

Eportfolio in Teacher Education and Academic Further Education: a new learning journey experience at the University of Konstanz, Germany

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Abstract

Nowadays more than ever private and professional life is shaped by rapid changes in society and developments in technology which have been accelerated even further by the COVID-19 pandemic. It is at these times, therefore, that the ability to learn is essential to become and stay employable. In addition to university education, the acquisition of this skill is increasingly being taken into account in further education. Alongside classroom teaching, digitalisation is gaining in importance in this context too. One tool that supports self-regulated learning while promoting digital literacy is eportfolio. At the University of Konstanz, eportfolio was introduced in two areas with two different objectives: (1) In teacher education (B.Ed.), eportfolio is compulsory and aims to support students in becoming competent teachers by documenting and questioning their professional development. (2) In the Bachelor of further education “Motor-Neurological Rehabilitation” (B.Sc.) participants can voluntarily use this tool to collect, reflect on and showcase professional skills and competences along the course of study. Students with difficulties in self-regulation and in meeting organisational requirements will be able to receive the support they need. Based on these case studies this paper describes the experienced challenges and potentials by adopting eportfolio in lifelong learning context. It highlights the worthwhile efforts as well as the profitable values delivering an appreciable impact on the future of new learning strategies and mechanisms.

1. Introduction

Education enjoys a high-quality status in Germany, offering opportunities to develop personal, social and professional skills. However, if we compare this to international standards, the participation in further vocational and academic courses was, until recently, relatively low (Wissenschaftsrat, 2019). The importance and necessity of lifelong learning or continuing education training are growing in today's German education policy debate. The State invests considerable sums in the German education system (High-Tech-Forum, 2020). Factors such as demographic development, shortage of skilled professionals, and an increasingly dynamic way of learning are significant driving forces. Nevertheless, we see fundamental structural shift in key industries driven by technological, social and geopolitical changes, as well as by unpredictable crisis situations such as the current COVID19 pandemic which is causing growing precariousness of employment. Hence, the German higher educational system is undergoing wide changes especially in the field of digitalisation

(Bündnis für Lebenslanges Lernen, 2020). In this paper we will present firstly the current developments regarding lifelong learning in Germany, we will then discuss the role eportfolio can play in this context by presenting two case studies from the University of Konstanz, and finally, we will describe the challenges we encountered while establishing eportfolio and its potential for the future.

2. Further academic education and Lifelong Learning in Germany

Nowadays the Federal Ministry of Education and Research and the federal States promote the educational opportunities aiming at achieving a higher professionalisation and higher participation of the population in all form of learnings.

The resolution of the Standing Conference of the Ministers of Education and Cultural Affairs (KMK, 2009) contributes to a wider permeability in the education system and allows higher education admission even for professionally qualified applicants without a school-based higher education entrance qualification.

Academic further education is a university's core task¹, but often legal and financial framework conditions are not uniformly available. The discussion on goals and fields of action is currently more topical than ever.

In this context “learning how to learn” is a key competence (European Union, 2018), and self-regulated learning (Zimmerman, 2000) – in the first phase of academic training and even beyond – is essential. The ability to reflect, and specifically to self-reflect, is a prerequisite to achieve this objective. A valid instrument that can help learners to regulate their personal learning process is the eportfolio (McAllister et al., 2008). Barrett (2011, Why E-Portfolios?) defines eportfolio as

“An electronic collection of evidence that shows your learning journey over time. Portfolios can relate to specific academic fields or your lifelong learning. Evidence may include writing samples, photos, videos, research projects, observations by mentors and peers, and/or reflective thinking. The key aspect of an e-portfolio is your reflection on the evidence, such as why it was chosen and what you learned from the process of developing your e-portfolio”

So, the eportfolio as a tool can help students setting their goals individually, documenting their process by artefacts and notes, and reflecting on the progress, not only chronologically. If necessary, eportfolio allows students to adapt the learning strategies in a purposeful and flexible way. It also enables the users to collect, select and present outcomes of informal as well as formal learning activities.

