



OWL - Open Web-based Learning Space For Professional Development of Adult Educators

Carmen Biel¹, Tim Scholze², Sabine Schöb³, Kolja Debus⁴

Abstract

This paper reports on the developments of an online portal (carried out by the project OWL and funded by the Federal Ministry of Education and Research) that aims at providing a new approach for professional development of the large target group of adult educators via an innovative web-based learning portal.

Keywords: New Learning Technologies, Situative learning, Self Organised Learning, Professionalisation of Adult Educators, Validation of Competence Development

1. Initial state of teachers in adult education in Germany

At least since Hattie's report everyone interested in education is aware that teachers play an important role in the learning process and have huge impact on how successful students learn [1]. Although Hattie took a deeper look into studies within school settings (but also see [2]), his findings may also be important for adult education. High quality adult education starts with the design of learning arrangements, which is usually done by the teacher. For this design, pedagogical competence is needed. Well-designed learning arrangements are a sign of quality which is a central demand of learners.

1.1 Need for competence development of adult educators

In many European Union member states, adult education staff is very heterogeneous in regard to their professional and educational background. In Germany, there are approximately 530.000 people that engage as lecturers, course instructors, counsellors or trainers in all areas of activity of further and adult education [3]. There is no certification and formal qualification needed to engage as an adult educator. Only a minority of adult educators therefore hold an initial pedagogical qualification. Most adult educators rely on personal teaching experience and field knowledge when designing their learning arrangements, and often lack a sound pedagogically founded knowledge or instructional approaches and methods.

So far, it is not surprising that 47% of adult education providers state that there is a need for training of their teachers in the area of „successful teaching“ [4].

There are hardly any overarching offers for a theoretically founded and contextualised qualification (including continuous professional development (CPD)) for adult educators that address professional action in pedagogical situations. However, as adult educators often work in precarious job conditions, a fully-fledged qualification is in most cases not an option for professionalization. They respond to a higher degree to self-study materials and guidebooks than to seminars that require attendance [5]. Therefore, it seems reasonable to consider online solutions for professional development of adult educators to offer an anytime and anywhere solution.

In 2015, a scientifically founded and application-oriented concept for an Open Web-based Learning system (OWL) was developed to enable AE professionals to acquire pedagogical competencies in order to professionalize their pedagogical actions.

The concept was based on a requirement analysis with more than 1.300 representatives of the target group from Germany, Austria and Switzerland [6]. All conceptualisations as well as pilot materials were discussed and evaluated in expert workshops, focus groups and interviews with representatives of the target group and providers of train-the-trainer seminars.

¹ German Institute for Adult Education, Germany

² German Institute for Adult Education, Germany

³ University of Tübingen, Germany

⁴ German Institute for Adult Education



1.2 Professional development

Following the international discourse, professional teaching needs competencies that comprise – along with self-competence – cognitive prerequisites that allow for successful and responsible problem solving in a variety of situations [7].

Most of existing competence models and the related studies (e.g., [8]) consider the specific demands of a teaching activity in AE insufficiently, since they relate to general competence areas while not addressing the context and circumstances of adult educators adequately.

As an alternative model, scientists from the German Institute for Adult Education (DIE e.V.) have developed a conceptual framework for the identification of adult education competencies that aims to close this gap. Their framework is oriented on recent discussions on competence development in school teacher education [9] and additionally takes occupational conditions of adult educators into account. The DIE-framework considers not only categories of knowledge of (pedagogical) content, general pedagogy [10] as well as organizational and counselling [9] but also relevant dimensions for adult educators' specific domain knowledge [11].

Considering all this, it seems necessary for the professionalization of adult educators to address questions on situational response, audience related design of teaching, and learning processes as these are the core activities of pedagogical staff. The OWL project therefore focuses on pedagogical-psychological knowledge and skills as central competencies to the conceptualization, implementation, delivery and evaluation of teaching and learning in AE. An online learning solution for CPD of adult educators should therefore address both the acquisition of pedagogical-psychological competence and offer opportunities to apply and act on the acquired knowledge in concrete acting situations.

2. Innovative learning arrangements to bridge the gap

As described above the main challenge of a CPD system for adult educators is the necessity of a direct transfer of knowledge into action [5]. Therefore the learning arrangements in OWL are designed along a twofold strategy – along competence dimensions (based on learning goals) and a situated learning approach (along action goals).

2.1 Theoretical Basis and Technical Design of the OWL Learning Space

The learning space will provide broad information for the target group and allow for supra-regional/multidisciplinary community building. It will comprehend situated learning as well as competence oriented arrangements that fit the needs of the target group to master their daily pedagogical challenges, both with the perspective to validate informally acquired competencies.

The needs for actions will be represented by pedagogically challenging action fields, consisting of 25 “critical teaching situations” which were identified with representatives of the target group (N=398) during the first project year. They were further refined and converted to different contexts, typical for adult education settings. In a next step, “learning fields” describe these situations and provide reference systems that allow a localisation of learning objectives and learning outcomes on competence levels related to these situations and fields of action. The learners are guided on “learning paths” which may cross the learning fields and only offer those learning objects necessary to tackle a specific situation.

