

ANNUAL REPORT 2013

Jointly written in the spirit of our collaboration

The SnT-based research group “Development and Interactions in cyber-physical activity systems” (DICA-lab) conducts research at the intersection of computation, interaction, and human activity. We investigate how users interact and cooperate with novel devices and (smart) systems including the context-sensitive modeling of human and social aspects of interactive technologies (e.g., behaviour, intentions, abilities, emotions).

Core interests address learning and community building with and through digital technologies; the role of mediating artefacts for acting in socio-digital activity systems; participatory sensing approaches in urban environments; innovation and transformation within organisations and communities; the construction of mutual understanding as trust and trustworthiness of systems in interaction.

Interactive processes are studied “in the wild”, i.e. in their naturally occurring situations. Suitable tools are used for tracking processes in all kind of contexts and data are exploited through interaction analysis and tool-bound activity research.

DICA-lab has ample expertise in the investigation of learning and development in general, at all ages and within highly diversified settings. Developmental research projects foster collaboration, social participation and new forms of agency within inter-related activity systems and beyond organizational, institutional, cultural, or linguistic boundaries.

In 2013, three major projects focused the main activity of the lab.

The UL-funded IRP project “*sciPADS: Creative Inquiry with iPads and Cloud Learning in Elementary Science*” (2012 -2015) was conducted in three fundamental schools and the European School 2. The core challenges dealt with implementing the cloud services in the local IT architectures, but foremost solving technological issues related to weak Internet connectivity of local schools. The data gathering process produced different kind of data, collected either by students (multimodal classroom productions, self-recordings about their learning and inquiry approaches which were uploaded on the internal cloud) and/or research teams (video data from science lessons, video-stimulated recall interviews with students). The first year classroom experiences serve as a basis for refining the project activities during the next two school years. In autumn 2013, a web-based survey gathered data about the pupils’ Internet access and uptake of digital tools outside school.

DICA-lab organized the RoboTEC Sud 2013 technology and learning event, initiated and hosted by the proSUD agency. During three weeks in June, small teams of 12 year old students from 15 fundamental school classes were attended a 6 hour workshop to program Lego mindstorm robots. The task was to make the robots find way through a pre-defined circuit. The students’ collaborative efforts and problem solving attempts were recorded via static and mobile cameras, the data is organised as a searchable database for further analysis. DICA-lab works already on preparing the RoboTEC Sud 2014 edition.

The European project “*Improving web strategies and social media presence of LLP projects – Web2LLP*” (2012-2013) has been successfully concluded in 2013. It was coordinated by SnT and

involved 5 European partners. The Web2LLP project managed to instigate better exploitation of social media for disseminating outcomes of lifelong learning projects (LLP). Activities aimed to raise awareness, provide tailored-made training as well as self-training on web strategies and social media presence to LLP projects, including all sectorial, transversal and Jean Monnet actions. SnT/DICA was in charge of several activities, which created a set of resources entailing

- a) the creation of video tutorials for self-paced learning of web-based communication strategies and social media use in three languages (EN, FR, IT),
- b) the setup of a collection of good practices from current LLP projects (showcase),
- c) the organisation of a workshop with LLP project managers from various European Programs in Coventry (UK)

Moreover, DICA-lab developed a French online course (webinar) to train LLP project managers in developing web-based communication and dissemination strategies (social media) to valorize their project. This online training course was delivered via a videoconferencing tool, allowing full interaction between trainers and participants. This course consisted of a 10 hour training module delivered in five 2-hour sessions to groups of participants, targeting a total of 178 participants: 55 in the first session; 44 in the second; 30 in the third; 29 in the fourth; and 20 in the fifth. An average of 87% of them was from France, just a few from Belgium, Luxembourg, UK, Greece, and Spain. Final outcomes of the project are available through the project website <http://www.web2llp.eu/>

One new PhD project has been launched in 2013 emphasising „*The impact of social media on the leadership strategies of Generation Y: Challenges and potential*“. This PHD research project is financially supported by a business partner from Germany.

Dr. Manuela Jungmann joined DICA-lab in September as a postdoc researcher. She achieved her PhD Thesis at the Interactive Systems Lab, University of Sussex, about “Embodied Creativity: A Process Continuum from Artistic Creation to Creative Participation”

DICA-lab members presented their work at various renowned conferences, panels and research symposiums in the US, Italy, Germany, UK, Switzerland, France, Belgium and Singapore.

A detailed list of all presentations, publications, networking and dissemination of scientific results activities as well as qualification work (research Master, PhD and post-doc work) of the research collective and its members is updated and available at the DICA-lab blog (<http://dica-lab.org>).

