Learning Hybrid by Doing Hybrid: Teaching Critical Digital Skills in a Safe Learning Space

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Abstract Professional social work contexts are increasingly characterized by hybrid administrative work environments and social space settings blending physical and virtual arenas of interaction. Modern social work management education therefore requires students to gain new critical digital competencies and opportunities for students to acquire these critical skills as part of their academic training in a systematic fashion. This chapter first discusses the new work environments social workers encounter as a result of the transformation of typical social spaces and administrative challenges based on the increased digitalization, informationalization, and hybridization of social work contexts. Next, the paper highlights the respective new professional digital competencies required of social workers as part of their professional toolkit allowing them to (re)gain agency in these transformed social and administrative environments. The chapter then shares experiences from a research methodology module (BA and MA level) offered both in traditional campus/face-to-face and online formats, offering insights and best practices how students can acquire and discover critical digital literacies in a safe learning space. These include the design of learning environments as experiential experience spaces and respective assessment formats that further enhance the learning of students.

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Introduction

The transformation of our social worlds wrought by digital technologies is by now a well-documented and analyzed phenomenon (Castells, 1998/2010; Franklin, 2015; Lupton, 2015). Far from being mainly a technological phenomenon, digitization has reshaped all of our social processes fundamentally, constituting a new material and cultural reality (Hassan, 2020). Digitization is closely connected to informatization, that is the "social process of an aware, systematic handling of information […] which aims to make information usable independent of its concrete subject" (Boes, 2005, p. 215, own translation). Both processes have become

well-established realities in our social lives, so much so that we often do not even recognize them as technology-related and -induced transformations anymore. From a social work management perspective this is highly problematic. The technologically-   induced connection of physical and virtual social spaces requires of social workers an extended competencies set to (re)gain professional agency in their assistance, managerial, and also advocacy roles (cf. Reamer, 2019). These competencies, however, are often not being actively addressed in their current professional training and education.

Current educational settings often lack opportunities for students to acquire these critical competences as part of their academic training in a systematic fashion. This chapter aims to demonstrate how this can be addressed with a redesigned educational course structure. First, that chapter discusses the challenges social workers face today as a result of the transformation of typical social spaces. These are characterized by an increasing hybridization of social spaces, that is a connection of physical and virtual places of space. Next, the chapter discusses the required set of competencies social workers need in all of their professional capacities, allowing them to develop professional agency in such environments. These include not so much a substitution of existing competencies but rather the extension of skill set to include new forms of literacies. The main focus here is on digital and data literacy. The chapter then shares some of the key insights of a research methodology module (BA and MA level) offered both in traditional campus/face-to-face and online formats at the YMCA University of Applied Sciences Kassel (Germany) that aims to address the shortfalls in social work training as it pertains digital and data literacy and their application to professional challenges, highlighting best practices and closing with a short summary.

Critical Digital Skills for Social Work Management

Information and communication are the most fundamental dimensions of human activity and organization. Thus, a revolutionary change in the material conditions of their performance affects the entire realm of human activity (Castells, 2004, p. 9). Informationalization – that is the emergence of a capitalist system in which productivity, manufacturing of commodities and services, forms of labor, as well as work styles – have become intertwined with digital information technologies (Arvidsson & Colleoni, 2012; Lyon, 1986). The growing availability and importance of digital data in societal exchanges and the way they structure social discourses and decision-making make it critical for social work management education to prepare students not only to engage confidently in these discourses but also to assist and help prepare their clients to develop their own agency (cf. Cope & Kalantzis, 2000; Lankshear & Knobel, 2008). Informationalization renders a technological paradigm based on the augmentation of the human capacity of information processing and communication made possible by the revolutions of digital information processing in its various applications (including biological engineering, data storage and analysis, or the connection of physical and non-physical objects and symbols) that sets it apart from previous historical information and communication technologies (ICTs), based on three major features (Castells, 2004, p. 9):

● their self-expanding processing and communicating capacity in terms of volume, complexity, and speed;

● their ability to recombine on the basis of digitization and recurrent communication;

● their distributing flexibility through interactive, digitized networking.

These changes have an impact not only on communication but also on other common aspects of social interactions and ultimately on individual meaning-making and culture at large. They also transform the social space in which human interactions take place.

Hybridization of Social Spaces

Established in the 1970s, the concept of lifeworld orientation has evolved as one of the dominant practice theory models in the German social work and social care community (Grunwald & Thiersch, 2009). Related theoretical approaches and socio-spatial models, especially the concept of social spaces have not only gained prominence in theoretical debates but also for the practice of social work (Budde et al., 2006). In contrast to psychological approaches, which focus on human experiences and behavior, or sociological perspectives, which investigate forms and consequences of human interaction, social-spatial models as applied to social work take a more holistic perspective on the individual and his or her social embeddedness (Hinte & Noack, 2017, p. 14). Social space thus understood is the result of social and organizational action embedded in interaction- and power-structures in the form of institutionalized regulatory norms and symbolic systems (Budde & Früchtel, 2006, p. 27). This space does manifest itself not only in its physical form, however. For this place to be constructed — to take *gestalt* —, social heritage, group membership and other important social factors are equally important (Habermas, 1981/1988, pp. 182–228). The center of this space is the individual and its persona. The construction of each concrete space differs from that of other individuals even if they both inhabit the same physical space at the same moment (Bollnow, 2010).