The arrangements comprise small units called “learning objects” that are connected to one or more pedagogical competence dimensions. A learning object consists of input material and task/exercise. They are arranged in a way to provide a path through the challenging situation offering required knowledge and skills.

All learning objects comprise at least one task that prompts the learner to apply the acquired knowledge and skills. Furthermore, learning objects will cover different competence levels in regard to the German Qualification Framework. These systems will be interconnected with a web-based competence management system that also works with reference systems and that relates to a competence model [12]. Therefore, the project offers the perspective for a future validation of pedagogical competencies

All progress and interaction will be tracked by the system and combined with other information (e.g. interests, professional context, learning styles, etc.) in order to provide recommendations for next learning steps.

From the technical point of view, the OWL learning space interconnects existing information and learning technologies (e.g., CMS, LMS, ePortfolio) to make use of state-of-the-art technology and up-to-date learning content. The learning arrangements are designed by applying instructional principles of the cognitive flexibility theory [13] and the cognitive theory of multimedia learning [14]. Furthermore,



the system is designed to exchange with other existing learning platforms to allow the uptake of “external” contents and the delivery of learning units to other open systems.

2.2 Access to the OWL space

A learning path consists of several learning objects that are arranged in the contexts of different competence dimensions, different competence levels (between which assessments will be placed that allow the recognition of competence gain) as well as in thematic approaches. A learning object is always clearly identifiable as it always belongs to at least one competence dimension (e.g., dealing with diversity), one level (low, medium, high) and one specific topic (e.g., learning theories). Furthermore, this logic provides the opportunity that a learning object is reusable in different learning paths. There are three different approaches to enter the OWL space.

Access 1 represents the access to different learning objects that belong to the same competence dimension, access 2 provides the sequence through a learning path that deals with one specific question within a challenging situation, and access 3 opens to learning objects that belong to the same topic (see figure 1).

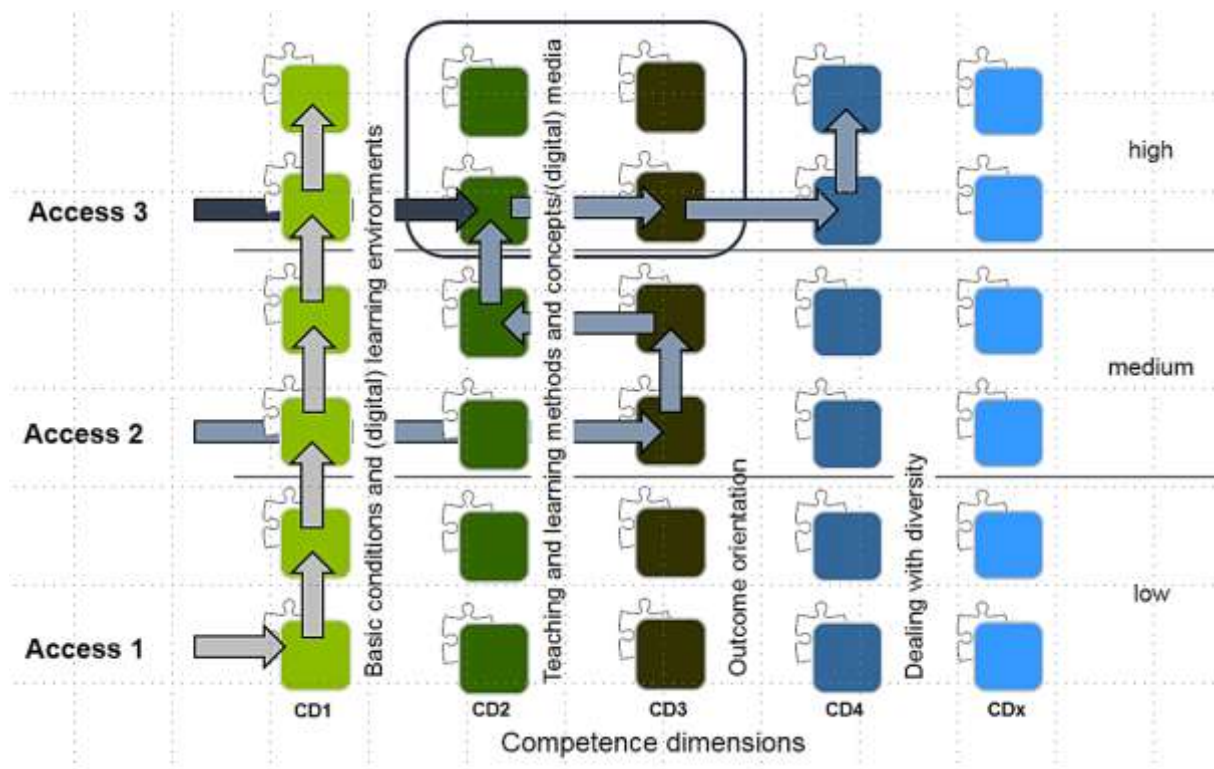


Figure 1. Different access points to the OWL learning arrangements

Although there is a pre-structure, the learner will still be able to decide which of the objects he/she would like to work on next. He/she will also be able to leave learning objects untouched within a learning path. This approach has three reasons: first, we would like to offer self-determination and autonomy of the learning process to keep the learner motivated and to support the willingness to process the material deeply [15]. Second, the possibility to leave learning objects untouched might reduce the extraneous cognitive load of the learner [16]. Third, we will track multiple data of the learners including interaction data with the learning objects to make use of learning analytics to improve our developments and to provide recommendations for further learning [17].

