

9th PDRnet Research Symposium

Antwerp, Belgium

March 2 – 4, 2020



Programme



Schedule

Monday 02-03	19.00	Informal dinner @ Backyard
Tuesday 03-03	09.15 – 09.30	Welcome
	09.30 – 10.15	Presentation by Alena Seredko
	10.15 – 11.00	Presentation by Jennifer Göhringer
	11.00 – 11.15	Coffee break
	11.15 – 12.00	Presentation by Julian Decius
	12.00 – 12.45	Presentation by Mariana Orozco
	12.45 – 13.45	Lunch
	13.45 – 14.30	Presentation by Bianca Steffen
	14.30 – 15.15	Presentation by Tamara Vanesse Leiß
	15.15 – 15.30	Coffee break
	15.30 – 16.15	Presentation by Sophia Gentner & Stefanie Zutavern
	19.00	Tour @ Seef Brewery
	20.00	Informal dinner @ Seef Brewery
Wednesday 04-03	09.30 – 11.00	Presentation by Svenja Böhn, Maximilian Krötz, Anke Braunstein & Viola Deutscher
	11.00 – 11.15	Coffee break
	11.15 – 12.00	Presentation by Christian Schadt & Julia Warwas
	12.00 – 12.45	Presentation by Sabrina Ludwig
	12.45 – 13.45	Lunch
	13.45 – 14.30	Closing remarks
	19.00	Informal dinner (recommendation provided)

Contact information

If you have any questions, do not hesitate to send an e-mail to: david.gijbels@uantwerpen.be
David ensures to regularly check his inbox before and during the symposium.

Locations

Conference venue

Klooster van de Grauwzusters
Room S.004
Lange Sint-Annastraat 7
2000, Antwerp

All presentations, lunches and coffee breaks will take place at this location.

You will receive a personalised WIFI-code along with your name badge to ensure you have Internet access.

Backyard (Restaurant Monday)

Grote Markt 52
2000, Antwerp
<http://www.backyard.be/menu>

Seef Brewery (Tour & Restaurant Tuesday)

Indiëstraat 21
2000, Antwerp
<https://seef.be/restaurant/#menu>

De Groot Witte Arend (Restaurant Wednesday - recommendation)

Reyndersstraat 18
2000, Antwerp
<https://www.degrootewittearend.be/menu>

Participants

Svenja	Boehn	University of Mannheim
Anke	Braunstein	University of Mannheim
Boukje	Compen	University of Antwerp
Samanta	Crans	University of Maastricht
Julian	Decius	University of Paderborn
Viola	Deutscher	University of Mannheim
Stefanie	Findeisen	University of Konstanz
Sophia	Gentner	University of Mannheim
David	Gijbels	University of Antwerp
Jennifer	Göhringer	University of Koblenz-Landau
Michael	Goller	University of Bamberg
Christian	Harteis	University of Paderborn
Helen	Jossberger	University of Regensburg
Kristina	Kögler	University of Hohenheim
Maximilian	Kroetz	University of Mannheim
Eva	Kyndt	University of Antwerp
Tamara Vanessa	Leiß	University of Mannheim
Lieke	Lochten	University of Antwerp
Sabrina	Ludwig	University of Mannheim
Christian	Mayer	University of Mannheim
Markus	Nivala	University of Gothenburg
Mariana	Orozco	University of Antwerp
Tuire	Palonen	University of Turku
Isabel	Raemdonck	Université catholique de Louvain
Andreas	Rausch	University of Mannheim
Steffi	Sassenus	University of Antwerp
Christian	Schadt	University of Göttingen
Juergen	Seifried	University of Mannheim
Alena	Seredko	University of Gothenburg
Bianca	Steffen	University of Paderborn
Josef	Strassen	University of Koblenz-Landau
Piet	Van den Bossche	University of Antwerp
Sara	Van Waes	University of Antwerp
Sofie	Vermeiren	University of Antwerp
Julia	Warwas	University of Göttingen
Stefanie	Zutavern	University of Mannheim

Abstracts

Tuesday 09.30 – 10.15 Alena Seredko

Identity and community in knowledge seeking and sharing. A case study of Stack Overflow Q&A website.