¹ The Higher Education Framework Act (Hochschulrahmengesetz, 1999, § 2) defines continuing academic education, alongside research and teaching, as one of the main tasks of the universities.

Even in teacher education life-long learning is a relevant component for their professional development. In German teacher education eportfolio programmes are mostly used during practical training. Considering that teachers, during their career, have to deal both with fast changing generational and social requirements as well as with new teaching and learning methods, eportfolio – both as a concept and a tool – decisively contributes to the development of the capability of being a “reflective practitioner” (Schön, 1983) which is particularly relevant to this profession.

3. Using eportfolio at the University of Konstanz: two case studies

At the University of Konstanz eportfolio is still relatively uncommon. Two fields where it gains more importance are teacher education and academic further education. In the following, we will describe the use of the eportfolio in these two fields in detail.

3.1 Eportfolio in teacher education (Orientierungspraktikum)

Introduction

Since 2015² in the German State of Baden-Württemberg portfolio is an obligatory element in university’s teacher training study and, later on, in teaching practice. In a portfolio, students can document and reflect their professional development during all practical trainings (RahmenVO-KM, 2015) in order to improve one’s pedagogical actions out of the combination of theoretical knowledge and practical behaviour. Furthermore, the portfolio clearly highlights the relevance of the transition between the different training phases in the whole teacher education process.

At the University of Konstanz students have to keep an eportfolio in [Mahara](#) during their first three weeks of internship (Orientierungspraktikum) of their bachelor’s programme. The internship is the first significant opportunity for students to experience school from the perspective of an aspiring teacher. The reflective tasks are worked out within the eportfolio during this process to help the students in taking a conscious look at their future career and addressing the question about their study choice and their suitability for the job early on.

Implementation

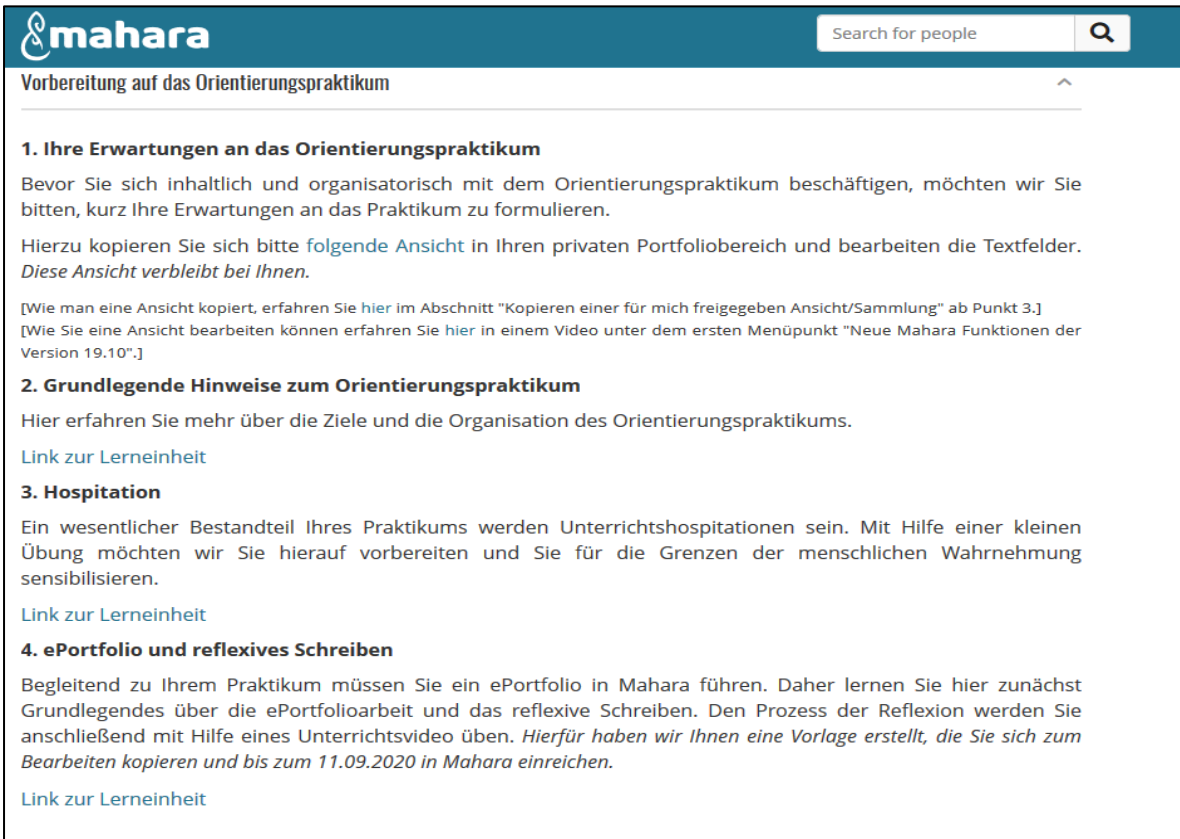
For the first time in the history of the establishment, due to the contact restrictions caused by the COVID19 pandemic, in spring 2020 the University of Konstanz had to shift in a very short time from face-to-face lectures to e-learning. The fully digital implementation, by consequence, affected the work with eportfolio in teaching education during the internship and within the modular supporting courses.

