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To future partners of the ELVET Digital Project

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Project proposal: ELVET 4.0 – Expansive and Experiential Learning in Vocational Education and Training for a digitalized world of work

Hamburg | Behörde für Wissenschaft, Forschung und Gleichstellung

Background:

The world of work, society and private life have undergone tremendous change as a result of the emergence of the internet as a one-size-for-all medium. Other than former media with a restricted scope of use separate from that of other media, the internet integrates nowadays an unlimited variety of applications in private, professional and social life. The digitalization of information and communication processes has considerable influence on social relations, individual socialization, markets, politics and society. In professional life work processes have been digitalized in order to increase efficiency (eg. realtime information, networking, reduction of labour and travel cost, online shops, customer collaboration). This influences not only the required competencies, but also corporate governance and organization, employee well-being and health, unintended externalities and customer relations (see right side of the mind map; Schweiger, W./Beck, K. 2010; Katzer 2016; Kielholz 2008; Hoffmann 2017).

As a result of these changes, people are not only recipients any more but rather actors who determine themselves the individual practical value. Each person has to develop his or her more or less conscious *individual digital appliance concept (*see top of the left side of the mind map). This comprises the choice of software, apps considered as useful, the way of making use of the offered features and the means to aquire the necessary skills. This is a prerequisite in order to take advantage of the opportunities of the digital world. Otherwise, individuals risk to become victim of numerous threats (fraud, fake news, data loss, loss of

data privacy, time waste, stress, job loss as a result of missing qualification etc.). In addition, the scope of action at the place of work is restricted by management decisions. Employees need to discover their creative leeway in order to adapt their workplace to their personal requirements and interests of relevant stakeholders. In addition, they have to prepare for future changes and uncertainties, otherwise they risk to have their back to the wall in case of imminent layoffs or to become stressed, unsatisfied or even ill.

Under these circumstances digital basic education (cf. Sen 2003) is an indispensable prerequisite to prepare VET students for their professional life and develop digital expertise for their respective professional field. Digital basic education not only consists of IT competencies, but also comprises

- the ability to shape the own career in a forward-looking way (cf. EU 2006);
- the ability to acquire the required skills and competences;
- creativity;
- the ability to cope with uncertainty and ambiguities (cf. Hays 2017);
- the ability to communicate and manage information efficiently with digital media (cf. Kielholz 2008);
- the ability to care for one's mental and physical health (cf. Katzer 2016) and
- the ability to act in a responsible and thoughtful way based on personal and common values (cf. Spiewak 2018).

(see left side of the mind map; cf. Hammermann 2016; Hays 2017; EU 2006, Bitkom 2018,3).

Therefore VET has to enable students

1. to describe and understand the digital infrastructure at the workplace including their relevance for work processes, stakeholders and externalities
2. to reflect and describe the own (digital) competence profile in a realistic way
3. to evaluate the present way of dealing with the digital infrastructure at their workplace and in private life, e g.
   - Do they use the full potential/synergies?
   - Does the digital infrastructure support or obstruct work processes and personal requirements?
   - Does digital infrastructure provide the necessary scope of action?
   - Do they protect their privacy and data in a satisfying way?
   - Are their alternative ways of using the digital infrastructure?
   - Are they well-prepared for expected future changes and uncertainties?
   - Do they take into account interests of internal and external stakeholders?
4. to identify present and future digital competency requirements
5. to identify individual threats and opportunities in the respective professional field with respect to personal objectives, preferences and talents
6. to identity measures and means (e.g. E-Learning-tools) to use opportunities and to meet present and future demands.

In order to foster the development of such digital basic education for the world of work, VET teachers need to develop adequate didactic concepts. These necessarily comprise a retrospective and forward-looking reflexive and analytic element in order to answer the above questions (cf. Tramm/Thole/Allgoewer 2017). In addition, they should make use of digital tools in a way that provides an additional value compared to non-digitalized learning settings (cf. Brevik 2015; Wittenberg 2017). This should make clear that E-Learning is *not the*

purpose but the medium of learning as the digital infrastructure at the workplace should also support the work process but not obstruct or exploit the user.

Theoretical and Didactic Concept: Expansive and Experiential Learning

The questions above follow the didactic concepts of *Expansive and Experiential Learning*.

