit, Leeds, UK

Present: Jack Brookes, University of Leeds; Cathy Burnett, Sheffield Hallam University; Lori Camm, BBC Children's; Emily Cole, Royal College of Art; Aisling Cooling, University of Sheffield; Richard England, Reflex Arc; Nick Hall, Endemol Shine UK; Wendy Harris, Tutti Frutti; Donnell Holloway, Edit Cowan University; David Johnston, BBC; John Kearney, BBC; Alex Lambert, BSIVR; Jackie Marsh, University of Sheffield; Duncan Millin, Manchester City FC; Elizabeth Milovidov, Digital Parenting Consulting; Faisal Mushtaq, University of Leeds; Becky Parry, University of Nottingham; Alistair Powell, BBC; Anna Ridler, Royal College of Art; Anna Riddler, Royal College of Art; Deborah Rodrigues Moreira, Gluck Workshops; Shahneila Saeed, Ukie; Eleni Sharp, BBC; Simon Spencer, Sony; Stephanie Whitley, Dubit; James Woodham, BBC; Helen Woolley, University of Sheffield.

Dylan Yamada-Rice welcomed everyone to the event. Jackie Marsh introduced the DigiLitEY Cost Action.

Bobbi Thandi began the event by outlining VR technology. Key points made:

- VR very different to other media.
- VR predicted to be a big money business.
- Bobbi compared various VR headsets: Google cardboard; Mattel Viewmaster; Google Daydream; Samsung Gear VR; PS VR; Rift CV 1; The Void.

Sean Thompson at Dubit made the point that VR experience goes back 20 years.

He gave a few pointers for designers in order that the viewing experience was as comfortable as possible:

1. There should be nothing directly in front of the eyes of the user; give as much space as possible.
2. Keep user comfortable (not require to look up or down for a long period of time).
3. Be mindful of the home position.

4. Be aware of the fact that movement in VR is not the same as movement in the 'real' world.
5. Consider how we would use signage in real life and replicate this.
6. Have a person/ avatar in the virtual world to instruct.

Sean also made the point that VR sells much better when people have tried it.

VR and Narrative Panel

Dylan Yamada-Rice - research on VR with young children.

- People who design games are often men who are far removed from young children, and it is difficult to consider how this would work for a child.
- It was interesting how social the experience was. Children were in pairs, talking.
- Children need a comfortable level of vision – make things a bit lower so they don't have to tip.
- Adults are quite cautious, kids were stretching, spinning and looking up and down.
- She suggested that designers keep the initial experience simple.
- They found that if the content related to everyday experience, it was a good experience.
- Usability – kids wanted something to take in to the VR world with them, so they know where they are.
- Balance – children's movements in the VR world should match to everyday experience.
- Engagement – kids liked social ways of interacting.
- Children preferred less realistic graphics.
- Experimental VR Anchors – so experimental, we don't know what children need. Dylan working with students to develop anchors on what they can take with them. Is there any commonality?

Wendy Harris – Tutti Frutti

- Wendy presented the work Tutti Frutti do with young children.
- Wendy has been working in theatre for 30 years, the last 3 years has been with children age 3-7.
- Her company tell stories about anything –death, love, depression, in an age-appropriate manner.
- Can tell anything to children if in the right format Interested in helping children defeat the dragons that they know exist.

- Key principles -
 - They place children at the centre of the work we create.
 - They make delightful new theatre for children and family audiences.
 - They appeal to young imaginations with highly visual and physical storytelling.
 - They create work that is beautiful, engages the imagination and provides an intimate theatrical experience.
 - Their work is influenced by and embraces cultural diversity.
 - They work with and nurture a broad range of artists to push the creative boundaries and quality of our work.
 - They tour regionally, nationally and internationally to venues, schools and rural settings.
 - In terms of relationship to VR, there is much to be learned from immersive theatre - letting the action develop around the child and embedding a range of possible storylines in the experience.

Anna Riddler, Royal College of Art

- Anna is doing an MA in information experience design at the Royal College of Art on art, technology and storytelling.
- The structure in storytelling with regard to how someone receives information is important. Try not to give absolutely everything - try and make the audience give some of it.
- Give people a choice of what they are interested in. 2 stories, 2 different experiences
- Instructions for how to use an interactive story experience she had devised were very important. If there wasn't someone there to advice, then users wouldn't know how to use it.
- Stressed the importance of sound in the virtual world as well as visuals.

Plenary discussion

Points made:

- Need to leave space in the narrative for children to fill in the gaps. They should not be completely passive. Taking children on a journey, but give space to interact
- Is VR a more individual space than other media.
- How different is VR from using the imagination in storytelling? What is new in VR?
- Need to be clear about the aims and objectives, and why VR rather than other technology.
- All high end headsets need to be 13+ to use them. What are the concerns? The age limit is rather arbitrary and not based on research. However, there is evidence from the

work that Dubit has done with the University of Leeds that the cardboard headsets may offer an inferior experience in contrast to the higher-end headsets.

- VR offers an opportunity for children and young people to get physical, important when some ICT use is sedentary.