 The constructiveness of social space makes it evidently necessary for today's social workers to include digitally-enabled, virtual extensions of space and place into account for their proper analysis, as they are — to various degrees — directly or indirectly part of nearly all social-relational spaces (Cortada, 2012; Fürst & Hinte, 2020). This, in turn, makes it necessary for social work practitioners — and their educators — to gain the required competencies for the analysis and understanding of agency within combined virtual and physical — or hybrid — social spaces. A hybrid space can be defined as one which "comprises both physical and virtual space, and in action is framed simultaneously [sic!] by the physical space, the virtual space and the relationship between the two" (Harrison & Dourish, 1996, p. 72). Harrison and Dourish noted a key feature of such hybrid spaces early on:

> When we observe the emergence of a sense of place in media space, a distinction arises between "spatial" features that the technology might provide—visual access, proximity, movement—and the place-oriented aspects of interaction which might arise there—formal and informal discussion, intimacy, a sense of ownership, and so forth. (Harrison & Dourish, 1996, p. 72)

In other words, they emphasize the importance of the social constructiveness aspect as well as the need to take into account the physical and technological framing of this space for a proper understanding of the construction processes. The transformation of social life wrought by digital media and technologies, especially in its mobile gestation, are now well-established and irrevocably established in every day social interactions (Berezan et al., 2018; Castells, 1998/2010; Schnell & Dunger, 2019). Mobile communication devices act as a "tether to the network through increasingly complex and automatic protocols" (Hassan, 2020, p. 77), thus embedding our physical self and actions within the immediate space of places into a larger, digitally mediated virtual space (de Souza e Silva, 2006; Droege, 1997), a space of flows (Castells, 1996/2010, pp. 407-446). This transformation is further enhanced by the increasing hybridization of socio-economic relationship structures and networks (OECD, 2019; Wang, 2019). The ubiquity of sensors and the growing importance of the Internet of Things and other

related developments only further enhance this development (Abowd & Mynatt, 2000; Ferscha, 2007; Goumagias et al., 2021).

The Need for New Competencies for Social Workers

These are certainly not new insights. Garret has highlighted the transformational impact of digital information processing technology on social work and its professional conduct in the early 2000s, naming this period "social work's 'electronic turn'" (Garrett, 2005). Parton summarized the impact of the change of forms of knowledge on social work professional conduct and standards in 2006, describing the implications for the relationship between theory and practice in social work and the nature of 'social' work itself (Parton, 2008, p. 254). An early critical analysis of these developments were provided by Smith (2004), who argued that governmental data-based oversight of social work(ers) was the result of loss in trust in their professional abilities and the rise of informationalization allowed a public substitution of confidence in the professional skills of social workers to that in informational systems. This has important effects on the nature of required knowledge of professional social work and its conduct:

> So, whereas previously social work was primarily an oral and written set of practices which relied on the construction of narratives, increasingly this seems to be less the case. […] In the process varied systems for assessment, monitoring and planning in social work both for a particular 'case' or for generating a range of management information are becoming dependent upon the computer for their operation. This is not to say that the use of narratives is disappearing but that they are increasingly framed by the logic of the database. (Parton, 2009, p. 718)

As a result, social work management now requires additional skills beyond that of traditional social work professional standards (Reamer, 2017). The changes outlined above impact the required skill set and competencies of social workers not only in terms of professional administrative conduct, but to regain their agency as professionals in their domain of work (López Peláez et al., 2018). A specific need to address these skills as part of educational training of social workers also affects newer generations, including so-called "digital natives" (Bennett & Maton, 2010). Social workers need a solid preparation in the main domains of literacy skills that enable them to conduct their professional skills and obtain and convey knowledge in both, traditional analog environments, as well as digital ones (Reamer, 2019). Furthermore, the growing importance of information and the resulting data requires them to gain competences in data literacy way beyond those currently taught in most social work educational programs.