The eportfolio supporting team, therefore, was forced to redesign the way of conducting portfolio work in a Mahara group completely online: an agile and significantly easy-to-follow approach was needed. Students were given practical guidance and easy access to work on the

² In Germany we have three phases in teacher education. At first you have to study five years at a university (1st phase). Afterwards you have to complete one to one and a half years of teaching practice depending on the school type you will teach at (2nd phase). Only after graduating from teaching practice you are a fully qualified teacher. The 3rd phase is the further education while you are teaching.

assigned tasks, enabling them to be more flexible to accomplish the reflective process in a distance learning situation.

All relevant organisational information and all tasks (that have to be finished ahead of the internship) can be found on the Mahara group homepage. It is a repository for those tasks, that provide students with basic knowledge about observation and reflective writing. Every task is linked to a page or collection with further details and/or informative screencasts, and some of the units include exercises as well. For example, within the “Unit No.4: Eportfolio and Reflective Writing” (Figure 1) the students are invited to first deal with theoretical input and, afterwards, to practice the knowledge acquired while watching a sequence of recorded lessons and, finally, to write down their reflections by guiding questions. Templates for written reflection, which students have to copy and submit them in Mahara as a proof of the accomplished self-report for the topic, are also provided.



The screenshot shows the Mahara group homepage. At the top, there is a blue header with the Mahara logo on the left and a search bar on the right containing the text "Search for people" and a magnifying glass icon. Below the header, the main content area is titled "Vorbereitung auf das Orientierungspraktikum". It contains four numbered sections:

- 1. Ihre Erwartungen an das Orientierungspraktikum**
Bevor Sie sich inhaltlich und organisatorisch mit dem Orientierungspraktikum beschäftigen, möchten wir Sie bitten, kurz Ihre Erwartungen an das Praktikum zu formulieren.
Hierzu kopieren Sie sich bitte [folgende Ansicht](#) in Ihren privaten Portfoliobereich und bearbeiten die Textfelder. *Diese Ansicht verbleibt bei Ihnen.*
[Wie man eine Ansicht kopiert, erfahren Sie [hier](#) im Abschnitt "Kopieren einer für mich freigegeben Ansicht/Sammlung" ab Punkt 3.]
[Wie Sie eine Ansicht bearbeiten können erfahren Sie [hier](#) in einem Video unter dem ersten Menüpunkt "Neue Mahara Funktionen der Version 19.10".]
- 2. Grundlegende Hinweise zum Orientierungspraktikum**
Hier erfahren Sie mehr über die Ziele und die Organisation des Orientierungspraktikums.
[Link zur Lerneinheit](#)
- 3. Hospitation**
Ein wesentlicher Bestandteil Ihres Praktikums werden Unterrichtshospitationen sein. Mit Hilfe einer kleinen Übung möchten wir Sie hierauf vorbereiten und Sie für die Grenzen der menschlichen Wahrnehmung sensibilisieren.
[Link zur Lerneinheit](#)
- 4. ePortfolio und reflexives Schreiben**
Begleitend zu Ihrem Praktikum müssen Sie ein ePortfolio in Mahara führen. Daher lernen Sie hier zunächst Grundlegendes über die ePortfolioarbeit und das reflexive Schreiben. Den Prozess der Reflexion werden Sie anschließend mit Hilfe eines Unterrichtsvideo üben. *Hierfür haben wir Ihnen eine Vorlage erstellt, die Sie sich zum Bearbeiten kopieren und bis zum 11.09.2020 in Mahara einreichen.*
[Link zur Lerneinheit](#)