VR and Education Panel

Jackie Marsh

- Research in the area of VR and early years education is very limited. Research with older children has identified that it has the potential to foster motivation and engagement in learning, and can aid knowledge acquisition.
- Technology and Play study considered augmented reality apps - <http://www.techandplay.org>. Found that more open-ended apps offered more opportunities for play and creativity, so we need to consider this in relation to VR experiences.
- There are emerging examples of VR use in Key Stage 1 - Lee Parkinson, for example, has shown how the use of VR fostered children's writing -
- There is a need to develop apps that enable young children to make VR content easily. Few apps around e.g. CoSpaces - See Lee Parkinson's blog - <http://mrparkinsonict.blogspot.co.uk/2017/02/creating-your-own-vr-with-cospaces.html>

Deborah Rodrigues Moreira – Gluck workshops

Deborah gave a number of examples of her work on VR. See - <http://gluckworkshops.com>

Becky Parry, University of Nottingham

- Emphasised that the content created in VR now would form part of children's future engagements with popular culture and narrative, influencing their play, identity and literacy development.
- VR is, importantly, an imaginative space – a place in which Anna Craft's notion of 'possibility thinking' might well be found. It has the potential to enable children to empathise and imagine the world anew and it therefore important to remember this in designing for children.
- In terms of research it would be of great value to have opportunities to observe and record the development of VR in order to comment on the way the form develops. We find it useful to think back to the early days of film and how filmmakers innovated, contributing to the development of formal conventions. VR is developing as we speak and it is

possible to collect this data now and provide evidence for future generations of the way a new narrative, popular and playful form emerged in the early 21st century.

- It would be interesting to see VR being developed in close proximity with key thinking in education and pedagogy, rather than only trying to market to schools through an adherence to curriculum as it is currently practiced.
- There is a need to anticipate teaching about VR, not just using it as a tool for teaching, so as with other media forms like newspapers or films we might want to ensure that we enable students to critically engage with VR, to have wider cultural access to diverse VR content and to be making VR content themselves.
- As a new narrative form Becky suggest that VR will be important to literacy learning and recommends that VR content makers refer to 'The Charter for Literacy' by Cathy Burnett, Guy Merchant, Julia Davies and Jennifer Rowsell and suggests it could be made available online:

Burnett, C., Davies, J., Merchant, G., & Rowsell, J. (2014). *New literacies around the globe: Policy and pedagogy*. Routledge.

Plenary discussion

- There was discussion about whether VR had to be focused on educational objectives to be of value in the classroom, or whether that would be too restrictive. The general feeling was that VR could be of value in meeting educational objectives, if it was used in ways that fostered creativity and imagination.
- VR has potential value for children with special educational needs (there is research that demonstrates this in relation to older children, and identifies the value of augmented reality apps for young children with SEN).
- There is an important relationship between affect and learning. If VR apps can be enjoyable and draw children in, the learning will happen.
- VR can lead to playful learning, which is valuable for older children also.

The group was then asked to identify the key questions to inform future research. Participants broke into small groups to articulate what were the most important research questions to address in relation to VR and children aged 3-8. The group then voted on the what they considered to be the most important/ urgent questions.

Questions that more than one group identified as significant:

- Can we pre-empt 'bad press' to establish best practice code of conduct?
- What sense are children making of VR, how are they negotiating meanings with virtual reality environments?
- Would VR affect children's brains developmentally?
- Examining the value of open v closed learning in VR apps.
- Do we have to have evidence of VR's value to education?
- What are the potential positive/negative impacts on children's mental and physical health?
- VR narrative development.
- Who decides on age limit of VR design?
- What are parent's perceptions/concerns, what would make them feel better if concerned?
- What are the health risks – how long should children use headsets?
- Length of content – how long are children comfortably engaging with VR/360 content in both a headset and 'magic window' environment?
- How kids play? Therapeutic inclusive play for disadvantages/disabled children.

Other potential research questions:

- How to measure success in the development of Creative VR apps/experiences.
- How do you balance the experiences of adults with the open mindedness of children in the development of VR?
- Need more research in early years VR.
- Age boundaries, what to design for younger children?
- What is information manufacturing advice, e.g: age appropriateness and exposure duration?
- Value of VR therapy play?
- VR for health/medicine.
- Skill transfer from VR – real world e.g. sport surgery
- How can we reduce the novelty effect to look at how children really might make progress through VR?
- How can we effectively use VR in education to get the most benefit?

- Would be good to do practitioner research in this area to identify different recommended models and best practice guidelines.
- Can young children distinguish between real and virtual world after using VR?
- Affordability.