Experiential Learning (Kolb 1984, https://www.learning-theories.com/experiential-learning-kolb.html) consists of describing, assessing and reflecting work-place experience in a systematic manner at college. Especially the analysis of challenging situations helps to identify strengths and weaknesses of the learner as well as causes for recurring conflicts. By doing so, they develop indispensable key competencies for lifelong learning such as analytical thinking, decision making, self reflection and conflict solving (cf. European Union 2006). In addition, it helps to develop the professional profile in a systematic manner and to identify individual goals for the personal development. It is a didactical concept to connect work-place learning with learning at college and therefore helps to close gaps between the education and employment system (cf. Thole 2014, 2015)

The idea of *Expansive Learning* (cf. Holzkamp 1995, Faulstich/Ludwig 2003, Engeström 1987, Billett/Somerville 2004; Fuller/Unwin 2003; Thole 2018) is to help students to overcome individual learning barriers (= Lernwiderstände). The aim is to turn their *defensive* way of learning (which consists of just meeting the demand of the curriculum) into an <u>expansive</u> way of learning that takes into account the individual preferences, objectives and talents of the learner in order to enlarge their scopes of action. Within the project, *Experiential Learning* will be used to identify such barriers. There is empirical evidence that successful problem solving at the workplace requires social, personal and meta cognitive competencies and involves the personality of the jobholder (cf. Kleemann/Matuschek/Voss 1999; Dehnbostel 2005; European Parliament 2006). Coping with such challenges can boost learners' self-development (cf. concept of developmental tasks by Havighurst 1974).

Example of a lack of digital basic education that is likely to cause a disrupted career:

Jana is going to accomplish an initial VET training in retail soon. Her employer has offered her a position as a cashier. She is happy to have an employment and is about to accept the employment offer. Conclusion: Jana is not aware that cashiers are likely to be replaced by self-scanning checkouts. Therefore it is crucial to collect a broad variety of work experience in order to have better chances in the labour market. She needs reflective learning arrangements that help her to anticipate developments in her work environment. In addition, she needs support in order to negotiate with her employer about a more attractive job profile.

Example of a lack of digital basic education that is likely to cause a dropout:

Peter is just starting the second year of a VET training as a digital media designer. He still likes designing digital and printed media, but he feels isolated as he spends the whole day in front of his computer as all contacts with customers and providers are held by his supervisor. He tinkers with the idea of giving up the apprenticeship as he is completely frustrated. Conclusion: Peter is not aware that the digital designing is only part of a larger work process which systematically comprises negotiations with customers and providers. These negotiations are also part of the professional competence of a digital media designer. The division of work in his company is a learning barrier that needs to be overcome in order to develop his professional competencies and meet his interest to be in contact with other people.

The interest of the VET researcher team at Universität Hamburg

The didactic concept of

- retrospective reflection of the own biographical competence development,
- the prospective reflection of the future job demands and own aspirations as well as
- experienced conflicts between theory, experienced practice and own aspirations

has been applied very successfully in VET teacher education by Prof. Dr. Tade Tramm (Universität Hamburg) and collaborators for several years. Currently, it is tested in several other teacher education contexts (cf. Tramm/Thole/Allgoewer 2017; Universität Hamburg 2018).

The researcher team around Prof. Dr. Tramm would like to use the project to transfer this didactic concept to dual track VET training for retailers and vendors. Prof. Tade Tramm has been doing research on curriculum development for commercial occupations (such as retailers, vendors, office clerks, physician assistants) for nearly three decades. However, empirical case studies indicate that there is still too little room for individual career planning. So far, the fit between learners' prior conditions and workplace demands is not reflected in a systematic manner. Furthermore, conflicts and problems at the workplace as well as the learners' heterogeneity are rarely used as learning potential (cf. Thole 2017a, 2017b; Wirth 2013). On the whole, analytical, reflective and social competencies necessary for lifelong learning are not developed in a systematic manner. By fostering digital basic education with the *Experiential und Expansive Learning concept*, these desiderata can be met.