Traditionally, literacy skills are differentiated into three basic domains: (1) prose literacy; (2) document literacy; and (3) quantitative literacy (OECD & Statistics Canada, 2000, p. x). All of these domains have undergone a significant transformation in respect to the way information is coded and contextualized (Lankshear & Knobel, 2011; Potter & McDougall, 2017). As Cukier and Mayer-Schoenberger (Cukier & Mayer-Schoenberger, 2013, p. 29) have pointed out, the datafication of society is characterized by the ability to render into (digital) data many aspects of the world that have never been quantified before. This also has important consequences for education in terms of literacies taught and competences attained (Cope & Kalantzis, 2000). A digital-media infused environment is far more complex regarding the sources and content of information and the corresponding societal narratives (Müller et al., 2009). Furthermore, participatory culture shifts the focus of literacy from individual expression to community involvement (Jenkins et al., 2015, p. 6). By now, digital literacy — here understood as a set of competencies needed for meaning-making in the digital realm — is a foundational capability essential for participation within society (Littlejohn et al., 2013) as the notion of traditional information is broadened to encompass meaning-making

in and around the multiple modes associated with digital forms of information. The tendency of an increasing number of societal decisions to be influenced, if not determined, by data-driven processes impacts directly the agency of individuals to act and interact socially. This requires a competent handling of and communication with data in all its forms: analog and digital formats (Otto & Ziegler, 2010).

A critical aspect, often overlooked in educational programs in social work focusing on methodology and information- and data-related competencies, is the codification of norms and values into data:

> [W]hen data appear to be so self–evident and big data seem to hold such promise of truth, it has never been more essential to remind ourselves what data are not seen, and what cannot be measured. (Baym, 2013, p. Conclusion, Paragraph 2)

This formation of normative standards encaptured in quantitative measures has been rightly criticized (Muller, 2018), yet the above outlined developments will only increase the need for a thorough understanding of the underlying formative processes. This makes it all the more urgent for social workers to gain the necessary skills to engage critically and competently in the creation and use of such data. As Pink and Lanzeni (2018) point out:

> For a world where the most mundane elements of our lives are inevitably datafied and where predictive data analytics are increasingly used in regimes of governance, we need a research ethics that engages with the emergent mundane contexts where data are made and analyzed, that accounts for the future temporalities of big data analytics and whereby ethics is part of rather than applied to research and analysis. (Pink & Lanzeni, 2018, p. 1)

A thorough training in these skills will enable students to engage themselves in the design and re-design of these processes, rather simply accepting them as a blackbox or — worse — to try to ignore their impact on both, their own professional agency as well as that of their clients.

Digital and Data Literacy

Digital literacy thus constitutes a critical competence for social workers, as digital technologies already mark important elements of professional social work practices and will only continue to do so in the future (Berzin et al., 2015; López Peláez et al., 2018). The concept of digital literacy eludes a commonly accepted simple definition, as "any attempt to constitute an umbrella definition or overarching frame of digital literacy will necessarily involve reconciling the claims of myriad concepts of digital literacy, a veritable legion of digital literacies" (Lankshear & Knoble, 2008, p. 4). Digital literacy not only involve the skills necessary for the use of digital communication. Rather, the concept captures the diverse ways of making meaning that involve "digital encodification", and the "enculturations that lead to becoming proficient in them" (Lankshear & Knoble, 2008, pp. 5–7). It is therefore useful to think of digital literacy more as digital literacies. This is particularly helpful, when keeping in mind that digital literacies require and build on the skillset from non-digital literacies (Støle, 2018).

Data literacy, on the other hand, constitutes "the ability to collect, manage, evaluate, and apply data in a critical manner" (Ridsdale et al., 2015, p. 8). In addition to statistical methodological and research skills, data literacy also requires a good knowledge of the regulatory and ethical norms in relationship to the creation, storage, and analysis of data (Heidrich et al., 2018, p. 14). Data literacy is especially characterized by its interdisciplinary nature, as the skill set needed to acquire thorough data literacy competencies are not merely rooted in mathematics or statistics. It is hardly possible to obtain deep professional skills in all areas related to a thorough data literacy. However, it is important to develop — and update — basic knowledge of and proficiency in some, if not most of the involved areas, as, for example, highlighted in the data science textbook by Skiena (2017).

The digitalization of social processes also transforms the required skill set for a competent document literacy, a crucial competence for social workers. The increasing quantification of social meaning making and establishment of social relations require a much deeper understanding of data and additional competencies and knowledge of quantitative skills, especially the development of data, their contextualization, analysis, interpretation, and presentation as information and derived knowledge from data (Hintz et al., 2018). Digital and data literacy also enables social workers to (re)gain agency in an administrative environment that is characterized by a shift from personal knowledge to institutionalized information gathering and data storage and analysis. This has important implications for the establishment of trust in an increasingly hybrid and data-driven social environment (Taddeo, 2010).