Figure 1: Learning units provided at the group homepage

Unlike in the past, when we would have been able to run a guided tour in the classroom with the students at the beginning of their internship, in these exceptional circumstances we had to choose a different approach. We stepped up the online support, set links to the specific topics and invited open discussions in the forum. This worked quite well.

While being in school, the students had to work on reflective tasks, which were provided as templates at the group section “Pages and Collection” (Figure 2) and submit them as a collection.

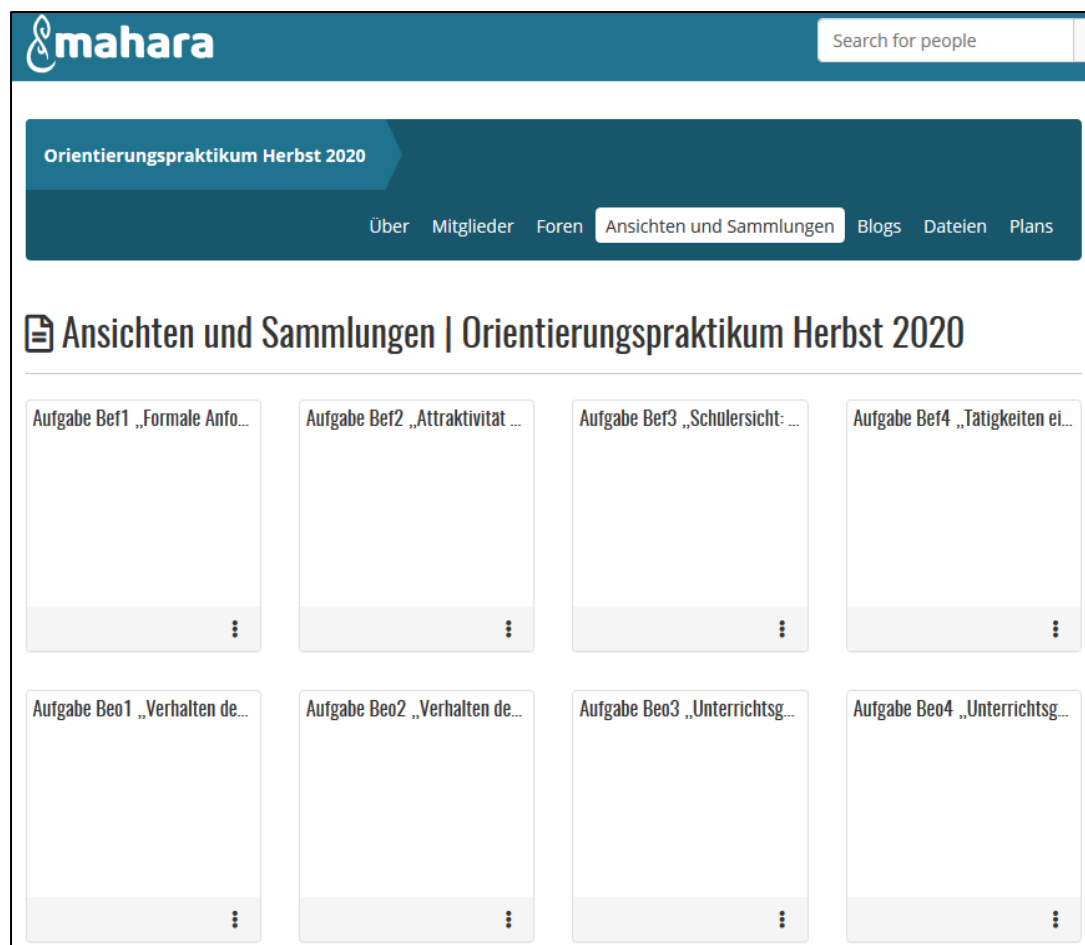


Figure 2: Templates for reflective tasks. Each page contains one reflective task.

