

# TRAINING THE MEDIA-EDUCATIONAL HABITUS: 21ST CENTURY SKILLS IN DIGITAL DIDACTIC SETTINGS IN TEACHER EDUCATION

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## Abstract

The educational policy demand for a reorientation of competencies towards more communication, future orientation, critical thinking, and collaboration - labeled "21st Century Skills" (Trilling & Fadel, 2012) – must have consequences for designing school and university teaching/learning situations. Previous university teacher education relied on individual work, individual examinations, the comprehension of existing positions, knowledge of tradition, and recognition and dominance of imparted content knowledge by teaching authorities. The central media of university teaching was printed matter. The pessimistic verdict of Clinton, Jenkins, and McWilliams from 2013 that we are training future teachers at universities "for an outdated world" has lost none of its relevance in Germany concerning media education and digital literacy. The media skepticism in teacher training and practical teaching in schools in Germany will be reflected in the first part of the talk. Therefore, in addition to subject-specific and curricular foundations and didactic design options, teachers need a peer-supported culture of meta-cognitive reflection that includes their expectations and beliefs in media. The second part of the talk presents a practice-relevant implementation in a cross-university, cross-state, and cross-subject didactic setting. It challenges and encourages students concerning their future didactic demands as teachers in producing a digital-online editable MOOC (Massive Open Online Course) as a peer-to-peer study offer.

**Keywords:** *Media-educational habitus, 21st Century Skills, digital didactic setting, teacher education, media skepticism.*

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## 1. Introduction

Today, reading is embedded in digital media offerings and devices. International performance studies for pupils not only show manifest gender-specific differences in the same age cohort. Above all, the socially determined educational gap is widening. Whether for socially responsible action in the pandemic, diversity and serious source selection when searching for information or reflected political opinion-forming: reading and media skills are cross-sectional or critical skills. Convergent media development (Jenkins, 2009), in particular, requires a broader, interdisciplinary promotion of digital use - in terms of technology and the use and evaluation of content. That applies to schools and universities.

The educational policy demands more communication, future orientation, critical thinking, and cooperation, which should have consequences for school and university teaching design. Universities are key players in improving the media skills of prospective teachers. However, the pessimistic assessment by Clinton, Jenkins, and McWilliams (2013, p. 9) has lost none of its relevance, especially in Germany and about media education and digital literacy - the education system is still "designed for an outdated world."

## 2. Media skepticism among German teachers

This complaint is rooted in the convictions of prospective student teachers (Petko, 2012; Admiraal et al., 2017). Studies conducted over several years have shown that prospective teachers at universities have already brought a profound media skepticism with them from their school biography (Schmid, Goertz, Radomski, Thom, & Behrens, 2017; Marci-Boehncke & Delere, 2018; Rath & Delere, 2020). This media skepticism is often reinforced in the humanities (Gretter & Yadav, 2018). The result is a rather anti-digital "media pedagogical habitus" (Friedrichs, 2015), which has been identified in

international studies on media education in Germany (Fraillon, Ainley, Schulz, Friedman, & Gebhardt, 2014; Fraillon, Ainley, Schulz, Friedman, & Duckworth, 2019). Despite the digital challenges of the coronavirus years, this finding has remained the same in the current PISA survey 2022 (cf. OECD, 2023a, 2023b). Although the coronavirus pandemic has forced digital teaching in the classroom, this practice has not been sustainable. With regard to other OECD countries, the willingness of German teachers to use digital media in the classroom is still well below the OECD average in 2022 (cf. Lewalter, Kastorff, & Moser, 2023, 268). Technical usage skills, the ability to see through economic interdependencies, and the ethical and political evaluation of media offerings overtax prospective teachers. Here, it becomes clear that only interdisciplinary, networked thinking and reflection can create security. These are to be conveyed didactically in the curriculum via an orientation toward 21st-century skills.

### **3. Shaping digital spaces together: MOOC**

Here, we present a didactic setting that specifically incorporates media education, curricular frameworks, inclusion, and future orientation into teacher training and challenges learners' metacognitive skills. The concept of our event was cross-university and cross-state. In addition, two subjects cooperated with a common theme: philosophy/ethics and the national language subject, here: German. Both subjects are curricularly responsible for teaching (digital) media skills, with different emphases. Therefore, student teachers at both universities should acquire digital media skills during their studies and learn how to pass them on to their future pupils. Students expect their training to have a connection to schools. In Germany, this teacher training takes place at universities and teacher training colleges, which offer subject-specific and subject-didactic as well as educational science and psychology-oriented courses. The seminar concept presented here is based, among other things, on the "21st Century Skills" (Trilling & Fadel, 2012), which demand overarching digital skills. Teachers should learn that subject-specific skills and life-world, social, and future-relevant skills must be promoted and didactically planned.