Far from remaining a distant concept laid out in Orwell's *Nineteen Eighty-four*, dataveillance — that is the "systematic use of personal data systems in the investigation or monitoring of the actions or communications of one or more persons" (Clarke, 1988, p. 499) — has become a widely accepted reality in many ways for common social and professional practices as a result of the growing importance of digital technologies and processes. As a result of developments in information technologies, combined with a growing demand for social control among government agencies and corporations alike, dataveillance practices have diversified and proliferated. Since the 1980s, dataveillance technologies have spread, the costs of conducting dataveillance have declined, and the application of dataveillance techniques greatly increased, while the demand for data to which they can be applied has spiraled upwards, and many new data gathering activities have emerged (Clarke & Greenleaf, 2017, p. 3). Buzzwords such as "machine learning" and "big data" are the labels currently used for these kinds of analytical tools. These developments have consequences way beyond mere technical changes in the analysis of data:

> However, one could argue that there have been qualitative as well as quantitative shifts in dataveillance practices in the last decade, or, more precisely, that an intensification of quantitative differences allows for the articulation of qualitative difference. Dataveillance in the present moment is not simply descriptive (monitoring) but also predictive (conjecture) and prescriptive (enactment). (Raley, 2013, p. 124)

This development can also be witnessed in social work practices and processes: from the personal use of digital information technologies (Faye Mishna et al., 2021), to administrative processes (Huuskonen & Vakkari, 2013; Reamer, 2019) and the use of predictive risk modeling and other related applications of algorithm-based computational support systems (Vaithianathan et al., 2013; Waterhouse & McGhee, 2015). Social workers need to be equipped with extended digital competencies, including data- and digital literacies, to address the challenges these transformations actively and competently (Perron et al., 2010), even more so considering future possibilities of (semi-)automated forms of observation and decision-making based on data metadata creation (Parton, 2009; Rudin et al., 2019).

Important countertrends that have emerged in response to these developments has been the rise of demands for more public scrutiny of algorithm-based tools, including access to the actual algorithms themselves, as well as the demand for more data to be made publicly available and easily accessible (Baack, 2015; Spiekermann et al., 2021). This public-making of data establishes new forms of public spheres that include non-physical and/or hybrid spaces and places, a new hybrid commons (Benkler, 2006; Rennstich, 2021). From a social work management perspective, these transformations demand changes to the regular curriculum of social work methods to equip students for the necessary skill set and competences required to engage confidently and professionally in a digitalized, hybrid social environment in all three main professional domains: intervention, administration, and advocacy. The following sections first discusses an approach to integrate learning spaces for digital competences into existing course modules based on blended learning principles and

through the use of specifically designed assessment formats. Next, key findings from several iterations of the course redesign are summarized and presented.

Teaching Digital Skills – A Case Example

Traditional competencies of social workers have not become obsolete as a result of digitalization and the datafication. Rather, the digital skills outlined above are often based on the specific competences social workers gain during their educational training and as part of their professional experiences. Digital competences should thus be viewed more as additional tools and methodological extensions to the social work toolbox than isolated skills that replace traditional competences geared towards the needs of an "analog social world". This section describes the redesign of an existing research methodology module comprising of three, integrated courses (Introduction to Research Methodologies for Social Workers [INTRO], Qualitative Social Science Research Methods [QUAL], and Quantitative Social Science Research Methods [QUANT]) with the explicit goal to allow students to gain critical digital competencies along the research methodological skills required by the German social work curriculum (see Schäfer & Bartosch, 2016).

Course Design

The choice to redesign an existing social work research methodology module was made purposefully to ensure that students do not view those digital competencies as separate from other, strongly related methodologies but rather as a natural part of the traditional methodological skills conveyed in the three courses. The INTRO course acts as the main hub of the module, tying the other courses, QUAL and QUANT, to the larger questions related to research methodologies, such as research design, ethical questions, legal aspects, analytical approaches and aspects surrounding choice-making in data-creation, -storage, and -presentation. The QUAL and QUANT courses are designed as laboratory courses, that give students the chance to further explore the methodologies and issues introduced as part of the INTRO course theoretically but especially also practically (cf. Fink, 2013). The module is designed to take place within one single semester, with all three courses running in parallel over the course of four months.[1]

The entire module is following a backward course design (Wiggins & McTighe, 2005). This ensures that the main goals of the course — expressed as the main competencies that students should be able to gain — are not only being made explicit to the students but also visible at all times as the main guiding posts of each course element. In addition, the courses follow scaffolding (Hogan & Pressley, 1997; Jones, 2019) and self-regulated learning (Russell et al., 2020) approaches, tying the individual courses together. All three courses are based on blended-learning concepts (e.g., Garrison & Vaughan, 2008). Thus, by design, students are part of a hybrid learning environment in which they are exposed to the features of typical hybrid social spaces not only as a professional work environment but also as a safe learning space. Also, this course design decision ensures that students are exposed to digital tools in multiple roles: from a theoretical perspective, as learners, as researchers, and as users themselves. Even though the module is part of the regular, face-to-face, campus-based course

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[1] This decision was based on the restrictions posed by the B.A. program that requires methods modules to be completed within a single semester. The MA. module is not divided into different courses but structured as a single course with lab elements. This constraint makes the module rather work-intensive for students. From a didactical perspective, it would be preferable to stretch the module out over more than one semester. This would also allow for a better integration of the courses into other modules/courses.

offerings, students are able to engage in both, synchronous and asynchronous learning settings. This not only is essential in terms of the hybrid learning set-up and learning goals, but also in terms of the highly diverse levels of (digital) literacy that typically characterize the student body.

