

# Social science education under digital conditions: The role of creativity in media practices on social networks

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## Highlights:

- The relationship of social science literacy and digital literacy.
- Constructions of Space and Social Movements as topics for social science education.
- Creative Practices for social science education in the digital age.
- The need for creating a digital social science literacy.
- Prospects for the formulation of a digital social science literacy.

**Purpose:** This paper explores social media practices with an exemplarily focus on constructions of space and social movements. It aims at identifying prospects for social science education under digital conditions regarding the reconfiguration of content and possibilities for digital literacy.

**Approach:** By reviewing and summarizing popular strands of discussion on the application of social media practices in constructions of spaces and social movements, we identify common didactical themes from an educational perspective. Subsequently, we discuss social networks as real-world learning contexts in light of creative practices.

**Findings:** Building on this, we derive theoretical implications for social science education for teaching and learning within social networks with a special focus on creativity. Following this, we present implications for social science literacy as well as digital literacy, which are two sides of the same coin.

**Practical implications:** Finally, we present implications for future research and outline prospects for a future social science education.

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## 1 INTRODUCTION

When Facebook and its subsidiary services Instagram and WhatsApp were temporarily down in October 2021, the constitutive character of the digital became plainly visible on a global scale. Their absence caused a disruption of “ordinary life”, which today is inseparably entangled with the digital. In turn, removing the digital, as was the case with the unintentional Facebook-outage, demonstrates its integration into everyday-life. An event such as this can be viewed as a symptom of what Jandrić et al. (2018, p. 893) term a postdigital world, where the digital is not an “other” to a ‘natural’ human and social life – instead, it is defined as a societal state. “Post” in “postdigital” thus refers to a reconfiguration of action on an individual and societal level. The term “post” is therefore not used in the “postmodern” sense of overcoming, but in a primary sense that refers to the digital as having reconfigured society altogether. Following the interplay of digital and physical spaces as discussed by Van Doorn (2011, 535), the societal reconfiguration described in the first paragraph of this article can be identified in the extension of social relations into a digital space. Here, meaning can be negotiated and created with reference to materiality in the physical space; the merging of the two “worlds” is the outcome (ib.). While we cannot enlarge upon this philosophical topic in the course of our article, it contributes to an understanding of an infusion of all areas of life with the digital – and a reliance on its smooth functioning. As an unnoticeable infrastructure, the removal of the digital disrupts society altogether and exposes that a “digital revolution” is not “happening”. It has already happened and the debate on its possibilities and consequences is today’s key challenge.

With respect to educational matters, the wide range of “digital” topics discussed exemplifies this. While, for example, metaverses are credited with great potential for teaching and learning, discussions on the digital divide have persisted since the introduction of the internet. However, they may need to increase in nuance given the constitutive character of the digital for everyday life as shown by examples from different world areas (e. g., the advanced access to e-government in Cape Verde or digitalization in Lithuania). Nonetheless, the focus of this article is on the subject-specific implications of the digital for social science education and therefore cannot cover all main topics of digital education. Therefore, we focus on theoretical approaches that can be appropriately linked to the topics of constructions of space and social movements in the context of media practices in social networks as a first step. This excludes debates in media education in the context of digital surroundings.

Expanding from discussions on the digital in everyday life, Stalder (2018) defines “the digital condition” as signified by referentiality, communality and algorithmicity. This sociological diagnosis can contribute to an explanation of the following two examples. The first – example no. 1 – will illuminate construction of space: By posting a snapshot of Frankfurt on a social network and adding #Frankfurt to the description, the photo is linked to an abundance of other posts under the same hashtag (referentiality). At the same time, the choice of image detail, filters or location can present an iterative referencing of

available material (i.e. other posts). This frame of reference facilitates the production of meaning and the forming of a community in which said meaning is permanently preserved (communality). Last, but not least, algorithmicity is interwoven into all these practices, as algorithms configure, sort and reduce the flow of information available. In other words, algorithms decide what to show us in the first place, based on our previous social media practice. Stalder's (2018) defining principles of the digital condition can also be applied to practices of social movements on social media, such as #metoo – example no. 2. By sharing one's own experience under this hashtag, it becomes linked to other users' misogynistic or sexist experiences (referentiality). Through this, a community with shared interests and principles arises in which congruent discussions are possible (communality). Again, algorithmicity contributes to the development of popularity of specific issues. Simultaneously, it directs attention towards information perceived as relevant or negligible.