In addition, the joint work in the seminar can also be understood as at least a short-term Professional Learning Community (PLC) (Vescio & Adams, 2015), as teachers from the universities cooperate across university and subject boundaries "at eye level" with M.A. students from both locations to jointly create a platform for future student cohorts in the B.A. program. To this end, students at the Dortmund and Ludwigsburg universities developed digital learning units on school-relevant media education topics in cooperative PLCs. These are then available to other students in younger semesters as digital online MOOCs (Massive Open Online Courses) as peer-to-peer learning opportunities. In this way, both academic and media didactic skills are realized through content-related and methodological work and reflection requirements.

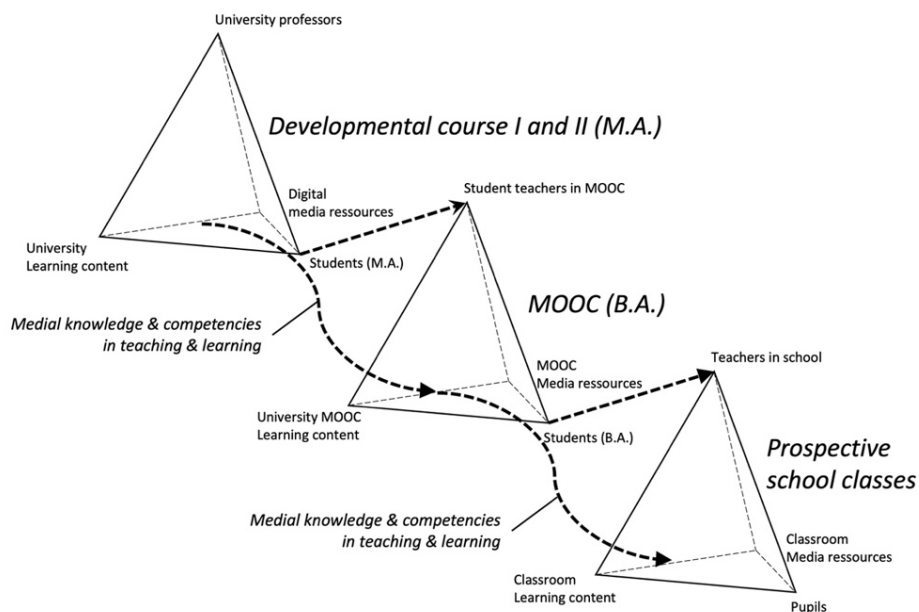
In the first round of seminars (developmental course I, summer term 2021), the students from both universities and we, as lecturers, met weekly in a digital room on the Moodle learning platform via Zoom access. The first step was to clarify relevant focal points from a student's perspective. Twelve core topics were profiled in joint work. The M.A. students then worked on the thematic units of the course digitally in groups (breakout sessions). With explicit reference to "21st Century Skills," the students identified relevant specialist literature, reported on the current state of research, and began with the digital production of the MOOC. The first product of the new MOOC learning units to be created was a self-produced introductory video with a motivational and abstract character. There were also information units, application and transfer tasks. At the end of the seminar, all students presented their unit in digital presentations in the digital plenum. One semester later (developmental course II, winter term 2021/2022), the units were developed further - this time by a new cohort of M.A. students. However, they developed the topics in comparison with the preliminary work of their fellow students. After these two creation phases, the units were standardized in layout for use as a self-study unit in a B.A. study phase and implemented in Moodle platforms with the help of the I.T. Media Centers at both university locations. From summer term 2022, B.A. students will now work on these subject units with digital tutorial support.

### **4. Didactic concept**

This teaching and learning setting is aimed not only at the peer-supported development of teaching content and learning processes within the university but also at the professionalization of pre-service teachers in their future professional field, the school. The thematic and practical orientation towards the "mediatization" (Krotz, 2007) and digitalization of our modern societies (Marci-Boehncke, Rath, and Tkotzyk, 2023) is intended to realize the professional digital literacy (Marci-Boehncke & Vogel, 2018) of teachers. Teaching digital literacy is a cross-cutting task for teachers of all school subjects. Therefore, the multi-stage, process-oriented, and media-educational peer-to-peer concept we present here is also a future-oriented professionalization of future teachers.