Professional development is an important part of lifelong learning that has moved to the online environment including Q&A websites. In the computer programming domain, the Stack Overflow (SO) Q&A website is used to solve questions, improve skills and competences. While learning is stated as an official goal of users' participation in SO, it is under-researched as an incentive for knowledge seeking and sharing behaviour. The proposed research aims to take the situated learning perspective and explore the interconnections between the individual's identity as a learner moving from the role of a novice to the one of an expert and the community of which he/she is a member. The research questions that will guide the dissertation are (1) how SO users communicate their identities as learners and as experts; (2) what personal and community aspects may correlate with the development of these identities; (3) how the perception of oneself as a learner influences the attitude towards and behaviour within the SO community. The suggested methods for initial data collection are netnography and interviews with SO users. The research may shed light on users' decision-making process within the SO community and inform practitioners about possible ways to support users' participation. As the research is in its early conceptual phase, I would like to take a chance and discuss possible research design options.

Tuesday 10.15 – 11.00 Jennifer Göhringer

The role of (interpersonal) emotion regulation in parents-teacher talks

In the last years, there is a growing field of research on the counseling competences of teachers. But most of the conceptualizations of counseling competences seem to focus on cognitive processes and skills (e.g. Rambow & Bromme, 2000). However, like Baumert and Kunters (2011) action competence model shows for teaching, professional knowledge and skills are just one of four components of professional competence besides beliefs, motivation and self-regulation. This could be also true for counseling competences. Research on parents-teacher talks shows, that some of these talks seem to be highly emotional and challenging for teachers (Gartmeier, 2018; Balsler, 1993). This suggests that in regard of parents-teacher talks self-regulation, and more precise emotion regulation, could be an important success factor in counseling and other parents-teacher talks. Emotion regulation can be understood as attempts to influence one's own (intrinsic emotion regulation) and others' (extrinsic emotion regulation) experience and expression of emotions (Gross, 2015) and is thought to be important in the professional development of (therapeutic) counselors (Prihidko & Swank, 2018). Currently there is little research on emotions and emotion regulation in parents-teacher talks, so it could be a promising and interesting field of research in respect to

professionalization. The idea of this session is to present my qualitative and quantitative approaches to research emotions and emotion regulation in teachers as a professional competence for parents-teacher talks and to discuss further directions of my research.

Tuesday 11.15 – 12.00 Julian Decius

Investigating the hen-egg problem: A cross-lagged panel approach to informal workplace learning and working conditions

Workplace Learning (IWL) is becoming increasingly important in a rapidly changing world of work and accounts for a large proportion of all vocational learning (Cerasoli et al., 2018; Decius, Schaper, & Seifert, 2019; Tannenbaum et al., 2010). The role of work design in relation to IWL has also been the subject of increasing discussion in research (Noe, Clarke & Klein, 2014; Parker, 2017). The central work design components in this context are job resources (job autonomy or job control) and job demands (cp. Cerasoli et al., 2018; Kyndt and Baert, 2013). Resources and demands were almost always assumed to be antecedents of IWL (cp. 'active learning hypothesis' from the Demand Control Support model by Karasek and Theorell, 1990), although there are nearly no longitudinal studies that can provide causal indications. However, the 'active shaper hypothesis' – proposed by De Lange et al. (2010) and little researched so far – states that through active engagement in learning, employees can transform their job themselves, e.g. by trying to make their job more interesting and challenging (cf. job crafting concept, Wrzesniewski & Dutton, 2001). In our study, we assume that the widespread assumption 'demands/resources -> IWL' ('active learning hypothesis') receives stronger evidence than 'IWL -> demands/resources' ('active shaper hypothesis'). Surprisingly, results from our cross-lagged-panel SEM analysis with a time lag of 1.5 years between the two time points – using data from blue-collar workers in small and medium-sized enterprises – rather support the 'active shaper hypothesis'. Possible reasons and implications for research and practice are discussed.