Learning Environments as Experiential Experience Spaces

The design of the various learning environments is a critical component of the module. The design takes into account both, spatial (cf. Sankey et al., 2012) as well as temporal dimensions (cf. Corte et al., 2003). Some of the learning spaces are (mainly) physical, others (mostly) digital or virtual in nature, whereas other learning spaces are deliberately hybrid in nature. Some course elements include traditional course meetings (synchronous) to allow students who are largely adapted to this kind of learning to engage in learning using their well-established learning strategies. In addition, other elements are purposefully asynchronous in nature to allow students with different previously acquired skill sets to be able to engage equally with the learning materials and to achieve the same learning goals and competencies. These asynchronous elements are partially digitally mediated, partially they are enabled by another important learning environment element: small study groups.

All learners build study teams of three to four students at the start of the module.[2] Even though they all have to submit an individual assignment in the end, the groups are designed to allow students to support each other as peers as part of the learning process. On the one hand, this widens the level of support students are able to access throughout the semesters and over all three courses, a critical element for a successful learning outcome. On the other hand, this allows students to gain critical group-working skills in hybrid social environments (cf. Keppell et al., 2012).

The inclusion of all these spatial and temporal dimensions — separately as well as combined — is an important element of the entire course design in order to ensure that students are able to learn not only the required specialist research methodology language, but also to digital literacy:

> People learn (academic or non-academic) specialist languages and their concomitant ways of thinking best when they can tie the words and structures of those languages to experiences they have had—experiences with which they can build simulations to prepare themselves for action in the domains in which the specialist language is used. (Gee, 2006, p. 3)

The combination of synchronous learning experiences and asynchronous ones is paired with the learning experience in the small learning teams in order to create safe learning spaces in which students are able to experiment with methods and technologies themselves while also experiencing insights into the perspective of their research counterparts. For example, students interview each other, acting as researcher (interviewer) and also subject (interviewee) or engage as observers but also as the observed. They can support each other in the use of new technologies, for example the use of specialized software (synchronous) but also are able to address gaps in their existing literacies on the basis of video inputs with step-by-step solutions to tasks and exercises, thus allowing for individual learning speeds that are nonetheless paced as part of the weekly course meetings.

Each session allows students to apply — and if necessary to acquire — the required skills in different learning speeds, individually, as small learning teams and/or as part of the larger

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2 From a didactical perspective, two options are possible: groups can either self-identify or be created on the basis of a previously established (e.g., through a survey) skill-level identification to ensure a supportive group structure. All groups work together throughout all module elements and courses. Groups work together as co-workers and teams. They do not, however, submit group-work as part of their assessment to ensure that students do not divide out work as part of their group, but engage equally and individually on all tasks and submit their individual assignments and reflect them independently and individually as well.

course learning group. In each session, students can interact within their learning teams, the larger course group and also with the instructor, either individually or as a learning group. Students are also able to either complete (most) of a learning task and its associated learning outcome in each session or pace themselves asynchronously over the course of the week until the next session. As many of the learning tasks and artifacts are required for the completion of the next one, students are highly incentivized to keep the general learning pace with their peers without forcing each individual student to complete a task within a very short time frame of a single class or lab session. This allows students in a diverse learning group — in terms of previous skill levels, learning styles, and other individual learning or time constraints — to keep pace with their peers, which is essential for many of the learning tasks, while still allowing for individualized and self-regulated learning paces within each weekly step.

Students are also tasked individually to reflect on each single learning task and step (e.g, the creation of a transcript from their interviews), allowing students to focus more on the learning process rather than on the production of an artifact (e.g., a completed interview or statistical analysis based on a common problem set) that caters to the supposed expectation of the teacher. This requires special attention to the assessment tool(s) used as part of the module.

Assessment

The form of assessment is a critical aspect in the design of a module with the aim of allowing students to experiment in safe learning spaces with different technologies, experience different forms of hybrid learning environments and thus to acquire critical specialist languages as well as general digital literacies. One the one hand, the form of assessment must fit into the overall academic set-up and learning experiences of students. On the other hand, it needs to give students space — and academic reward — for reflective thinking and allow for trial and error steps as part of the learning process. One assessment format that fits all of these requirements is the use of e-portfolios (cf. Heinrich & Bozhko, 2012).