Coordinator: Prof. Dr. Charles MAX

PUBLICATIONS

Journal Articles

SIRY, C. and MAX, C. (2013), The Collective Construction of a Science Unit: Framing Curricula as Emergent From Kindergarteners’ Wonderings. *ScienceEducation*, 97: 878–902.
doi: 10.1002/sce.21076

Book Chapters (peer reviewed)

MAX, Ch., SIRY, Ch., KRACHEEL, M. (forthc). “And? Did we do nice things?” Children documenting their emerging inquiries in early science learning. Tobin, K., & Shady, A. A. (Eds). *Transforming urban*

education: Collaborating to produce success in science, mathematics and technology education.
Rotterdam, NL: Sense Publishing.

MAX, Ch., ZIEGLER, G., KRACHEEL, M. (2013). Tracing science in the early childhood classroom: the historicity of multi-resourced discourse practices in multilingual interaction. In N. Mansour and R. Wegerif (Eds.). *Science Education for Diversity: Theory and Practice*. Cultural Studies of Science Education, Vol 8. Springer. 10.1007/978-94-007-4563-6

Papers at conferences (peer reviewed)

Albanese, C., Max, Ch. (2013). A proto-Language of Emotions? Response Cries as an Interactional Achievement'. Paper presented at the 2013 Conference of the International Society for Research on Emotions which took place from August 3-5 at the University of Berkeley – San Francisco (US)

Albanese, C. in coop. with Ziegler, G., Max, Ch. (2013). 'Languaging Universals' – The Biosemiotics of Facial Kinesics. Paper presented at the 13th International Gathering of the International Society for Biosemiotic Studies, June 4 -8, Pisa (It)

Hack, N., Max Ch. (2013). Creative Inquiry with ipads in elementary science education. Paper presented at the 15th Biennial EARLI Conference "Responsible teaching and sustainable learning " in Munich (Ger), August 24-31.

Hack, N., Max, Ch. (2013). The sciPADS project. Round table contribution at the Eapril 2013 Conference in Biel (CH), November 27-29.

Max, Ch. (2013). Talking ideas into being: Reasoning about science phenomena in the elementary classroom. Paper presented at the 15th Biennial EARLI Conference "Responsible teaching and sustainable learning " in Munich (Ger), August 24-31.

Ouafo, A. (2013). Learning a language for integration: the value of Luxembourgish. Paper presented at the Conference on Language and super-diversity, which was took place from June 4-7 at the University of Jyväskylä, Finland

Ouafo, A. (2013). Reconceptualising the learning of an additional language: The Luxembourgish case. Paper presented at the 9th International Symposium on Bilingualism, June 10-13, Singapore

Ouafo, A. (2013). Language affordances for Luxembourgish as an additional language. Paper presented at the 9th International Symposium on Bilingualism, June 10-13, Singapore

Song, J. (2013). Language learning and social media: 6 key dialogues (LS6). Presentation of project outcomes at the YOURopa conference in London (UK), June 26-27

Song, J. (2013). Web strategy: magic formula for success. Contribution at the web2LLp final conference "Using Social Media to Foster Collaborative Work in Multi-disciplinary Cross Border Projects" . Coventry (UK), November 7-8.

Wirtz, D., Max Ch.(2013). Constructing the participation framework during story reading activities in the multicultural preschool in Luxembourg. Paper presented at the 15th Biennial EARLI Conference "Responsible teaching and sustainable learning " in Munich (Ger), August 24-31.

Wirtz, D., Max, Ch. (2013). Constructing the participation framework during story reading activities in the multicultural preschool in Luxembourg. Paper presented at the *ECER Emerging Researcher's Conference – Istanbul/Turkey 9-10 September 2013*.

Articles in journals (not peer-reviewed)

Song, J., Max, Ch. (2013). European Project Language learning and social media: 6 key dialogues (LS6). *Focus Europe magazine*, Special edition (September 2013).

ACTIVITIES

Invited lectures

Dr. Adu Vaidyanathan, CEO and Chief Software Architect, PatnMarks, (June, 21): Proactive crowd-sourcing for Location Based Services, Weicker Building.

Dr. Manuela Jungmann, University of Sussex, UK (July, 22,) Spatial-temporal play effects in a tangible game with an F-formation of multiple players, Weicker Building.

Invited plenary talk

MAX, Ch. (2013). Learning 2.0 in Higher Education. What pathways should academia take now?. Invited key note speech at the e-learning@UniGR Conference, Luxembourg, February 7, 2013.