Tuesday 12.00 – 12.45 Mariana Orozco

Integrative Learning of Theory & Practice. An Epistemological Perspective in the Context of Chemical Process Technology.

The 'Integrative Learning of Theory and Practice' (ILTP) project consisted of three studies about what 'integrative learning' means and how it proceeds. The aim was to contribute to resolving an omission problem preventing further pedagogical advancements in professional learning. First, a literature review focused on the epistemological roots of the problem and offered a rationale for adopting a stance that is appropriate for generating new knowledge on integration. This refers to Brandom's inferentialism, and consists of a non-dualistic view on theory and practice that does not abandon their distinction at the analytical level. Subsequently, two qualitative empirical investigations (45 participants in total) sought to advance new insights into integrative learning, in the context of alternating school-based and work-based learning in the field of chemical processing technology (CPT). The first empirical study concentrated on the epistemological beliefs of the micro-level actors (i.e. the students and their close instructors) and on the conceptualisation of the ILTP construct (in

terms of process and outcome dimensions), according to a grounded theory approach. The results showed that these actors often hold a sophisticated and networked view on various forms of knowing that connect to each other through collaborative cognitive activities. Moreover, distinctive perspectives on integration appeared to co-exist. The second empirical study relied on a longitudinal design over a one-year learning programme. For this, a novel operationalisation of the inferentialist framework was conducted. The results of a content-conversational analysis portrayed the theory-practice integration as a process of progressive social reasoning with an increase in the actors' responsiveness to theoretical and to practical reasons. This is to claim that integrated learning takes place in discursive reasoning and that it results in growing mastery of concepts. The implications concern a contribution to underpinning pedagogical advancements in professional learning, and to scientific advancement in the area of education, training and professional development.

Tuesday 13.45 – 14.30 Bianca Steffen

The Influence of Mental Simulation on Intuitive Acting

The acquisition of knowledge by specific experiences and techniques of workplace learning is not completely explained (Billett, 2012). Harteis (2017) describes intuition as one (of three) quality of knowledge that constructs expertise. Intuitive action is defined by the lack of conscious effort and reflection (Dreyfus, 2004). Intuition enables experts to distinguish structures and patterns by small and opaque differences which helps them acting fast and successful (Dreyfus, 2004). Mental simulation is one factor that supports the development of intuition (Harteis, 2017). It is unclear how exactly intuition is learned and developed. This project aims to answering the following question: Which influence does mental simulation have on intuition? Workshops for teachers on classroom management in autumn 2019 are used to set up a control-group-design. The test group is shown a video of a classroom situation in which the teachers have to make intuitive decisions about what might happen next and how they would prevent disturbances. Then the members of all groups are shown the video to test their pattern recognition and invention of novelties. The data collected could then reveal how intuitive and how successful teachers act. Workshops for teachers on classroom management are used for data collection in fall 2019. The teachers are shown a video of a classroom situation in which they have to make intuitive decisions about what might happen next and how they would prevent disturbances. This presentation, therefore, gives first insights in data analysis.

Tuesday 14.30 – 15.15 Tamara Vanessa Leiß

Perceived Usefulness of Electronic Performance Support Systems (EPSS) for Workplace Learning in Office Work

Professional learning becomes more personalized and informal especially for knowledge workers because formal training has become less effective (Littlejohn & Margaryan, 2014). Due to fast development cycles it can be difficult to keep formal training content up-to-date. Furthermore, the transfer of formally acquired knowledge to one's workplace is difficult, too (Chang, 2004; Nguyen,