We conceptualize our planning as a didactic tetrahedron (cf. Tall, 1886; Prediger, Roesken-Winter, & Leuders, 2019), systematically including learners, teachers, subject content, and media resources. It will be further developed as a thematically persistent moment in the process of developing our setting over three steps (see figure 1): (1) development and production of the digital self-study offer (developmental courses I and II), (2) use of the digital study offer by B.A. students (MOOC) and finally (3) the initiation of digital media education in later lessons (prospective school classes). The concept of integrated digitality in the tetrahedron as an implementation of the theory of mediatization (Krotz, 2007) is not located in one of the tetrahedron nodes but on the line between the learning content and the media resources. This digitalization of the development and teaching process is carried into the tetrahedron of the next stage via the peer-to-peer learning setting. Gaining skills through developing, producing, and using a digitalized setting ensures these skills are adopted in future school lessons.

Figure 1. Didactical tetrahedron model (own graphic).



Fundamental here is the process of anticipated role assumption in step 1 (developmental courses I and II) with regard to step 2. The M.A. students, who are in the position of the learners in the logic of the didactic tetrahedron, actively create the MOOC for their peers, the future B.A. students, in two consecutive semesters. In doing so, however, they anticipate the role of the student teacher in relation to these peers, who indirectly address and guide their learners in the MOOC via media offerings (auditory, animated, or written addressing) (cf. Borko et al., 2021).

In the same way, a process of anticipated role assumption is also initiated for B.A. students in step 2 (MOOC B.A.) with regard to step 3 (prospective school classes): they are instructed to anticipate their role as future teachers. In addition, the concept of digitalization of the development and teaching process is taken into the tetrahedron of the next step via the peer-to-peer learning setting. Gaining skills through developing, producing, and using a digitalized setting ensures that these skills are adopted in future school lessons. In addition, after a few semesters of use (cf. step 2), a further revision (cf. step 1) takes place, which then leads to renewed use and implementation (cf. step 3). We can describe the entire procedure as an iterative process of sustainable updating of the teaching offer.

## 5. Digital skills and school relevance: The evaluation

The "21st Century Skills" from Trilling and Fadel (2012) are particularly relevant in our model. The 21st Century Skills describe fundamental skills indispensable for a digitalized society's future. In this respect, it is the professional task of schools to prepare the next generation for this - and this means that future teachers must have already acquired and reflected on these skills. As in the didactic tetrahedron model, media are not only a tool and a topic but also a context for action.

The evaluations now available (cf. Marci-Boehncke, Rath, Greiff, Hueser, & Akdeniz, 2023) since summer term 2022 at both universities show the high level of acceptance and efficiency of the course. In brief evaluations after each unit, the B.A. students (total n=192) were asked to rate on a four-point Likert scale (1 = very relevant, 4 = not relevant) how relevant they consider the respective topic to be for the school. The students rate the content orientation as highly relevant (average 1.57). On a further Likert scale (1 = very high, 4 = low), they were asked to indicate what learning gains they assumed for themselves. They explicitly recognize their own practical educational needs and growth (digital literacy and media literacy), although there are more significant standard deviations and a slightly higher mean value (1.97) due to differences in previous education. Overall, the results show a very high appreciation of this learning offer compared to other seminar evaluations. This didactic implementation of mediatization and digitalization has reached the students' practices. That could be a "disruption" as a "gestalt shift" in the students' media pedagogical habitus, which will have an impact on their professional media activities in the medium term (cf. Flavin, 2012).

## 6. Conclusions

The interweaving of the various facets that are evoked in the seminars with the term "media" (work equipment, topic, and context of action) enables the students to have different individual approaches to the joint work. As part of youth culture, all students use digital devices, which are also part of their habitus. However, the confidence level in using them - technically and in terms of content and political reflection - differs significantly. However, as a sub-competence of the subjects German and Ethics, comprehensive digital sovereignty is part of the necessary educational content.

The work in cross-university teams was severe and motivated, and the results show a committed and highly appreciative approach to the topics and work on offer. The brief evaluation by the students in the MOOC-supported courses of the B.A. cohort shows an increasing acceptance of the course after two semesters. The topics are rated as very relevant, as is the level of understanding when working through them, and thus, the students' competence gains. The differences in assessment between the units are only slight. The topics concerning students in their own peer group - such as internet security and social media use - are particularly valued. Students are also very grateful for information on inclusion and the role of digital media in this.

On the other hand, aspects of teaching justification – such as curricular frameworks – seem not quite as attractive. It is also apparent that the cohort is already divided among students regarding their future orientation. For example, the relevance of algorithms and A.I. is considered less important, especially among students in German. The importance of the future conveyed in the unit and the connection of this topic to linguistic structures (A.I. and ICT as a semiotic system) needs to be understood. Nevertheless, the values on the scales are close to each other, so there is a very high level of interest in this learning opportunity.

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