The basic definition of e-portfolios often describes them as "digitized collections of work, responses to work, and reflections that are used to demonstrate key skills and accomplishments for a variety of contexts and time periods" (Lorenzo & Ittelson, 2005, p. 1). On a technical level, they are digitally mediated, pedagogically they are learner-centered and deliberate collections of work aimed at embodying sophisticated achievement (Cummings & Maddux, 2010). They are also well-established tools of learning and assessment. As Mark Pegrum in a foreword to a volume on e-portfolios in higher-education points out,

> [p]ortfolios, as collections of artefacts on which learners can reflect, on which they can be assessed, and on which they can base future job applications, are not a new construct. Nor, by the mid-2010s, are e-portfolios, the digital versions of portfolios which have also existed for some time. But, in a context of superdiversity, where a premium is placed on the acquisition of twenty-first century skills during personal learning journeys, and where learning can take manifold forms and be demonstrated in manifold ways, e-portfolios are taking on a new salience. (Chaudhuri & Cabau, 2017, p. vi)

The assessment based on portfolios (whether in digital or analog form) differs markedly from other assessments formats such as final exams or research papers. They transfer responsibility for learning to the student, who then establishes individual learning goals. The use of this format encourages a learner-centered environment that connects learning and assessment, using samples of student work and reflections collected over an entire semester (or even year or an entire program). Instructors need to provide clear guidelines for selection of representative materials as not all work completed in a course should be featured in the portfolio. Especially important is the fact that portfolios require student-reflection, peer feedback, and instructor feedback and guidance. To work effectively as an assessment tool that provides comparable grades with other formats, references standards, benchmarks, or

examples of excellence should be made available, in order to provide clear and appropriate criteria allowing students and teachers to evaluate student learning (Carmean & Christie, 2006, p. 38).

The e-Portfolio Structure of the Case Example

Students create one e-portfolio for the entire module.[3] It presents students with a common structure — a topical outline — that forms a common basis for the portfolio content for the entire cohort. In the first section, students are asked to briefly introduce themselves and are asked to answer three questions about their prior exposure to and familiarity with research methods using a very simple to use video tool that is part of the Learning Management System (LMS)[4]. This interview style has worked well, as students otherwise initially often feel at a loss, as to how to present themselves in a format most of them have no or very little familiarity with. The use of video allows students to use or if necessary gain additional digital media skills while presenting them with a browser-based and easy to use system, limited to 2 minutes per video.[5]

The final section is similarly structured and asks students to review and reflect on their initial presentations, acting as a bookend to the opening section. The initial reflection is referred to as a "letter to your future self in three months time", providing students with a video artifact that describes in their own words their expectations, worries, ambitions, etc. related to the course material.[6] This first set of artifacts familiarizes students with some of the core elements that constitute the digital literacy they should have obtained by the end of course in a low-stakes, and safe learning space environment.[7] It provides students with the opportunity to engage in a multimodal documentation of their own learning journey and reflection based thereupon.

The remainder to the e-portfolio is structured along the learning steps divided over the three courses. Students are asked to present artifacts coupled with a reoccurring set of three basic elements, asking them to describe the development, the artifact itself, and a reflection of the developmental process and the outcome. This allows students to use multiple gestations of the development of the artifact for a discussion, or describe the process in writing only. As all students are asked to address the same set of basic elements, the e-portfolios remain comparable as an assessment tool, while still allowing students to engage in different styles and also providing a documentation of their learning progress, as the entries usually are developed each week as part of the course assignments.

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3 This is important, as the European Higher Education Area (EHEA), often referred to as the Bologna system, requires a module-wide, not a course-based assessment. The use of e-portfolios thus enables the instructor to use self-regulated didactic methodologies while at the same time also meeting the administrative and legal requirements that fit into the wider module structure of educational programs, both on the B.A. and M.A. level.

4   The LMS here is the open-source Moodle system, with which students have familiarity as it is used program-wide at the school.

5   Students are free to use as many videos as they like, however, or any other video production tools they are familiar with or prefer to use. The point is not to restrict students to a specific tool but rather offer them a "built-in", low-threshold tool enabling them to focus not only on technical aspects of digital media literacy but also on the content and communicational aspects. Past experience has shown that relatively low levels of technical expertise and media competencies of students has often shifted most of the time spent and thus core learnings on the technical aspects rather than the entire combined process of content planning   , implementation and presentation.

6   Research methodology is a subject many students often view many ambiguities as it contains skills and expert languages — e.g., quantitative mathematics (Onwuegbuzie & Wilson, 2003) — many of them feel unprepared for or think unnecessary as a preparation for social work (Gredig & Bartelsen-Raemy, 2018).

7   Students are given the choice to make their e-portfolio entries available to other students, to the instructor only, or as a draft to only themselves.

Some of the artifacts that should be presented as part of the e-portfolio are predetermined: for example, students are asked to present their preparatory material (based on a provided template) for their face-to-face interviews. Other artifacts can be added as students see fit, depending on the kind of data analysis they have undertaken. Students are asked to provide a basic set of written description for each section, in addition to the creation of digital artifacts and in the quantitative sections also data analyses based on both, provided problem sets and their own created data. This ensures that students are being made aware of the connection between all the main forms of literacies discussed above and do not view, say data analysis as a separate and distinct form/specialist language from the data creation. It also ensures that students view their digital literacies as separate from that of other forms of literacy. In addition, students are specifically asked to reflect on each individual section entry in connection to the descriptive and analytical elements.