2009; Nguyen & Klein, 2008). In order to integrate opportunities to learn into the workplace, Electronic Performance Support Systems (EPSS) are applied in many companies. EPSS “provide the right information to the right user at the right time” (Noe, 2017, p. 95). Although EPSS are used in companies since the 1990s, their effectiveness and potential benefits have been scarcely assessed empirically (Gal, Meishar-tal, Non, Ben-Basat, & Paikin, 2017; Mao, 2004). This holds especially for their potential to foster learning (Gal & Nachmias, 2011). This research gap is addressed in a series of empirical studies in cooperation with a large IT company. In a first questionnaire study, the influence of task characteristics, tool characteristics and user characteristics on the perceived usefulness of EPSS and the perceived learning is investigated. The present contribution provides an overview. A further study aims at analysing processes of tool use, emotions and learning in the workplace by means of work diaries. The present contribution provides an overview of the research questions, research design, variables of interest and the instruments to measure them.

Tuesday 15.30 – 16.15 Sophia Gentner & Stefanie Zutavern

What if I leave? – Perspectives on knowledge sharing

Capturing work-related knowledge becomes a critical issue, when employees leave their current position. To prevent a loss of knowledge, several studies propose initiatives for knowledge sharing (e.g. Borges, 2013; Edú-Valsania et al., 2016). However, only a few studies consider the perspective of the affected personnel (e.g. McQuade et al., 2007). Against this background, our study starts with examining instruments that are offered for corporate knowledge management (RQ1). Subsequently, these instruments’ suitability for the long-term securing of knowledge transfer will be questioned critically from the perspective of the persons involved (RQ2). To assess the status quo (RQ1), we conduct guideline-based interviews with representatives of a medium-sized IT service provider, which are entrusted with knowledge management. Information for the evaluation of the status quo (RQ2) will be obtained through interviews with team leaders and employees who are leaving their current position soon. Conversations with the company representatives reveal that sharing knowledge via available IT tools is associated with a number of challenges. In addition, there is no defined procedure for passing on knowledge. Interviews with team leaders and leaving employees are planned to start in January 2020, so that further results can be expected by the meeting in March. Through the systematic evaluation of corporate knowledge management tools, critical knowledge resources can be identified and secured. This may facilitate the familiarization of junior employees with future tasks and support them in coping with the new job duties.

Wednesday 09.30 – 11.00 Svenja Böhn, Maximilian Krötz, Anke Braunstein & Viola Deutscher

Dropout from initial vocational training – reasons and perspectives

Focus 1: Dropout from initial vocational training – a meta-synthesis of reasons from the apprentice's point of view

One major challenge for Vocational education and training (VET) is the relatively high number of premature terminations of contract, which is not just a threat to the German VET system – with a

constant level of more than 20 % (Report on Vocational Education and Training 2018) – but has become an internationally arising problem on a European scale (CEDEFOP 2016). It is our aim to identify central cross-study and cross-sector reasons for dropout in VET from the apprentice's perspective by systematically reviewing and meta-synthesizing the state of research. Dropout reasons are categorized within a 3-p model (Tynjälä 2013), differentiating input, process and context factors on a school and company level. A systematic review and meta-synthesis of findings is conducted with the aim to identify those dropout reasons that were analyzed within former qualitative and/or quantitative research. The analysis traces back to 66 studies (qualitative: 8, quantitative: 58) from 14 countries. An overview of those variables that were either only part of qualitative or quantitative, respectively both methodological approaches is generated. In sum, 79 different reasons for premature termination of contract are extracted. A large number of variables is related to unchangeable individual (45 %) or context factors (30 %), while only little effort is dedicated so far to input and process factors of training that would allow for a targeted prevention of dropouts.

Focus 2: Do differences in quality perception matter?