Project goals, research questions and intellectual outputs

The project aims to

1. intensify cooperation between VET-researchers and VET-practitioners in the Baltic Sea Region (Germany, Denmark, Finland, Norway);
2. apply for ERASMUS+ funds (Strategic Partnerships) for a *Design Based Research (DBR)* project aiming to improve VET practice, didactics and theory for the systematic development of lifelong digital basic education;
3. design didactic concepts to foster digital basic education as well as basic competencies for lifelong learning in VET programmes. Therefore research will be carried out in close cooperation with a national provider of VET;
4. Prevent dropouts in VET programmes, promote a smooth transition of VET students from initial VET to adult VET education and to prevent disrupted careers in the future;
5. Use and train the expertise of VET-teachers to foster systematically digital basic education as well as competencies for lifelong learning.

Research questions (to be discussed)

Apart from the overall project aims, participants will be free to design their national contribution to the project taking into account the ERASMUS+ guidelines. However, while VET programmes, national context (cf. Nord-VET 2017) and professional fields may differ, all sub-projects should follow the idea of *Expansive and Experiential learning* and common research questions which could be the following:

Research Questions

1. What kinds of digital competencies and experience do students already have? *(individual reflective analysis)*

2. *What digital competencies are required at the workplace and in the professional environment? (existing expertise/expert interviews, group discussion in class)*
3. *What difficulties/conflicts do students experience with the digital infrastructure at their workplace? (individual reflective analysis, group discussion in class)*
4. To what extent do students already meet the demands? To what extent do they understand their relevance for work processes and stakeholders? *(assessment of mentors/trainers)*
5. What future changes do students expect for their profession regarding work processes, technical change, competition, qualifications required etc.? *(individual reflective analysis)*
Are these expectations realistic in respect to existing evidence/research about the profession? *(assessment of mentors/trainers)*
6. What aspirations and goals do students have for their professional development? *(individual reflective analysis)*
7. Which competencies have to be developed to improve digital basic education with respect to present and future demands and uncertainties and personal aspirations? *(co-reflection by mentors and students)*
8. What didactical (E-Learning) concepts fit these requirements and the aspects on the left hand of the mindmap*?(co-reflection by mentors and students)*
9. *What were the learning outcomes? What improvements have been achieved with regard to the identified requirements (question 8)? (co-reflection by mentors and students)*
10. *To what extent has the concept of Expansive and Experiential Learning proven to be useful? What modifications should be made from the learners'/mentors'/workplace trainers' point of view? (co-evaluation by mentors and students)?*

Following the DBR-logic, the research process will be integrated in the didactic development. This means, that most research documents giving answers to the above questions will be produced within the reflective learning process. Therefore all learning processes will start with a retrospective and forward-looking reflective analysis in order to identify the digital competencies to be fostered. This common concept is necessary to make research results comparable, but is also the core of the idea of *Experiential Learning*. The E-Learning concepts chosen to address the requirements will be chosen freely. Here mentors' and students' creativity will be open-ended.

Researchers will analyze, summarize and compare the results (differences and commonalities between countries and professional fields) as well as assess their relevance for theory building and VET practise and provide reports which are part of the intellectual output of the project.

The intellectual output produced within the ERASMUS project may be (to be discussed):

1. *Report about the*
    - *Local context in participating countries*
    - *Existing digital competencies of the students in their respective professional field*
    - *personal aspirations of the students*
    - *difficulties/conflicts experienced at the workplace*

- *expected future demands and uncertainties*
- *resulting competence requirements to be trained.*
2. *Description and evaluation of E-Learning concepts applied*
3. *Manual for students and mentors with tools and examples*
4. *Scientific publication with theory-based presentation of empirical results and consequences for VET didactics for the digital age.*

Participants

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- Häme University of Applied Science HAMK Hämeenlinna, Finland, Anne-Maria Korhonen
- Moeve aps Aarhus, Denmark, Regina Lamscheck-Nielsen
- Oslo Metropolitain University, Norway
- Four local VET providers in the participating countries to be announced

Literature

Brevik, Birger; Holtet, Jon Ingar (2015). Developing learning tasks in a technological learning workshop with LEGO mindstorms and additive manufacturing as the main pedagogical tools. Leite, Laurinda (Red.), ATEE annual conference 2014 - Transitions in teacher education and Professional identities. Proceedings. Artikkel. s. 235-244. ATEE - Association for Teacher Education in Europe.