The e-portfolio format requires different forms of feedback as feedback and its contextual administration constitutes a critical aspect for successful learning (Sadler, 2010). The module design thus includes a variety of feedback opportunities beyond the typical scenarios from traditional assessment format such as research papers or other end-of-course-based student-teacher interactions. Students can gain valuable feedback not only from the instructor during course meetings or asynchronously using the LMS communication tools, but also from their peers in various settings (study teams, entire cohort, online). Students are thus able to gain relatively timely — often instant — feedback during the specific moments in time when they require it the most, being stuck at a specific point in the creation of their learning step. This opens up the possibility for individual learning speeds for students even with relatively large course sizes.

Finally, students familiarized themselves with the evaluation rubric of the e-portfolio during the first meeting and evaluation criteria were regularly discussed throughout the semester.

Research Methodology for Course Analysis

The analysis presented here is based on data analysis of student reflections from all modules using the underlying method, one BA methods module taught in a blended learning design face-to-face (with one version being synchronous, but online administered during 2021 as a result of the COVID-19 pandemic restrictions), a BA methods course offered online (with a three day face-to-face session), and a MA module offered online (with a five-day face-to-face session). The e-portfolios were structured in such a way, that students were asked to provide initial video statements to a set of questions regarding their expectations about the course, their previous experience with the content matter, and specific worries they might have regarding the course materials or content (e.g., statistics, use of analytical software such as Excel, etc. – those examples of issues were only raised in a first lecture and introduction to the course, not in connection with the specific task in the e-portfolio in order to avoid any possible bias; the question was asked very generally). These video statements acted specifically as multimedia "letters to my future self" and students were made aware that they should only return to those initial reflections and statements at the very end of the semester.

As with all assignments, students had a choice to share those videos or any other artifacts with the course instructor during the semester or keep them private, which about two-thirds of the students did. The issues mentioned in those hidden videos did not differ significantly from the published ones in terms of issues raised. Students who chose to keep the videos private initially seemed more unsure about the use of a new media skill at this stage in the course. Students were then asked to review these initial videos at the very end in a final element of

the e-portfolio. Here, students were asked to summarize their experiences during the semester, respond to their own, initial expectations and reflections on past experiences, and provide an overall reflection of their perceived learnings and competencies gained. The sum of all these reflections were analyzed and provided as a basis of the key learnings and take-aways in this course. The data were highly consistent across all forms of course formats (online/hybrid/face-to-face) and levels (BA/MA).

Key Learnings and Take-aways

The redesigned module has been offered repeatedly over the course of three years, both as a blended-learning face-to-face, campus-based course and an online course with a three-day face-to-face meeting session. Teaching materials have been adapted to in the last iteration of the module offering which took place during the COVID-19 induced online-only format, even for the regular face-to-face version. This section provides a brief discussion of the key findings gained over the past three years, including a short summary of the insights from the COVID-19 module experience.

The design of the module as presented here has shown to work quite effectively in terms of reaching the stated goals and course aims, i.e, allowing students to obtain specialist literacies — quantitative and qualitative research methodologies and data literacy — combined with the goal of extending the digital literacies of students. The use of e-portfolios as an assessment tool has greatly facilitated the learning process. It also allows a much more detailed evaluation of the learning progress and outcomes of both, individual students, and the entire cohort. These are important aspects for social work management, as current educational content will not be able to adequately address the required set of skills and methods for students over their entire future career in a time of social and technological transformation. Social work education thus must equip students also with the critical skills of learning how to learn using digital/remote learning environments and collaborating in small learning teams. This module has addressed these competencies specifically.

One critical aspect that emerged in terms of providing digital literacy as part of the course is the need to carefully design the possibilities of hybrid self-experiences for students in a safe learning environment. Allowing students to experience potentials and challenges of hybrid work environments themselves as part of the learning process and as part of a professional work setting — here as researchers — during the course of the module has proven important for critical self-reflection and to encourage students to explore technologies and digitally mediated forms of social interaction more fully than in other course settings. The requirement to continuously engage in critical self-reflection, rewarding that self-reflection as an academic achievement regardless of the initial outcome of the attempted intervention or attempt, has also proven to be of critical importance for a successful learning experience and especially the transfer of theoretical knowledge to an applicable competence.

The choice of assessment format has proven to be very important for a successful learning experience of students. The use of e-portfolios has enabled students to develop critical self-reflection skills without the fear of negative consequences on their final course grade. Students were able to demonstrate competencies in a problem-based, stepwise set-up that avoided typical student learning behaviors such as studying for the exam avoiding a connection to real-life, professional challenges and the use of newly gained competencies to address them. Rather, the e-portfolio format allowed students to get academically rewarded for their learning path rather than just the final product, demonstrating the process in which they obtained new competencies as well as the ability to put these competencies to use, while

allowing them to play to and facilitate existing strengths. This allowed for a safe learning environment of discovery as opposed to mere information exposure that allowed students to discover and address their own strengths and weaknesses regarding digital competencies.