Habilitation Thesis work

BREUGNOT, Jacqueline (2013). Communiquer à l'Eurocorps - Enquête de terrain en milieu militaire international. Université de Koblenz –Landau , FB 6: Kultur- und Sozialwissenschaften. November 2013. Membre du jury: Prof. Dr. Charles Max

PHD Thesis work

ALBANESE Claudia: A Cross-linguistic Analysis of the Composite Structure of Language in French and Chinese Repair Sequences – Supervision: Prof. Dr. Charles Max

BLANCA Philippe: Multimodal scholarly publishing: The scientific journal case. Towards scientific multimodal journals – Supervision: Prof. Dr. Charles Max

FELTES Florian: The impact of social media on the leadership strategies of Generation Y: Challenges and potential – Supervision: Prof. Dr. Charles Max

KARPENKO Tetyana: The collaborative construction of news media: Care-giving, knowledge building and early education by web 2.0 tools - Supervision: Prof. Dr. Charles Max

OIUAF O Adrienne: *Interacting in Luxembourgish as an Additional language: An analysis of adult immigrants' L2 as related to their social activities.* – Supervision: Prof. Dr. Charles Max

WIRTZ Delia: Participation and Language Learning in the multilingual pre-primary classroom - Supervision: Prof. Dr. Charles Max

DANILOVA Sviatlana: Conversational agents. – Supervision: Prof. Dr. Christoph Schommer, Co-supervision: Prof. Dr. Charles Max

MA Thesis-work

Aktas, Isilay (07/2013): Using activity theory for understanding challenges in Time Banking: a case study on the Turkish Time Bank initiative. (Advisor(s): Ch. Max)

Ceylan, Zeynep (07/2013): The standardisation of multinational advertising and the role of creative directors. (Advisor: Ch. Max)

Coman, Eugen (07/2013): The co-construction of a graphical product and the interaction between the designer and the client. (Advisor: Ch. Max)

Wylecial, Katarzyna (07/2013): Knowledge sharing in an online community: The Case of Inter Nation Luxembourg. (Advisor(s): Ch. Max)

Simpson, Anne (07/2013): The construction of a participation framework between Chinese and Non Chinese players in the Mahjong Game. (Advisor(s): Ch. Max)

Hack, Nathalie (02/2013):La motivation à apprendre dans les cours de langues étrangère. (Advisor:Ch. Max)

Kogan, Polina (02/2013):Ethnography of a portable online community : the case of an anonymous Japanese forum board. (Advisor:Ch. Max)

Moreau, Richard (02/2013):Pre-teenagers' co-construction of participation while playing a video game. (Advisor:Ch. Max)

Nadimi Amiri, Shaghayegh (02/2013):Learning through embodiment in playing board games. (Advisor: Ch. Max)

Shmakava Schneider, Iryna (02/2013):The achievement of Intersubjectivity in the Multicommunicating Mode. (Advisors: G. Ziegler, Ch. Max)

Sismanidou, Triantafyllia (02/2013): European Union Citizenship and Primary Education, a feasible vision or an illusion ? (Advisors: G. Ziegler, Ch. Max)

Sousa Da Costa, Mike (02/2013):Die Rolle der Interaktion im Zweitspracherwerb. (Advisors: G. Ziegler, Ch. Max)

Sprinterioi Petraru, Simina (02/2013) :A Multimodal Analysis of Mediated Interaction in Business Presentation. (Advisor: Ch. Max)

Vijiic, Ancuta (02/2013): Les gestes de l'enseignant et le modèle "IRF" de l'apprentissage : une micro-analyse dans une classe en langue seconde. (Advisors: G. Ziegler, Ch. Max)

STAFF IN 2013 (in alphabetical order)

Name: **Claudia ALBANESE**

Position: Doctoral researcher

Interests: Conversation Analysis, talk-in-interaction, discourse practices, digital media, gestures and gesture studies, language acquisition, socio-linguistics, computational linguistics, applied linguistics, multimodality, social semiotics, speech recognition, speech synthesis.

Name: **Philippe BLANCA**

Position: Assistant, Doctoral researcher

Interests: Processes of knowledge development in higher education, modalities of scientific publishing, multimodal analysis, interculturality and multilingualism

Name: **Florian FELTES**

Position: Doctoral researcher

Interests: Web 2.0, corporate culture, entrepreneurship 2.0, generation Y,

Name: **Nathalie HACK**

Position: Scientific collaborator

Interests: tablet computers, social media,

Name: **Manuela JUNGSMANN**

Position: Post doctoral researcher

Interests: HCI, ubiquitous computing, computer-mediated human-human interaction, social interaction, research into cognitive processes, visual ethnography, media

Name: **Tetyana KARPENKO**

Position: Doctoral researcher

Interests: language learning, social media, tele-communication,

Name: **Charles MAX**

Position: Professor for “learning with media”

Interests: research on human activity; learning within and across communities; living and working in socio-digital activity systems, interactions within multi-device environments and through increasingly smart technologies; cultural and creative expressions through distributed digital production facilities.

Name: **Adrienne OUAFO**

Position: Doctoral researcher

Interests: Interaction, third language acquisition, Luxembourgish, intercultural communication, competences for integration.

Name: **Ju-Youn SONG**

Position: Scientific collaborator

Interests: social media, corporate culture, interaction

Name: **Delia WIRTZ**

Position: Doctoral researcher

Interests: Collaborative learning process, play, language learning and social media