STSMS

11 STSM's were funded in year 2 of the Cost Action

Round 1

Saara Saloma research visit to: Sheffield Hallam University (UK)

Margarida Lucas research visit to: University of Helsinki (Finland)

Skúlína Hlíf Kjartansdóttir research visit to: University College London (UK)

Marco Bento research visit to: University of Wolverhampton (UK)

Cristina Sylla research visit to: University of Aalborg (Denmark)

Round 2

Rebecca Parry research visit to: University of Helsinki (Finland)

Kate Cowan research visit to: Stockholm University (Sweden)

Elisabete Barros research visit to: University of Helsinki (Finland)

Sumin Zhao research visit to: University College London (UK)

Alina Ticaú research visit to: Universidad de La Laguna (Spain)

Teresa Sofia Castro research visit to: Katholieke Universiteit Leuven (Belgium)

STSM reports are available at: <http://digilitey.eu/events-activities/short-term-scientific-missions/>

Presentations

Presentations made about the COST Action by the Chair (Jackie Marsh) and Vice-Chair (Ola Erstad) to:

- Literacy Research Ireland Conference, Dublin, Ireland (September 2016)
- Parenting in a Digital Age Seminar, Copenhagen, Denmark (October, 2016)
- Growing up digital - technology, child development, iRights and policy, Westminster Forum, UK (November, 2016)
- ELINET Conference, Brussels, Belgium (April, 2016)
- UKLA Research Conference, Sheffield, UK (May 2016)

Other presentations about the Action:

Ileana Rotaru (Romania): Andong Univeristy of South Korea (30.10-4.11.2016), BK21 - "Children and Media Culture in Romania - between two worlds";

Ileana Rotaru (Romania): "Digital culture communication and the need for parental mediation", International Symposium of Research and Applications in Psychology, 24th edition, with the theme „Cognitive characteristics of Transdisciplinarity. Applications in psychology and psychotherapy”, 24-26 of March 2017 in Timisoara, Romania

Ileana Rotaru (Romania): "A divided space of mediatization: Romanian children and the internet", 10th International Conference on Professional Communication and Translation Studies, 30-31 of March Timisoara, Romania

Laszlo Z. Karvalics E-könyvek, e-olvasók. Kerekasztalbeszélgetés, Budapesti Könyvfesztivál, 2016. április 24.

David Poveda (Spain): "Young Children (0-8) and Digital Technology" Country Report for Spain 2015, which was streamed and then generated a number of press pieces in the Spanish media. Here is the information on the event and the twitter feed about it (most in Spanish):

<http://www.infanciacontemporanea.com/2016/02/04/presentacioninforme08digital/>

Helle Strandgaard Jensen (Denmark): University of Copenhagen 7-8 March 2016 on Children, Media and Parenting (In Danish: <http://mef.ku.dk/forskning/fokusomraaderogprojekter/boern-medier-kultur/aktuelt/boernmedierogforaeldreskab/>)

Helle Strandgaard Jensen (Denmark): University of Copenhagen 19 May 2015 (children as digital, global citizens)

Helle Strandgaard Jensen (Denmark): University of Copenhagen 15 June 2015 (various project on film literacy and preschool, digital culture and young people)

Helle Strandgaard Jensen (Denmark): University of Copenhagen 14 September 2015 & 28 October 2015 The political economy of children's media culture.

Gregor Waller (Switzerland): Insights into Cost Action 1410 - The digital literacy and multimodal practices of young children (DigiLitEY): Presentation at: Network Media Literacy Switzerland. (November 24th 2016). Bern: Federal Social Insurance Office " Platform Youth and Media".

Rosie Flewitt (UK): 7th December 2016. Opening keynote and workshop for 2-day Hampshire and Isle of Wight Educational Psychology (HIEP) Annual Conference. Topic: 'Early Literacy Learning in a Digital Age'.

Rosie Flewitt (UK): 8th October 2016. Keynote for Canterbury Christchurch University Annual Early Years Conference. Topic: 'iPads and enabling literacy for children experiencing disability'.

Ulrika Sjöberg (Sweden): Presentation of the Cost Action at the Swedish Media Council. 11 October 2016. Ulrika Sjöberg is a member of the Council's scientific advisory board. The Swedish Media Council is a government agency whose primary task is to promote the empowering of minors as conscious media users and to protect them from harmful media influences (from webpage).

Ulrika Sjöberg (Sweden): The Cost Action, and the empirical study 'A day in the digital lives of 0-3 year olds', has been presented and discussed at the national PhD course 'Contemporary Debates in Media and Communication Studies', Malmö, March 2017.

Sonia Livingstone (UK): Chair, European Jury, 4th Evens Foundation Prize in Media Education, 2015 (Warsaw, May).

Sonia Livingstone (UK): Special Advisor, House of Lords Select Committee on Communications: Inquiry into Children and the Internet, 2016-17 [\[Link\]](#) [\[Report\]](#)

Sonia Livingstone (UK): Member, Royal Foundation Taskforce on the Prevention of Cyberbullying, 2016 [\[Link\]](#)

Sonia Livingstone (UK): Growing Up Digital Taskforce, chaired by the Children's Commissioner 2015-17. [\[Report\]](#)

Sonia Livingstone (UK): Academic Advisory Board, Children's Media Foundation, 2015-date.

Sonia Livingstone (UK): Policy guidance on empowering, protecting and supporting children in the digital environment. Council of Europe (Background paper for the digital strand of the Strategy for the Rights of the Child (2016-2021). Summer 2016. Lead consultant.