BITKOM (2018) Bundesverband Informationswirtschaft, Telekommunikation und Neue Medien e.V.: Digitale Bildung – Handlungsempfehlungen für den Bildungsstandort Deutschland, Positionspapier. Berlin. Online: https://www.bitkom.org/Bitkom/Publikationen/Digitale-Bildung-Handlungsempfehlungen-fuer-den-Bildungsstandort-Deutschland-2.html

Dehnbostel, P. (2005): Konstitution reflexiven Handelns im arbeitsbezogenen Lernen, Report, 1, Online: https://www.die-bonn.de/doks/dehnbostel0501.pdf

Engeström, Yrjö (1987): Learning by expanding: an activity-theoretical approach to developmental research. Helsinki.

Havighurst, R. J. (1974): Developmental tasks and education. 3rd ed., newly revised. New York.

Hoffmann, D. et al. (2017) (Ed.): Mediatisierung und Mediensozialisation

Holzkamp, Klaus (1995): Lernen. Subjektwissenschaftliche Grundlegung. Frankfurt/Main.

Billett, Stephen/ Somerville, Margaret (2004): Transformations at work: Identity and learning. In: Studies in Continuing Education, 2, 209-326.

European Parliament (2006): Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. Online: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN

Faulstich, Peter; Ludwig, Joachim (Hrsg.) (2004): Expansives Lernen. Baltmannsweiler.

Fuller, Alison/ Unwin, Lorna (2003): Learning as apprentices in the contemporary UK workplace: creating and managing expansive and restrictive participation, Journal of Education and Work, 16, 4, 408-426.

Hammermann, A. (2016): Qualifikationsbedarf und Qualifizierung. Anforderungen im Zeichen der Digitalisierung. Institut der dt. Wirtschaft Köln. Online: https://wm.baden-wuerttemberg.de/fileadmin/redaktion/m-wm/intern/Dateien_Downloads/Arbeit/Arbeitsmarktpolitik_Arbeitsschutz/A2_Hammermann_2016-09-19_stuttgart_pp_digitalisiserung_versendet_-_Kopie.pdf

Hays plc. (2019) (Ed.): HR-Report 2017. Schwerpunkt Kompetenzen für eine digitale Welt. Online: https://www.hays.de/personaldienstleistung-aktuell/studie/hr-report-2017

Katzer, Catarina (2016); Cyberpsychologie. Leben im Netz. Wie das Internet uns verändert, dtv. München

Kielholz, Annette (2008): Online-Kommunikation. Die Psychologie der neuen Medien für die Berufspraxis. Springer. Heidelberg.

Kleemann, F./ Matuschek, I. /Voss, G. (1999): Zur Subjektivierung von Arbeit. Wissenschaftszentrum Berlin für Sozialforschung. Online: http://www.ssoar.info/ssoar/handle/document/11666

Kolb, David A. (1984): Experiential Learning: Experience as the Source of Learning and Development. Prentice-Hall, Inc., Englewood Cliffs, N.J.

Nord-VET (Ed.) (2017): The future of vocational education - learning from the nordic countries, Roskilde University, Online: www.nord-vet.dk (26.08.2017).

Schweiger, W./ Beck, K. (Ed.): Handbuch der Online-Kommunikation. VS Verlag. Wiesbaden

Sen, Amartya (2003): The importance of basic education. Conference speech to commenwealth education conference Edinburg. In: The Guardian. 28 Oct 2003 Online: https://www.globalpolicy.org/component/content/article/211-development/44402-the-importance-of-basic-education.html

Spiewak, M. (2018): Fake News. Nachhilfe in Skepsis. In: Zeit, 28.02.2018. Online: https://www.zeit.de/2018/10/fake-news-schule-fakten-unterricht-unterscheidung

Thole, Christiane (2014): Das didaktische Potenzial von Arbeitsplatzanalysen als Instrument zur Reflexion betriebspraktischer Erfahrungen in der Ausbildungsvorbereitung – theoretische Überlegungen und empirische Befunde. Research Report. Universität Hamburg Online: https://www.ew.uni-hamburg.de/ueber-die-fakultaet/personen/thole/files2/forschungsbericht.pdf