The adaptation of the module to an online-format has proven somewhat problematic. The design requires a high degree of interaction between learners themselves and with the instructor. These interactions can be facilitated in asynchronous settings, for example through the use of LMS communication tools such as forums. Online students, while usually demonstrating a higher degree of familiarity with the LMS, are often lacking the required basic digital literacies that the course is supposed to help them acquire more extensively in the first place. Especially the small study teams, an essential element of the course design, are difficult to establish and maintain in online courses, at least in settings, where students are often unable to fit the required teams settings in a common time schedule. Similarly, the unavoidable lag in instructor response time to student questions further can lead to frustrating learning experiences of students as they are unable to obtain the required assistance in solving a specific problem either from their peers or the instructor.

During 2020-2021, the COVID-19 induced changes to the regular teaching set-up created a "natural experiment" that allowed to explore other online-mediated versions of the courses as otherwise possible. The key take-aways from teaching the module under these settings can be summarized as such:

● Hybridization experiences can be designed as part of the module even in online-versions of the module, if specific circumstances allow it.[8]

● These experiences must be explicitly designed in order for them to facilitate. Students need to be able to meet synchronously in person or in digitally mediated forms as learning teams. Ideally, learning teams and if possible the entire class should meet in regular fashion synchronously and in specially designed digitally mediated environments.

● Online adaptations of this model thus require a set-up that allows for synchronous meeting analogous to regular course-meeting times to allow for interactive learning experiences within the small learning teams and/or students and instructor.

● Small learning team meetings need not be scheduled at the same time in order to ensure the higher level of flexibility that is often a main feature of online programs. However, this requires a higher time commitment from the instructor who ideally should be available during those meetings to provide critical forms of assistance to the students, thus facilitating a more fluent learning experience for students during

● The interaction with the entire cohort does not necessarily require this time-sensitive level of interaction and can be facilitated through the use of regular LMS-based communication tools.

● Instructors should make full use of digital learning and teaching tools based on the opportunities provided by the LMS. Instructors should avoid the introduction of too many new tools solely to facilitate digitally-mediated learning or communication unless they are specialist tools specifically required for the aimed for digital literacies or specialist languages.

● Instructors should make use of video-based interaction wherever possible, both in synchronous and asynchronous fashion as this facilitates a more personalized learning

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[8] The QUANT and QUAL courses met online in a specifically designed learning environment using an online platform geared especially to the mediated recreation of physical meetings (using the platform Wonder

experience and cuts down on the required time for feedback provision (see for example the EDUCAUSEreview series, especially Borup, 2021).

● Instructors should prepare especially at the beginning of the module for an increased need for technical support, as students struggle with two challenges — obtaining a new specialist language and digital literacies — at once. This is critical, as students necessarily need to prioritize their time resources and rationally tend to prioritize academic rewards over the gain of more general competencies. With proper design of such rewards into the e-portfolio in combination with plans for the provision of additional technical assistance both goals can be achieved at once.

● Instructors should also provide video-based instructions for at least some of the problem-set steps. This allows students to continue their learning process at their own speed and to catch up on their own on material or skills other members of their learning teams might have already acquired. This also minimizes the danger of falling too far behind during the course of the semester when — unavoidable — circumstances arise that often lead students to drop out of active engagement in their small learning teams and/or the course(s).

Summary

Social work management, in light of the digital transformation of society at large but also key economic and cultural administrative transformations, is facing a tremendous set of challenges. Many social workers are often highly critical of datafication and digitalization of their profession and trying to resist growing public control as an expression of distrust of professionalism. At the same time, social workers themselves have long since — at least in part — adapted to these changes, using digital technologies in interventions and for administrative as well as communication purposes, often circumventing technological structures they face in their work environments (Mishna et al., 2017). This reluctance in the general social worker habitus to embrace more fully the realities of a hybrid social space transformation and its corresponding requirements in terms of intervention, administrative, and advocacy agency has led to a lack of focus on the need to extend the skill sets required in a more systematic fashion as part of the educational training of social workers aiming to prepare them for a life-time of professional service in an increasingly hybrid work environment, both in terms of social work interventions and administration.

This chapter has discussed the main technologically-induced transformations leading to the hybridization of social spaces and the corresponding required new competencies social workers need to be equipped with to address the challenges they face in these new professional environments, with a special focus on data and digital literacy. The research methodologies module presented here serves as an example, how these literacies can be taught and acquired in an academic setting within the context of existing academic programs, allowing students to explore these skills in a safe learning environment. To emerge as a professional competence it is essential that students make the connection between the various new skills — and corresponding literacy or rather literacies — and their behavior and actions in a hybrid professional environment. This connection needs to be structured into the design of the educational offerings to emerge. Reflective elements thus need to be made up a core aspect of the course. The use of e-portfolios is ideally placed to accomplish these goals, providing students with critical thinking and exploratory learning opportunities while also recognizing the need for academic rewards that fit into the larger program-wide structure of their education.

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