Sonia Livingstone (UK): IAMCR 2016 pre-conference, Children's and young people's rights in the digital age, LSE London, July 2016. [Website](#).

Media

8th January 2017 Vilmante Liubiniene participated in the radio programme Manasis aš“ (LRT Klasika), discussing the Digital culture, new ways of reading, media literacy, children and digital technologies. I have also mentioned COST action and JRC.[The interview is in Lithuanian: http://www.lrt.lt/mediateka/irasas/1013533290/manasis_as_2017-01-08_10_05]

Sonia Livingstone (UK), Empowering children online through literacy and safety initiatives. Interview with Sonia Livingstone, January 2015. [\[Video\]](#)

Sonia Livingstone (UK), Gearty Grilling. Interview with Sonia Livingstone on keeping children safe online, 2015. [\[Video\]](#)

Sonia Livingstone (UK), Impact of technology on children in Latin America. Chicos.net, February 2015. [\[Text\]](#)

Sonia Livingstone (UK), Children have rights also on the internet. Interview by the [Università Cattolica del Sacro Cuore](#), May 2015. [\[Video\]](#)

Sonia Livingstone (UK), Motherland Podcast: Kids and Tech, 18/8/15. [\[Podcast\]](#)

Sonia Livingstone (UK), Younger children online. How are families responding? Child Exploitation and Online Protection Centre, Sept. 2015 [\[Video\]](#)

Sonia Livingstone (UK), Interview about ‘Families and Screen Time’ (2016). [\[Video\]](#)

Sonia Livingstone (UK), What and how should parents be advised about 'screen time'? (2016) [\[Video\]](#)

Sonia Livingstone (UK), On kids and screens, a middle way between fear and hype. Interviewed for NPR Education (2016) [\[Text\]](#)

Research Proposals

Proposals under review, and successful proposals include:

Rosie Flewitt (UK) - Jan 2017- end 2019 Supporting early language development and interest in reading with digital personalised books. £183,060 (80% FeC). Funder: [ESRC Future Leaders Scheme](#) (FLS). Project Mentor for Dr Natalia Kucirkova's 2-year FLS Award (Project Number 535125) which aims to further theoretical and practical understanding of the under-researched yet educationally potent area of how digital technology can be used to support young children's language learning and interest in reading.

Rosie Flewitt (UK) - Sept 2017-Aug 2018 Valuing young children's signs of learning: observation and digital documentation of play in early years classrooms. £34.35k. Funder: [The Froebel Trust](#). Principal Investigator with Kate Cowan. Working with early childhood educators to develop a pedagogy of observation, documentation and assessment based on the Froebelian principles of the 'uniqueness of every child's capacity and potential' and 'holistic nature of development', focusing on 3-5 year-olds who are living with disadvantage and/or in the early stages of learning English in multicultural classrooms.

Rosie Flewitt (UK) - Mar 2017-end 2017 A Day in the Digital Lives of 0-3 Year Old Children £6387. Funder: UCL IOE Seed Corn Funding. Principal Investigator. A small-scale pilot project to scope out how and for what purposes young children aged 0-3 years engage with digital technologies as part of their everyday lives at home and/or in early care settings, and how parents and carers support their early language and literacy learning with digital technologies.

Pavel Izreal (Slovakia) - Catholic Univeristy in Ružomberok I submitted a research project titled: Media practices and media literacy of children in early childhood and children at younger school age. Approved by Scientific Grant Agency of the Ministry of Education. The research project is scheduled for years 2017 - 2020.

Jackie Marsh (UK): Leading 'Makerspaces in the Early Years: Enhancing Digital Literacy and Creativity (MakeY). 2017 – 2019. €539,000. EU H2020 RISE project, involving several COST Action partners in Denmark, Finland, Iceland, Norway and Romania. <http://makeyproject.eu>

Giovanna Mascheroni (Italy) - submitted an ERC CoG 2017 proposal. ERCs are individual projects, but in the team there are several DigiLitEY COST Action members: David Smahel, Kjartan Olafsson, Reijo Kupianinen, Dylan Yamada-Rice, Anca Velicu and Jackie and Sonia Livingstone on the Advisory group.

The project title is: "The digital lives of young children – dYoung" and below is an abstract:

Given evidence of young children's growing access to touchscreen devices and IoT toys, there is need for critical and comparative research on the mediatization of early childhood (4-to-6-year-olds) that advances our understanding of the meanings, role and social consequences of digital media in preschoolers' lives. To address these issues, dYoung adopts and adapts the "circuit of culture" model, which frames the relation between the technological and the social as a cultural process situated at the dynamic, conflicting and contingent articulation of: 1) social representations of children's engagement with digital media and 2) the discursive construction of children's identities as digital users; 3) the production of apps and IoT toys for early childhood; 4) the consumption of apps and IoT toys by young children and their families; 5) the regulation of children's digital practices by parents (micro-level), and government and EU regulation of the production and consumption of digital media for early childhood (macro-level). By combining quantitative and qualitative methods - surveys with parents of children aged 4-6, longitudinal ethnographic research with children 4-6 and their families, case studies of apps and IoT toys, critical analysis of social discourses around digital childhoods and policy regulations - the project examines the mediatization of early childhood as it unfolds in four diverse cultural settings (Finland, Italy, Romania and the UK). The project will create unique and much needed empirical data for understanding the relation between changing media and changing childhood in a longitudinal and comparative perspective, thus contributing to the knowledge base of children and media studies and the sociology of childhood. Theoretically, it will assess the value of the circuit of culture, as both a theoretical and analytical tool, for mediatization research. Methodologically, it will develop and test innovative methods for research with young children.