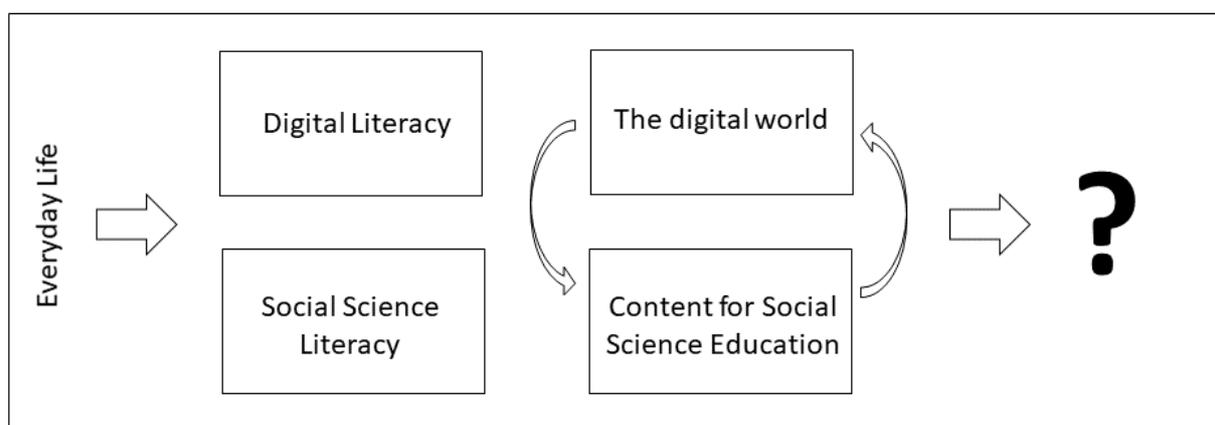
For our considerations, it is not central to select the term “postdigital” or the cultural “digital condition” over the other. Instead, we treat them as applicable diagnoses of today's society: and this society is defined as “digital” by its reconfiguration with digitally provided content and the constitutive character of this reconfiguration for everyday life. The concepts of digital society presented above thus serve as a backdrop and frame of our article. To honor and summarize these, in part, terminological discussions, we will, for practical reasons, in the following refer to a “digital age” which is the life-world of a “digital society”. As smartphones and social networks are used on a daily basis, georeferencing (example no. 1) and societal issues popularized on social networks (example no. 2) serve ubiquitously as an informational basis. These manifestations of the digital world furthermore constitute the basis of real-world orientation and can be resources for learning processes. At the same time, they challenge citizens' digital sovereignty and through this may pose a threat to independent, informed and reflexive decision-making. This is why citizenship education in the digital society needs to be reconfigured. The goals of citizens being able to actively engage with information, reflect their own decisions and participate responsibly thus remain the same. They need, however, be rethought as situated in a digital context that forms the backdrop of everydayness. Hence, we view digital literacy, as well as social science literacy, as “situated in practice” (Hansen, 2018). One aspect entailed in this interpretation of digital literacy, is that all societal processes remain impermeable to analysis to a certain degree. For example, AI-supported algorithms can only be understood by informatics. However, citizens can learn to detect the results of algorithmic decision making and critically relate these to their own actions. Consequently, knowledge on the technological aspects of the digital world is one constituent that needs to be supplemented by reflexive abilities. Through this, digital literacy amounts to a way of being in the world. The immersion in and the engagement with real-digital-world environments thus evokes digital literacy.

As we will explore in the course of this article, nowadays digital literacy is the other side of the coin of social science literacy. These two sides are inseparably connected, which

is why we will approach social science education from an integrative view of learning through the digital. More concretely, this means to integrate the digital world as content into learning processes to foster social science literacy. On the other side, these experiences empower learners as digitally literate citizens in a digital society. This is necessitated by the shift from dutiful to actualizing citizens that citizenship education has experienced in the digital age (Bennett, 2008). Actualizing citizens are more prone to participation in informal contexts as opposed to top-down obligations formulated by governmental institutions (ib.). Here, social media play an important role, as they allow for the establishment of less binding and global ties. Through this, they can bring people together who are pursuing the same courses. As a consequence, learning through social media is one constituent of fostering citizenship in the digital age. Therefore, in this article we state that digital literacy and social science literacy are inseparably connected. While it is of course possible to forefront one of these two aspects of literacy as an educational goal, the other aspect remains present under the surface and is – perhaps unintendedly – addressed simultaneously.