During the self-regulated learning and writing process the students are usually supported by the lecturers, whom they can always ask for feedback.

After completing the internship, students can discuss their experiences with peer students and share different perspectives with regards to their own personal development. In the approach adopted each student has:

- to identify two fields of action, in which s/he has evolved, and underpin them with practical examples by creating a page and ask some peers for feedback;
- to identify two additional fields of action, in which the student himself/herself still recognises a need for development, and formulate open questions based on practical examples. These questions shall be discussed within a forum in Mahara;
- to summarise which effects the discussion had on the student with regards to the further professional development in a prospective way.

The use of eportfolio during the internship offers many benefits. The students can share their eportfolios not only with their lecturers, but also with their training teachers at the same time. This allows them to get a variety of feedback to learn from. Furthermore, the eportfolio has to be continued during the following internships. Because of the use of Mahara the students have their eportfolio in one space. This makes it very easy for them to carry on with their professional development.

3.2. Eportfolio in academic further education by the example of the part-time Bachelor “Motor-Neurological Rehabilitation” (B.Sc.): a trial project.

Introduction

The part-time [Bachelor of continuing education “Motor-Neurological Rehabilitation” \(B.Sc.\)](#) offered by the [Academy of Advanced Studies](#) (AfWW) at the University of Konstanz addresses examined professionals with a completed vocational training and profound professional subject-related experience in the physiotherapy and ergotherapy. Those therapists who want to update their knowledge with scientific skills on the basis of a theory-practice interlocking, can attend the modular blended-learning study programme developed in a close cooperation between the Department of Sport Science of the University of Konstanz and the [Kliniken Schmieder](#), Clinic for Neurology and Neurological Rehabilitation.

The AfWW became familiar with the concept of portfolio work within the framework of the project [EPASS](#) (eportfolio as a key system for lifelong learning) sponsored by the Ministry of Science, Research and Culture of Baden-Württemberg’s programme ["Teacher Education in Baden-Württemberg"](#). Moreover, as a member of the [Baden-Württemberg Portfolio-Network](#)³, the Academy recognises that some basic principles of the portfolio approach (even if primarily directed to the school sector) can be transferred to adult education. The first key aspect in this context is the “learner centric approach”, enabling participants to experience the process of collecting, reflecting on and showcasing skills and competences on a voluntary basis. The second relevant aspect for this target group is a practical one: we intend to provide support especially to those students who have difficulties with certain processes such as self-organisation, administration and archiving of collected or self-designed documents, meeting deadlines, and collaborative work for group assessments. Thus, we decided to introduce the open source eportfolio-tool Mahara – integrating it in the LMS Moodle system – as a trial project for the study programme starting on fall term 2020.

Implementation

Working with Mahara is not anchored in the curriculum and it is not granted. Therefore, it remains for students voluntary and, at the moment, merely a recommendation. Nevertheless, we believe that the target group will benefit from the tool once they recognise the potential of some functionalities.

In order to foster a high acceptance and provide strong motivation of usage, the eportfolio as a tool and as a concept will be presented from the user’s perspective. To counteract K.O. criteria such as “time-consuming”, “not meaningful”, “arduous and labour-intense” or “additional burden”, the design of a portfolio environment will intentionally be kept “low-threshold”, that means: as tight as necessary and as open as possible. In our view, clear structure, easy manageability, goals’ transparency, and recognisable advantages are promising criteria for acceptance by users and successful transfer from theory to practice.