Lubomira Parijkova (Bulgaria) - Participation in the Bulgarian project "Digital Competencies and Media Education at Pre-school and Primary School Age" (December 2016-2019) National Science Fund. Coordinator of the research team Romyana Papancheva. Coordinator of the WP3 "Connection between reading and digital literacy" – Assoc. Prof. Lubomira Parijkova.

Vitor Tome (Portugal): Has submitted a bid titled: Children's Rights and Fostering Tolerance (CRAFT). Involves several members of the COST Action including Rosie Flewitt (UK), Becky Parry (UK), Janice Richardson (Belgium) and Cristina Sylla (Portugal)

Call: Support dialogue and exchange of best practice in fostering tolerance and mutual respect (Topic identifier - REC-RRAC-RACI-AG-2016; Types of action - REC-AG REC Action Grant).

Link to the call: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/rec/topics/rec-rrac-raci-ag-2016.html>

Total costs: 794.606,00

Requested EU contribution: 635.684,00

Publications

Marsh, J., Kontovourki, S. Tafa, E. and Salomaa, S. (2017). *Developing Digital Literacy in Early Years Settings: Professional Development Needs for Practitioners. A White Paper for COST Action IS1410.*

<http://digilitey.eu/wp-content/uploads/2017/01/WG2-LR-jan-2017.pdf>

Marsh, J., Mascheroni, G., Carrington, V., Árnadóttir, H., Brito, R., Dias, R., Kupiainen, R. and Trueltzsch-Wijnen, C. (2017) *The Online and Offline Digital Literacy Practices of Young Children: A Review of the Literature.* COST ACTION IS1410.

<http://digilitey.eu/wp-content/uploads/2017/01/WG4-LR-jan-2017.pdf>

Newsletter 3: December 2016

<http://us11.campaign-archive1.com/?u=9a65b6728a4ee3d5f39e98090&id=c6e4ecb424&e=1a6bb778ce>

Newsletter 4: April, 2017

[http://us11.campaign-archive2.com/?u=9a65b6728a4ee3d5f39e98090&id=034ded3800&e=\[UNIQID\]](http://us11.campaign-archive2.com/?u=9a65b6728a4ee3d5f39e98090&id=034ded3800&e=[UNIQID])

A DigiLitEY Blog was launched:

<https://digilitey.wordpress.com/blog/>

Handbook of Digital Literacies in Early Childhood

The Handbook of Digital Literacies in Early Childhood is progressing as planned. A proposal was sent to Routledge in December 2016. The proposal consists of a rationale and 30 abstracts for chapters representing European and international scholars. We received the reviews in March 2017. In general these were very positive and supportive with some critical remarks and suggestions which have been addressed. A response to the reviews has been sent to the publisher, which might imply that the Handbook will be expanded with 2-3 additional chapters. Routledge has now accepted the proposal. A final deadline for the manuscript is December 2018. The major work with writing the individual chapters will be during the Fall of 2017, with a review process and finalisation in 2018.

Working Group 1

Blum-Ross, A. and Livingstone, S. (2017) "Sharenting," parent blogging and the boundaries of the digital self. *Popular Communication*, 15(2).

Blum-Ross, A. and Livingstone, S. (2016) *Families and screen time: current advice and emerging research*. LSE Media Policy Project, Media Policy Brief 17. LSE: London, UK.

Chaudron, S., Marsh, J., Donoso, V., Ribbens, W., Mascheroni, G., Smahel, D., Cernikova, M., Dreier, M., Korkeamäki, R-L., Livingstone, S., Ottovordemgentschenfelde, S., Plowman, L., Fletcher-Watson, B., Richardson, J., Shlyapnikov, V., and Soldatova, G. (in press) Rules of engagement: Family rules on young children's access to and use of technologies. In Danby, S. et al. (Eds), *Digital Childhoods*.

Dias, P., Brito, R., Ribbens, W., Daniela, L., Rubene, Z., Dreier, M., Gemo, M., Di Gioia, R., Chaudron, S., (2016). The role of parents in the engagement of young children with digital technologies: Exploring tensions between rights of access and protection, from 'Gatekeepers' to 'Scaffolders' // *Global Studies of Childhood* Vol. 6 N 4 (2016), p. 414-427. DOI: 10.1177/204361061667602024 , URL: <http://journals.sagepub.com/doi/pdf/10.1177/2043610616676024> ISSN 20436106

Galera, N; Matsumoto, M. y Poveda, D. (2016). The place of digital devices in the home and family routines of young children (3-7) in Madrid. *Media Education: Studi, Ricerche, Boune Pratiche*, 7 (2), 303-319.