The dual system of vocational education and training (VET) and its quality currently receive broad scientific attention due to high dropout rates and political efforts to increase participation in the system (Le Mouillour 2018). However, it is still controversial how and from which perception quality should be measured and how training quality affects dropout. Empirical studies mostly target quality perceptions by trainees or by trainers separately. The extent to which output factors like dropout-rates are influenced by varying perceptions of quality between both concerned parties is previously unobserved. The object of this study is to present a novel bilateral approach to training quality. Therefore, the effects of deviations in the perception of quality between trainees and trainers (incongruences) from the same company on dropout intention are examined. For this purpose, an online survey involving 311 commercial trainees and training officers from 30 companies was conducted. A framework model of workplace learning (Tynjälä 2013) and a respective short questionnaire "VET-LQI" (Böhn & Deutscher, submitted) served as a research basis. Responses from trainees were matched to their trainers in order to determine possible deviations for every item and scale. Subsequently, 15 input- and process-quality factors of divergence could be used as independent variables in multiple regression analyses. The results show that differences in perception of quality not only have a significant effect on dropout intentions, but also explain dropout intentions better than the conventional method of mere quality perceptions by trainees ($R^2 = .422 > .358$).

Wednesday 11.15 – 12.00 Christian Schadt & Julia Warwas

Professional communication about teaching as a tool for teachers' professional development – a systematic literature review

Since it facilitates job-related learning (e.g. Kanning & Staufenbiel 2012), professional communication among those involved in joint work processes is often studied in occupational and organizational sciences. This line of research focuses mainly on in-company interaction of professionals. Even

though reviews on teacher collaboration (e.g. Vangrieken et al. 2017) call for detailed investigations of collaborative micro-processes, empirical studies on communication about teaching methods and materials make up a comparably small field of educational research. Within this field, we find several studies that underline the importance of communication among teachers as an opportunity to construct teaching-related knowledge (e.g. Ohlsson 2013, Kvam 2018), nevertheless, there seems to be little consensus on what exactly constitutes professional communication about teaching and how it stimulates teachers' professional development. Therefore, a PhD project will address this research gap with a mix of different methodological approaches and a special focus on how professional communication relates to instructional planning activities, like selecting/designing instructional materials. The project's first objective is to derive descriptive categories of professional communication about teaching from a systematic literature review. The review focuses on theoretical underpinnings and observational measures in extant studies on professional communication among teachers as well as indicators of the participants' professional development. The proposed presentation at the PDR conference aims to set out the procedure, criteria and preliminary findings of the literature review, which is currently conducted. Additionally, it will put up first ideas for subsequent comparative or intervention studies within the PHD project for discussion and constructive feedback.

Wednesday 12.00 – 12.45 Sabrina Ludwig

Log File Analysis of Computer-Based Learning and Problem Solving in Vocational Education and Training

Within the last two decades, technology-based learning as well as computer-based assessment (CBA) have been shaped by a paradigm shift from simple practice to open-ended learning environments (OELE) in order to foster higher order thinking skills (HOTS) such as problem-solving (Funke et al. 2018; Greiff et al., 2013). Computer-based learning and assessment allow for the analysis of learning processes and problem-solving processes based on log files. Moreover, real-time analyses of log data enable instant feedback to enhance learning, for instance by intelligent tutoring systems (ITS). However, process-mining techniques are needed for valid inferences from computer-generated log files on cognitive, non-cognitive and metacognitive processes to identify problem-solving patterns and strategies. A distinction is made between the two log file analysis methods: the data-driven and the theory-driven approach. The first paper of my dissertation, a narrative review, discusses several studies employing different approaches to log file analysis in the context of learning and assessment. The second paper will be based on a study on computer-based problem solving in the field of office work (n=778 VET students; Rausch et al., 2016). A data-driven approach (k-means method) will be used to identify different groups of problem solvers. In a new project, "Problem-Solving Analytics in Office Simulations (PSA-Sim)", which started in 2019 and is funded by the German Ministry, theory-driven approaches will be applied to identify problem-solving strategies and typical errors in a computer-based office simulation. In my presentation, I will shortly explain different approaches, then focus on the application of k-means and finally give an outlook on our new project.