3. Conclusion

Focus of this paper was to report on the developments of an online portal for the CPD of adult educators. In this paper, we reviewed the current situation regarding pedagogical expertise of adult educators in Germany and argued that there is the need for pedagogical competence development. Furthermore, we provided insight into the current developmental state of the innovative portal as well as potentials.



References

- [1] Hattie, J. "Visible learning: a synthesis of over 800 meta-analyses relating to achievement." New York, Routledge, 2009.
- [2] Loviscach, J. & Schulmeister, R. "Errors in John Hattie's "Visible Learning", <https://docs.google.com/document/d/1hUbe8GYPFToduveTVD1laNXn-2lwixsWRNkc62I5LYg/>, Hamburg, 2014
- [3] Martin, A. & Langemeyer, I. "Demografie, sozioökonomischer Status und Stand der Professionalisierung – das Personal in der Weiterbildung im Vergleich", Deutsches Institut für Erwachsenenbildung (Ed.), Trends der Weiterbildung: DIE-Trendanalyse 2014, Bielefeld, Bertelsmann, 2013, 43–68.
- [4] Bundesinstitut für Berufsbildung & Deutsches Institut für Erwachsenenbildung (Ed.). "wbmonitor 2008: Personalentwicklung und wirtschaftliches Klima bei Weiterbildungsanbietern", http://wbmonitor.bibb.de/downloads/Ergebnisse_20090226.pdf, Bonn, 2008
- [5] Schrader, J. "Fortbildung von Lehrenden der Erwachsenenbildung: Notwendig? Sinnvoll? Möglich?: Bedarf und Angebote im Überblick" J. Schrader, R. Hohmann, & S. Hartz (Eds.), Mediengestützte Fallarbeit. Konzepte, Erfahrungen und Befunde zur Kompetenzentwicklung von Erwachsenenbildnern, Bielefeld, Bertelsmann, 2010, 25–68
- [6] Schöb, S., Sahlender, M., Brandt, P., Fischer, M., & Wintermann, O. "Information und Vernetzung – Bedarfe und Erwartungen von Lehrkräften an online-gestützte Fortbildungsangebote: Eine Umfrage der Universität Tübingen im Auftrag der Bertelsmann Stiftung und des Deutschen Instituts für Erwachsenenbildung.", <http://www.die-bonn.de/doks/2015-erwachsenenbildner-01.pdf>, Bonn, 2015
- [7] Weinert, F. E. "Leistungsmessungen in Schulen", Weinheim, Beltz-Verlag, 2001
- [8] Bastian, H. "Kursleiterprofile und Angebotsqualität", Bad Heilbrunn, Klinkhardt, 1997
- [9] Baumert, J. & Kunter, M. "Stichwort: Professionelle Kompetenz von Lehrkräften", Zeitschrift für Erziehungswissenschaft, 9(4), 2006, 469–520.
- [10] Shulmann, L. S. "Knowledge and Teaching: Foundations of the New Reform", Harvard Educational Review, 57(1), 1987, 1–21
- [11] Schrader, J. & Goeze, A. "Professionelle Kompetenzen von Lehrkräfte in der Erwachsenen- und Weiterbildung – Ein Rahmenmodell für Forschung, Rekrutierung und Fortbildung", in preparation.
- [12] Lencer, S. & Strauch, A. "Das GRETA-Kompetenzmodell für Lehrende in der Erwachsenen- und Weiterbildung", www.die-bonn.de/doks/2016-erwachsenenbildung-02.pdf, 2016
- [13] Spiro, R. J., Collins, B. P., Thota, J. J., & Feltovich, P. J. "Cognitive flexibility theory: Hypermedia for complex learning, adaptive knowledge application, and experience acceleration", Educational Technology 42(5), 2003, 5-11
- [14] Mayer, R. E. "Multimedia Learning", Cambridge, University Press, 2001
- [15] Deci, E. L. & Ryan, R. M. "Die Selbstbestimmungstheorie der Motivation und ihre Bedeutung für die Pädagogik", Zeitschrift für Pädagogik, 39(2), 1993, 223–238
- [16] Sweller, J. "Implications of cognitive load theory for multimedia learning", R. E. Mayer (Ed.), The Cambridge handbook of multimedia learning, New York, Cambridge University Press, 2005, 19–30
- [17] Siemens, G. "What are Learning Analytics?" <http://www.elearnspace.org/blog/2010/08/25/what-are-learning-analytics/>, 2010