Thole, Christiane (2015): Berufliche Identität. Erfahrungsbasiertes Lernen nach Kolb mit der Arbeitsplatzanalyse ELKE. Ein Blog für Lehrende und Studierende in der beruflichen Bildung: Online: http://blogs.epb.uni-hamburg.de/berufliche-identitaet/

Thole, Christiane (2017a): Identitätsarbeit in einer ökonomisch geprägten Arbeitswelt - eine curriculare Konkretisierung einer Reflexiven Wirtschaftspädagogik am Beispiel der dualen Ausbildung im Einzelhandel, Online: http://www.bwpat.de/ausgabe/spezial14/thole (26.08.2017).

Thole, Christiane (2017b): Individualized professionalism as a happy medium between man-power entrepreneurship and standardized occupationalism in the reflexive modern world, In: Social Dimension and Participation in Vocational Education and Training, Rostocker Schriften der Berufspädagogik, 112-118. Online: https://www.ibp.uni-rostock.de/fileadmin/uni-rostock/Alle_PHF/IBP/Sonstiges/VET-Conference_2017/Proceeding_onlineversion_final_01.pdf

Thole, Christiane (2018): Individualisierte Professionalisierung als berufliche Identitätsarbeit in der modernen Arbeitswelt: Berufliche Curricula vom Subjektstandpunkt neu denken. In: Tramm, T.; Casper, M.; Schlömer, T. (Ed.): Didaktik der beruflichen Bildung Selbstverständnis, Zukunftsperspektiven und Innovationsschwerpunkte. Bertelsmann.

Tramm, Tade (2011): Theorie-Praxis-Verknüpfung in der beruflichen Ausbildung. In: Jürgen Hogeforster (Ed.): Bildungspolitische Strategien heute und morgen rund um das Mare Balti-cum. Hamburg.

Tramm, Tade (2010): Von der Geschäftsprozess- zur Lernprozessperspektive - Das Zusam-menspiel von Prozessorientierung, systemischer Perspektive und prozessübergreifender Kompetenzentwicklung im lernfeldstrukturierten Berufsschulunterricht. In: Horst Pongratz, Tade Tramm und Karl Wilbers (Ed.): Prozessorientierte Wirtschaftsdidaktik und Einsatz von ERP-Systemen im kaufmännischen Unterricht. Aachen: Shaker Verlag (Texte zur Wirt-schaftspädagogik und Personalentwicklung, 4), 77–101.

Tramm, T./Fischer, M./Naeve-Stoss, N.(Hrsg.) (2014): Berufs- und Wirtschaftspädagogik onli-ne, Heft 26: Berufliche Bildung aus der Perspektive des lernenden Subjekts, Online: http://www.bwpat.de/ausgabe/26 (26.08.2017).

Tramm, T./Thole, C./Allgoewer, E. (2017): Wirtschaftswissenschaften als Gegenstand ökono-mischer Bildung – Reflexionen zum Verhältnis einer Fachdidaktik zu ihrem Fach. In: Lehber-ger, R. (2017) (Ed.): Kooperationen in der Lehrerbildung. Books on Demand. Norderstedt

Universität Hamburg – Kompetenzzentrum nachhaltige Entwicklung (2018): Nachhaltigkeit in der Lehre – Perspektiven der Universität Hamburg. Online: https://www.nachhaltige.uni-hamburg.de/downloads/2018/broschuere-nachhaltigkeit-in-der-lehre.pdf

Wirth, K. (2013): Verknüpfung schulischen und betrieblichen Lernens und Lehrens - Erfah-rungen, Einstellungen und Erwartungen der Akteure dualer Ausbildung. In: Bsp.@ Spezial 6 - Hochschultage Berufliche Bildung 2013. Einzelbeitrag aus WS 08. 1-19. Online: http://www.bwpat.de/ht2013/eb/wirth_ws08-ht2013.pdf (26.08.2017)

Wittenberg, Astrid (2017): „Träges Wissen" vermeiden unter Zuhilfenahme von *Cognitive Apprenticeship* – Eine Unterrichtssequenz im Ausbildungsberuf der kaufmännischen Medi-enassistenten. Assignment in the Master Ed. Studies for Vocational Education. Universität Hamburg