The portfolio concept and its advantages will be presented to the students in an introductory lecture before the official programme starts. The students will be provided with practical information to facilitate familiarity, user friendliness and a fast handling and adoption of the tool right from the start:

³ The Portfolio-Network is an informal network of universities and institutions, located in the state of Baden-Württemberg, aiming at developing a concept for digitation and reinforcing a better acceptance of portfolio within educational cross-phases.

- Video tutorials as “Quick-Start” to get accustomed with the Mahara environment
- “How to” as step-by-step instruction (summarised in a View-Collection in Mahara)
- Examples for templates
- FAQs (sampled in Moodle)
- Online support

Considering the programme structure, we suggest students use Mahara preferably for each module, and particularly during the two practical phases (two supervised internships lasting from one week, up to two weeks), which will normally be integrated in the final dissertation. However, we do not expect that every student will make use of it in every part of the programme.

The main functions below will particularly benefit students in their own learning processes, development and goals:

- **Collection & Organisation** - students collect "learning products" module by module and store them in Mahara's file repository, which can be structured by directories and subdirectories with less effort
- **Communication & Peer-Review** - students collect feedback from fellow students and benefit from a multi-perspective space (external perception)
- **Reflection** - a learning journal "blog" for each learning product that is stored leads to self-assessment of the acquired competencies. Moreover, allowing peers' external assessment before, during and after the creation of the learning products, creates valuable new insights
- **Selection** - students can select the products that best demonstrate the achievement of their learning objectives (for assessment and/or presentation purposes)

4. Conclusion

Challenges and conditions for success

The challenging tasks for successful lifelong learning with eportfolio are firstly of strategic nature (financial, human, and technical resources) such as the intensive support of both learners and lecturers at the very beginning, and secondly of conceptual nature, for example in regards to the opportunities of its application (Ziegelbauer et al. 2013).

A lack of digital competencies, whether by learners or by lecturers, obviously requires support (workshops, technical introduction) but this is not really the major difficulty. A positive mind-set and acceptance, shared by most users, are crucial and lead significantly to success (Shroff et al., 2011, Ziegelbauer, 2016). All efforts to promote the benefits of the portfolio concept are necessary and relevant. Clear specification on intention, purposes, meaningfulness and advantages are key determinants. In this case, objections concerning lack-of-time or disproportionate effort for supervision become superfluous within a rather short time.

Potential of eportfolio

Working with an eportfolio is an investment in people's potential. When well supported and thoughtfully structured, it enables the display of learners' potential alongside their own personal and professional curriculum. The ability to sample, (self-) reflect – in a constructive

critical manner – and engage, encourages the willingness to assume a new perspective: a determinant aspect in nowadays lifelong learning approach. This is precisely the particular strength of the portfolio. It leads away from conventional, selective forms of performance determination and offers a presentation of performance over a longer period consistently geared to the learners' competences (Häcker, 2007).

Without a doubt, eportfolio helps student teachers to gain a deeper understanding of the teaching contents and, therefore, to better perform in exams. Though, portfolio, with its various possibilities, is more than a measurement tool of achievement: it reflects one's "deep learning" in formal as well as in informal context. Additionally, it improves the self-marketing strategy of the users (digital career identity).

Considering that teachers in Germany are mainly civil servants, we are quite confident that eportfolio might have good chances to be introduced in teacher's in-service training too, and even more as an accompanying tool along teachers' career pathway. Surely, a legislative framework – which we are still waiting on – would facilitate and speed up implementation.

The clear trend about the role of modern learners shifting “from consumer to producer” and the changing of educational reform goals definitively encourage a wider acceptance of eportfolio in academic further education. We are conscious that Portfolio is not the perfect tool for everyone, but it is certainly a powerful one when wisely orchestrated.