Based on this thesis, social science literacy cannot be detached from digital literacy and approaches on how to address the two simultaneously need to be identified. Therefore, based on the examples of constructions of space and social movements, we ask the question: Which theoretical and pedagogical approaches are applied to adopt the digital world for social science education and in how far can learning through creative practices offer new perspectives? Our goal is thus to highlight that a discussion on digital social science literacy is necessary and to contribute a possible starting point. The following figure 1 summarizes our research interest accordingly.

**Figure 1. The unused potential of the digital world for social science education in the context of digital and social science literacy (own illustration)**



We will illustrate how the digital world reconfigures social-science content along an example each from geographic and political education. These will be analyzed as illustrative of social science education as a whole. In the course of our analysis, we will introduce approaches in media education. Both topic-specific research and adaptations for education will be reviewed in the areas of (1) “constructions of space” and (2) “social

movements (on social media)". Subsequently, we will introduce the concept of media education as creative practice to highlight "the other side of the coin": digital literacy. This thinking-together of reconfiguration of content in social science education with the equal goal of digital literacy and social science literacy will enable us to deduce implications for future social science education. With this in mind, we will suggest first ideas for further discussions about social science literacy and digital literacy as an integrative approach. As we address the subject-matter in an explorative manner, the derived implications and suggestions are not finite. While meant to provide a limited number of answers, they serve to open up additional questions.

## **2 EXAMPLES FROM SOCIAL SCIENCE EDUCATION IN THE DIGITAL AGE**

### **2.1 Constructions of space**

Following the concept of space being produced through actions and communication (Werlen, 1997), a digital society presents new "surroundings", in which action and communication are embedded. The resulting phenomena, which are co-created by individuals, society and assemblages of algorithms through social media in the digital age, can be referred to as constructions of space. The lack of an adjective defining this manifestation as "(post-) digital" or "new" is intentional, as it emphasizes the equal status of space constructed through social media and analog spaces, as they have become mutually dependent.

#### **2.1.1 Constructions of space in subject-specific discourse**

Ash, Kitchin and Leszczynski (2016) summarize this increased epistemological interest in the role of the digital in Geography as a "digital turn". An example of this are analyses of georeferenced material on social media as a means for investigating spatial processes. While such endeavors productively deploy material made possible only by social media, Leszczynski and Crampton (2016, p. 3) challenge researches to "go beyond the geotag". Through this, they draw attention to the manner in which spatial processes themselves have been altered through digital society. As an alternative, Leszczynski and Crampton (2016) suggest to focus on the way individuals construct their everyday lives in a world of Big Data. In this sense, Graham (2017) offers a frame for this analysis by summarizing the interplay of individuals and "offline"- "online" spaces as "augmented geographies". Through this lens, digital information adds layers to "real" places. The two become inseparably interconnected and transformation of the "real" place through the digital layer can occur. In this context, constructions of space on social networks on a city are part of the city itself.

A different focus on everyday practices is presented by Leszczynski (2015). She recognizes that every action is inherently mediated by digital media (Leszczynski, 2015, p. 745). As spatial information is facilitated by social networks, they are part of the everyday

practices Leszczynski (2015) refers to. Contrasting this with “augmented geographies” (Graham, 2017), Leszczynski (2015) resolves the layer structure in favor of pervasive mediation through everyday actions carried out in everyday life. Both these theoretical frames can add to the explanation of the ubiquity of constructions of space and the consequences they bear. As constructions of space are constantly available and accessible through mobile devices and part of everyday practices, they carry a great efficacy. Thus, a closer look at their characteristics is vital to determine their power to shape lives.

Empirically, constructions of space can reproduce existing social structures, such as marginalization or stigma (cf. for example Butler, Schafran & Carpenter, 2018). Consequently, they facilitate the presentation of stereotypes or the ascription of – in this case defamatory – meaning to specific places. This can in turn affect peoples’ actions, such that a place is visited less and the population becomes increasingly marginalized. The exclusion of actors in the production of space and ascription of “trendiness” is also a possible factor in constructions of space (cf. Boy & Uitermark, 2017). Here, access to social and monetary resources regulates who can participate in contributing to the image of the city created on social networks. Therefore, people who lack said resources are excluded and social disparities deepen.

Following these empirical claims, non-neutrality is an essential characteristic of constructions of space. Constructions of space on social networks themselves can thus only be deduced through the analysis of everyday actions and communicative practices that take place against the backdrop of an augmented and mediated world.