González-Patiño, J. and Poveda, D. (2015). Privileging the individual through the collective commitment: Parental strategies and dynamics of involvement in a middle-class school. *Multidisciplinary Journal of Educational Research*, 5 (3), 316-336. (<http://hipatiapress.com/hpjournals/index.php/remie>).

Könitzer, B., Jeker, F. & Waller, G. (2016). *Young Children (0-8) and Digital Technology. A Qualitative Exploratory Study – National Report Switzerland*. Zurich: Zurich University of Applied Sciences.

Livingstone, S. (2015) Why do parents stress about screen time? *Digital Parenting, Issue 4*, p.9.

Livingstone, S., and Byrne, J. (2015) Challenges of parental responsibility in a global perspective. Gasser, U. (Ed.), *Digitally Connected: Global Perspectives on Youth and Digital Media (pp.26-29)*. Cambridge: Berkman Center for Internet and Society, Harvard University.

Livingstone, S. Marsh, J., Plowman, L, Ottovordemgentschenfelde, S., and Fletcher-Watson, B. (2015) *Young children (0-8) and digital technology: A qualitative exploratory study - National Report – UK*.

Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S. and Lagae, K. (2015) *How parents of young children manage digital devices at home: The role of income, education and parental style*. LSE, London: EU Kids Online.

Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., and Folkvord, F. (2017) Maximizing opportunities and minimizing risks for children online: the role of digital skills in emerging strategies of parental mediation. *Journal of Communication*, 67(1): 82-105.

Marsh, J. (in press). Russian dolls and three forms of capital: ecological and sociological perspectives on parents' engagement with young children's tablet use. In C. Burnett, G. Merchant, A. Simpson and M. Walsh (eds). *The Case of the iPad: Mobile literacies in education*. Springer.

Marsh, J. (in press). Childhood in the digital age. In S. Powell and K. Smith (eds) *An Introduction to childhood studies* (4th ed.) London: Sage.

Matsumoto, M; Aliagas, C; Morgade, M; Corroero, C; Galera, N; Roncero, C. y Poveda, D. (2016). *Young Children (0-8) and Digital Technology. A qualitative exploratory study: National report of Spain*. Madrid/Barcelona/Ispra: Joint Research Centre / Universidad Autónoma de Madrid / Universitat Autònoma de Barcelona.

Mifsud, C.L. & Petrova, R. (2017) *Young Children (0-8) and Digital Technology: The National Report for Malta*, University of Malta/EU Joint Research Centre. ISBN 978-99957-1-098-9. https://www.um.edu.mt/__data/assets/pdf_file/0007/307555/JRCReport2017_webb.pdf
Parijkova, L. (2016). The digital literacy and multimodal practices of young children (DIGILITEY) (COST ACTION IS1410). // E-magazine *Education and Technology. Innovations in teaching and cognitive development*. Bourgas, 7/2016, 38-43.

Parijkova, L. (2016) The digital literacy and multimodal practices of young children (DIGILITEY) (COST ACTION IS1410). // Paper magazine – *Education and Technology. Innovations in teaching and cognitive development*. Bourgas, 7/2016, 19-21.

Pervolaraki, I.-E.; Garoufallou, E.; Siatiri, R.; Zafeiriou, G.; Virkus, S.; Antonopoulou, S. (2016). Use of Digital Tools by Preschool Children: Preliminary Results. In: Kurbanoglu, S.; Boustany, J., Spiranec, S.; Grassian, E.; Mizrachi, D., Roy, L.; Çakmak, T. (EditorsAbbr). *Information Literacy: Key to an Inclusive Society.4th European Conference, ECIL 2016 Prague, Czech Republic, October 10–13, 2016 Revised Selected Papers (449–459)*. Heidelberg, New York, Dordrecht, London: Springer. (Communications in Computer and Information Science Series; 676).

Working Group 2

Cremin, T., Flewitt, R., Mardell, B. and Swann, J. (2017) (Eds.) *Storytelling in Early Childhood: Language, Literacy, and Culture*, London and New York: Routledge.

Jaros I, Koziej S. Technologie mobilne we wczesnej edukacji, in: Dzieci i młodzież ze specjalnymi potrzebami edukacyjnymi w przestrzeni informacyjnej, ed. Mirosław Z. Babiarczyk, Karol Bidziński, Alicja Giermakowska, *Impuls Oficyna Wydawnicza*, Kraków 2016, p. 215-225, ISBN 978-83-8095-070-2.

Jernes, M., Knaben, Å. D., & Berner, K. (2017). Barns fortellinger om lek i barnehagen i en tid preget av moderne medier. [Children's stories about playing in the nursery in an era of modern media.] *Norsk Pedagogisk Tidsskrift*, 101(1), 31-44.