References

- Barrett, H. (2011). *Balancing the Two Faces of E-Portfolios*.
<http://electronicportfolios.org/balance/Balancing2.htm> (Accessed 23 November 2020)
- Bündnis für Lebenslanges Lernen (2020). Gemeinsam. Für. Weiterbildung. Die Ziele des Bündnisses für Lebenslanges Lernen 2021-2025. https://km-bw.de/site/pbs-bw-km-root/get/documents_E-1422147974/KULTUS.Dachmandant/KULTUS/KM-Homepage/Pressemitteilungen/Pressemitteilungen%202020/B%C3%BCndnisurkunde.pdf
- European Union. (2018). *Council Recommendation of 22 May 2018 on key competences for lifelong learning*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2018.189.01.0001.01.ENG&toc=OJ%3AC%3A2018%3A189%3ATOC
- Häcker, T. (2007). *Portfolio: ein Entwicklungsinstrument für selbstbestimmtes Lernen. Eine explorative Studie zur Arbeit mit Portfolios in der Sekundarstufe I*. Hohengehren: Schneider Verlag.
- Hightech-Forum, (2020). *Impulspapier: Innovation und Qualifikation*, Veröffentlicht am: 15. Juli 2020. <https://www.hightech-forum.de/publication/innovation-und-qualifikation/>
- Hochschulrahmengesetz. (1999). <https://www.gesetze-im-internet.de/hrg/index.html>
- KMK [Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland]. (2009). *Hochschulzugang für beruflich qualifizierte Bewerber ohne schulische Hochschulzugangsberechtigung*. Beschluss der der Kultusministerkonferenz vom 06.03.2009.
https://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2009/2009_03_06-Hochschulzugang-erful-qualifizierte-Bewerber.pdf
- McAllister, L. M., Hallam, G.C. and Harper, W.E., (2008). The eportfolio as a tool for lifelong learning: Contextualising Australian practice. *Proceedings International Lifelong Learning Conference 2008*. Queensland: Yeppoon, 246-252.
- RahmenVO-KM (2015). Rechtsverordnung des Kultusministeriums über Rahmenvorgaben für die Umstellung der allgemein bildenden Lehramtsstudiengänge an den Pädagogischen Hochschulen, den Universitäten, den Kunst- und Musikhochschulen sowie der Hochschule für Jüdische Studien Heidelberg auf die gestufte Studiengangstruktur mit Bachelor- und Masterabschlüssen der Lehrkräfteausbildung in Baden-Württemberg (Rahmenvorgabenverordnung Lehramtsstudiengänge - RahmenVO-KM) Vom 27. April 2015. <http://www.landesrecht-bw.de/jportal/?quelle=jlink&query=LehrRahmenV+BW&psml=bsbawueprod.psml&max=tr ue>
- Schön, D.A. (1983). *The reflective practitioner. How Professionals think in Action*. New York: Basic Books.

Shroff, R.H., Deneen, C.C. & Ng, E.M.W. (2011). Analysis of the technology acceptance model in examining students' behavioural intention to use an e-portfolio system. *Australasian Journal of Educational Technology*, 27(4), 600-618. doi: 10.14742/ajet.940

Wissenschaftsrat (2019). *Empfehlungen zu hochschulischer Weiterbildung als Teil des lebenslangen Lernens (Drs. 7515-19)*. https://www.wissenschaftsrat.de/download/2019/0418-19.pdf?_blob=publicationFile&v=2

Ziegelbauer, S., Ziegelbauer, C., Limprecht, S. & Gläser-Zikuda, M. (2013). Bedingungen für gelingende Portfolioarbeit in der Lehrerbildung – empiriebasierte Entwicklung eines adaptiven Portfoliokonzepts. In Koch-Priewe, B. et al. (Eds.), *Portfolio in der LehrerInnenbildung. Konzepte und empirische Befunde* (112-121). Bad Heilbrunn: Klinkhardt.

Ziegelbauer, S. (2016). Akzeptanz als Bedingung einer erfolgreichen Implementation und Anwendung der pädagogisch-didaktischen Innovation Portfolio. In Ziegelbauer, S. et al. (Eds.), *Portfolio als Innovation in Schule, Hochschule und LehrerInnenbildung. Perspektiven aus Praxis, Forschung und Lehre* 73-86). Bad Heilbrunn: Klinkhardt.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In Boekaerts, M. et al. (Eds.), *Handbook of self-regulation* (13-39). Cambridge: Academic Press. doi: 10.1016/B978-012109890-2/50031-7