Rendering constructions of space in their disequilibria and ambivalence accessible has to be the task of social science educators. Only then can learners begin to explore their own practice and options for action. As constructions of space are an ostensibly geographical manifestation of the digital world, we will, in the following, analyze available approaches from geography education that target constructions of space to deduce implications for social science education and identify the didactical potential these examples offer.

### **2.1.2 Constructions of space in geographical education discourse**

Approaches that use social networks in a purely instrumental manner exist in a small number (for example Ribchester, Ross & Rees, 2014). They explore options for applying the communicative aspect of social networks as tools for connecting learners and/or educators. While this presents one way of acquainting learners with social networks in learning processes, we do not view such approaches as fitting resources for our purpose. This is due to the lack of education “through” media, as a lifeworld created by people is not considered as part of the interventions.

Conveying constructivist conceptions of space, on the other hand, has become an (if only small) part of geography education over the last years. Here, it is necessary to mention that authors do not necessarily use the term “constructivist conceptions of space”

or “constructions of space”, but often focus on specific aspects of space-making or ascription of meaning.

Case studies dominate the available research. Latham and McCormack (2009), for example, introduce the conception of a seminar on urban environments. In a constructivist manner, they view the city as made by humans through their everyday actions. Along similar lines, Anderson (2013, p. 5) describes a project on reading “traces” that a place consists of. Here, university students also integrate their own roles as active agents in constructions of space and illustrate this by composing own films. This connection to visual means (i.e. films or photos) of expression can be identified as a highly recurrent didactical means in the area of constructions of space (for example Varró & van Gorp, 2021; Dando & Chadwick, 2014). This alignment of content with medial expression is notable, as it provides first ideas on how to connect media education and constructions of space. While the didactical reasoning in these articles themselves is generally slim, they display characteristics of learning through media. This means that mediatized, constructed places and spaces are the subject of learning. The learning activities, in a next step, contain elements of producing own content that may convey an image of a place that is personal and charged with meaning. Nevertheless, the didactical concepts that would theoretically embed these connections are not made sufficiently explicit. Therefore, these case studies cannot provide insights into the didactical or pedagogical principles applied to adopt the digital world for Geography as a compartment of social science education.

As we have argued in the beginning of this section, constructions of space in the digital world are always connected with social networks. Nevertheless, didactical approaches that consider constructions of space in the context of social networks as an integral part are rare and comparatively new. An interesting case study for this is presented by Davies, Lorne and Sealey-Huggins (2019). They introduce social networks as part of everyday practice in the production of space (ib.). In line with the visually focused case studies presented above, posting content on Instagram (a social network) is worked into a task for university students. The state of the art on constructions of space in the digital society is thus mirrored in the learning content. On the other hand, the application of Instagram as a learning environment can be considered a continuation of the earlier endeavors that foster production of own, visual content. The creation of own content can present one manifestation of the didactical addressing of social networks in social science education. While Davies Lorne and Sealey-Huggins (2019) do not reference this themselves, their example could be connected to learning through creative practices (section 3.1) as a way of learning in the digital world.

A didactical connection that is, however, mentioned in some case studies is the concept of geographical media literacy (Lukinbeal & Craine, 2009). This concept broadens the concept of visual literacy and has the goal of enabling learners to reflect and apply geo-media competently. Social networks, in this context, are geo-media, as they facilitate, with geotags, place-based hashtags, etc., the ascription of meaning to a place. While social networks are not the focal point of geographic media literacy, the visual aspects addressed

bring attention to geographical information being conveyed in a multitude of forms: texts, photos, videos, etc.. All these medial formats and their combination with each other are an essential part of social networks and contribute to constructions of space. A corresponding didactical frame targeted towards the notion of *literacy* therefor presents one possibility for adopting social science education in the digital world.