Kucirkova, N., Littleton, K. and Kyparissiadis, A. (2017). The influence of children's gender and age on children's use of digital media at home. *British Journal of Educational Technology* (In Press).

Lotherington, H., & Paige, C. (Eds.) (2017). *Teaching young learners in a superdiverse world: Multimodal perspectives and approaches*. New York, N.Y: Routledge.

Lotherington, H. (in press). Elementary language education in digital multimodal and multiliteracy contexts. In S.L. Thorne & S. May (Eds.), *Language, Education and Technology. Encyclopedia of Language and Education* (Volume 9). Springer. (Publication in 2017)

Lotherington, H., Fisher, S., Jenson, J., & Lindo, L.M. (2017). Desarrollo profesional de adentro hacia afuera: El rediseño del aprendizaje por medio de la investigación y la acción colaborativa. Reconfigurando las aulas de clase y los pasillos. In M. Knobel & J. Kalman (Eds.), *Aprendizaje docente y nuevas prácticas del lenguaje. Posibilidades del desarrollo profesional en contextos digitales* (pp. 89-118). Mexico City: Grupo SM.

Marsh, J. (2016). Gareth: The reluctant writer. In A.H. Dyson (Eds) *Composing in childhoods: A global perspective*. New York: Routledge.

Marsh, J. (2016). The digital literacy skills and competences of children of pre-school age. *Media Education Studies and Research*. 7 (2), 197-214.

Rotaru I. (2015) From Blackboard to Internet: possible changes of the Romanian classroom, *Social Research Reports*, vol,27,pp.111-120, ISSN: 2066-6861 (print), ISSN: 2067-5941 (electronic) <http://www.researchreports.ro/en/from-blackboard-to-internet-possible-changes-of-the-romanian-classroom>

Rotaru I. (2016) How good is the internet? A perspective of Internet use and gratification (4-6 years old) in *Current Challenges in Social Sciences* (eds. Olah S.,G. Roseanu, S.Bodogai, L.Coturbas), Editura Presa Universitara Clujeana, Cluj-Napoca, p238-244

Rubene, Z. (2016). Postmodernā bērntība: izaicinājumi pedagogijas pētījumiem = Postmodern Childhood: Challenges for Researchers in Pedagogy / Zanda Rubene, Ilze Dinka. (Aktualitātes audzināšanas teorijā = Topicality in theories of upbringing). Literatūra: 19.-20. lpp. // Pedagoģija un skolotāju izglītība = Pedagogy and teacher education / [atbildīgās redaktors: Zanda Rubene, Dita Nīmante]. (Latvijas Universitātes raksti = Acta Universitatis Latviensis = Scientific papers University of Latvia ; 811. sēj.). Rīga : LU Akadēmiskais apgāds, 2016. 12.-21. lpp. , URL: http://dspace.lu.lv/dspace/bitstream/handle/7/34346/LU_Raksti_811_Pedagoģija.pdf ISBN 9789934181276. ISSN 1407-2157

Rubene, Z. (2016). Digitālā bērntība [Digital childhood] / Zanda Rubene. Literatūra: 18.-19.lpp. // Tagad : zinātniski metodisks žurnāls Nr.1 (10) (2016), 9.-19.lpp. , URL: http://maciunmacies.valoda.lv/images/Maci/Par_latviesu_valodas_apguvi/Tagad_10_16.pdf ISSN 1407-6284.

Virkus, S. (2015). Väikelaste digitaalne kirjaoskus. *Tallinna Ülikooli ajakiri*, 8, 36–38.

Wileczek A. (2016) Czytanie i pisanie na ekranie. (Samo)kształcenie kompetencji komunikacyjnych młodszych dzieci, in: Edukacja polonistyczna jako zobowiązanie. Powszechność i elitarność polonistyki, ed. Ewa Jaskółowa, Danuta Krzyżyk, Bernadeta Niesporek-Szamburska, Małgorzata Wójcik-Dudek, Uniwersytet Śląski w Katowicach, Katowice 2016, p. 253-62, ISBN 978-83-8012-952-8

Working Group 3

Chaudron, S., Gioia, R. D., Gemo, M., Holloway, D., Marsh, J., Mascheroni, G, Jochen, P. & Yamada-Rice, D. (2017). *Kaleidoscope on the Internet of Toys: Safety, security, privacy and societal insights*. Luxembourg: Joint Research Centre (JRC). Accessed at: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC105061/jrc105061_final_online.pdf

FitzGerald, E., Kucirkova, N., Jones, A. et al (in press) Dimensions of personalisation in technology-enhanced learning: a framework and implications for design. *British Journal of Educational Technology* .

Kucirkova, N., & Zuckerman, B. (2017). A guiding framework for considering touchscreens in children under two. *International Journal of Child-Computer Interaction*.
<http://www.sciencedirect.com/science/article/pii/S2212868917300491>

Kucirkova, N., Littleton, K. and Cremin, T. (2017). Young children's reading for pleasure with digital books: six key facets of engagement. *Cambridge Journal of Education*, 47(1) pp. 67–84.

Working Group 4

Chaudron, S., Gioia, R. D., Gemo, M., Holloway, D., Marsh, J., Mascheroni, G, Jochen, P. & Yamada-Rice, D. (2017). *Kaleidoscope on the Internet of Toys: Safety, security, privacy and societal insights*. Luxembourg: Joint Research Centre (JRC). Accessed at: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC105061/jrc105061_final_online.pdf

Chernyevskaya, A., and Livingstone, S. (2015) Children's safety on the internet: a guide to stakeholders. Report for EU Kids Online and LSE Media Policy Project.

Flewitt, R., & Maybin, J. (2016). From Crib Talk to YouTube: narrative and performance in childhood and youth. In J. Maybin (Ed.), *Narrative, language and creativity: contemporary approaches* (pp. 61-108). Milton Keynes: Open University Press.

Haddon, L. and Livingstone, S. (in press) Risks, opportunities and risky opportunities: How children make sense of the online environment. In Brooks, P., and Blumberg, F. (Eds.) *Cognitive Development in Digital Contexts*. San Diego, Cal.: Elsevier.

Jaros I. (2015_ Technologie mobilne w nauczaniu języków obcych małych dzieci, in: *Technologie mobilne w kształceniu językowym*, ed. Elżbieta Gajek, Texter, Warszawa 2015, p. 136-159, ISBN 978-83-7790-537-1.

Kalniņa Daiga, Āriņa Baiba, Valpētere Ieva, Kriņģele Kristīne. (in press) *5 – 7 gadus vecu bērnu digitālo spēļu lietošanas paradumi: ieguvumi un apdraudējumi* [Digital game practice habits among 5 – 7 years old children: benefits and risks]. Accepted for publishing in *Latvijas Universitātes raksti* [Acta Universitatis Latviensis = Scientific papers University of Latvia].

Lievens, E., Livingstone, S., McLaughlin, S., O'Neill, B., and Verdoodt, V. (in press). Children's rights and digital technologies. In T. Liefaard and U. Kilkelly (Eds.), *International Children's Rights Law*. Berlin: Springer.

Livingstone, S. (in press) Children's rights in the digital age. In Tumber, H., and Waisbord, S. (Eds.), *Routledge Companion to Media and Human Rights*. London: Routledge.

Livingstone, S. (in press) Children and young people's lives online. In J. Brown (eds.). London: Routledge.

Livingstone, S. (2016) Reframing media effects in terms of children's rights in the digital age. *Journal of Children and Media*, 10(1): 4-12. [\[Text\]](#) Republished in Lemish, D., Jordan, A., and Rideout, V. (Eds.) (2017) *Children, Adolescents, and Media*. London: Routledge.

Livingstone, S. and Local, C. (2017) Measurement matters: difficulties in defining and measuring children's television viewing in a changing media landscape. *Media Information Australia*.

Livingstone, S., Mascheroni, G., and Staksrud, E. (2017) European research on children's internet use: Assessing the past, anticipating the future. *New Media & Society*.

Livingstone, S. and Third, A. (in press) Children and young people's rights in the digital age: An emerging agenda. *New Media & Society*.

Marsh, J. (in press). The Internet of Toys: A posthuman and multimodal analysis of connected play. *Teachers College Record*.

Marsh, J. (2016). From the wild frontier of Davy Crockett to the wintery fiords of Frozen: Changes in media consumption, play and literacy from the 1950s to the 2010s. In B. Parry, C. Burnett, G. Merchant (eds) *Literacy, media, technology: past, present and future*. (pp41-59). London: Bloomsbury.

Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J.C. & Scott, F. (2016). Digital play: A new classification. *Early Years: An International Research Journal* 306 (3), 242-253.

Stoilova, M., Livingstone, S. and Kardefelt-Winther, D. (2016) Global Kids Online: researching children's rights globally in the digital age. *Global Studies of Childhood*, 6(4): 455-466.

Working Group 5

Livingstone, S. and Blum-Ross, A. (2017) Researching children and childhood in the digital age. In James, A. and Christensen, P. (Eds), *Research with children* (pp.54-70), 3rd edition. London: Routledge.

Messer, D. and Kucirkova, N. (2016). Digital and new technologies: Research tools and questions. In: Prior, Jess and Van Herwegen, Jo eds. *Practical Research with Children*. Abingdon: Routledge, pp. 264–284.

Plak, R. D., Merkelbach, I., Kegel, C. A. T., van IJzendoorn, M. H. & Bus, A. G. (2016) Brief computer interventions enhance emergent academic skills in susceptible children: A gene-by-environment experiment. *Learning and Instruction*. 45, p. 1-8

Ramasubramanian, S., & Yadlin-Segal, Aya (2016) Building meaningful cross-sector partnerships for children and media initiatives: a conversation café with scholars and activists from around the world. *Journal of Children and Media*, 10(2): 216-224. DOI: 10.1080/17482798.2015.1127840.

Sjöberg, U. (2015). 'Children and media: new challenges call for interdisciplinary and comparative approaches', editorial in *Acta Paediatrica* (international medical journal), 104 (2) 116-117.