While the authors analyzed so far considered the individuality of picture and video-taking, the embeddedness of this process in the context of identity as a combination of characteristics – such as, for example, family and/ or migration background, personal interests or sexual orientation – that can be explored online, lacked. Halliwell (2020) and Hintermann, Bergmeister and Kessel (2020) focus on identity as one facet of constructions of space, as they specifically center on learners' individual involvement in social networks. Consequently, individuality and identity are not conceptualized a byproduct, but at the core of reflections on constructions of space. However, only Hintermann et al. (2020) make their didactical foundation sufficiently explicit: they use the concept of construction, deconstruction and reconstruction (Reich, 2008). This is applied in a three-step procedure (Hintermann et al., 2020, p. 120). First, learners create own “media stories” in pairs. For this purpose, they integrate existing material to reference current societal discourse. In the next, central step, they analyze media stories compiled by other participants along five categories: Representation, Regulation, Signs, Production, and Identities – Target Groups (Hintermann et al., 2020, pp. 120-121). The first category, Representation, includes questions on content visibility and exclusion, actors and their reliability. Regulation asks questions of normative ascriptions of meaning included in the media stories. Building on this, the category Signs poses questions on the means applied in this meaning making. Category four, Production, zooms in on the storytelling elements used. The final category broadens the scope onto addressees and social groups, their possibilities for participation and the construction of identity. The resulting analysis is shared between the learners in the final step. According to Hintermann et al. (2020), this leaves room for reflection and discussion. For future practical implementations of constructions of space, this three-step procedure can be a valuable starting point.

A conjunction of constructions of space, social networks and pedagogical and didactical backgrounds is also found in Kanwischer and Schlottmann (2017). They select a pedagogical approach, the “structural media education approach” (Jörissen & Marotzki, 2009), that aligns with their learning subject: constructions of space in the context of social networks. Similarly to Hintermann et al.'s (2020) central analytic second step, Kanwischer and Schlottmann (2017) also suggest questions to guide the learning process. However, their focus is different. While a critical analysis is mentioned as part of the process, the main emphasis lays on lifeworld orientation. This manifests itself in the reflection of the individual's reference to the self and the world it is situated in. For this goal, the authors apply Jörissen and Marotzki's (2009, p. 30) four dimensions of lifeworld orientation, as illustrated in table 1.

**Table 1: Dimension of lifeworld orientation (Jörissen & Marotzki, 2009); own table**

Reflection of...	Explanation	Example
conditions and limits of knowledge	Questions on the origin and the reliability of knowledge.	Who reports on an event, a place, an issue, etc. on a social network? What aspects do the producers include?
the relatedness to action	Questions on the available and morally responsible options for action.	Which content could I supplement to the discussion on a social network? Which consequences for persons affected would this entail?
transcendency and limits	Questions on the handling of limits or the transcendence of limits.	How do algorithms restrict what is presented to me on a social network? In how far do I “train” the algorithms?
processes of biography-making	Questions on the valuation, ordering and interconnecting of entities in the individual subject.	How am I constructing my life through social networks?

Connected to constructions of space, the first dimension could raise awareness towards who shares information on a place online, while the second dimension could target a reflection on the personal connection to said place and possible actions. Subsequently, the third dimension could serve to spark reflections on the individual entanglement with social networks, brought about by actions such as liking or commenting. Finally, the fourth dimension could focus on the reflection of the construction of one’s own identity through social networks in the context of constructions of space.

In selecting a pedagogical approach to enable learning through constructions of space and social networks, both Hintermann et al. (2020) and Kanwischer and Schlottmann (2017) serve as models for our endeavor. Those works foreground reflective and analytic tasks and aim at enabling learners’ orientation in the digital world and through this provide a didactical and pedagogical foundation of social science education in the digital world. While the authors target only very specific parts of digital phenomena, their approaches align with our goal of digital literacy. However, before we dive into this, let us turn to our second case study.

## 2.2 Social movements

As suggested by the concept of “mediated democracy” (Hofmann 2019) democratic agency is inherently entangled with media technologies. Against the rise of social networks, this relationship becomes yet more apparent: in the digital society, the contention of politics and policies is increasingly carried out by means of online activities. Hence political issues are widely popularized on social media. In this section, we will draw upon research about social movements to illustrate how political action is realized via digital technologies and, subsequently, discuss implications for social science education.

### 2.2.1 Social movements in subject-specific discourse

Current social movements such as *Fridays for Future* or *Black Lives Matter* have primarily been shaped by digital practices on social networks. These developments provide examples of what Celikates (2015) calls “digital publics”. This term denotes the digitally induced “new structural transformation of the public sphere” altering the way political concerns are articulated in both online and offline contexts (Celikates, 2015, p. 172). Situated within those digital publics, emerging social movements are characterized by decentral mechanisms of decision-making and coordination (ib., p. 167). While Celikates thereby points towards shifts in the organizational forms of political action in digital environments, Bennett and Segerberg (2013) delineate its discursive dimension. Introducing the concept of “connective action”, they describe how the formation of social movements in the digital age dispenses with the prerequisite of a “shared ideological frame” which previously characterized protests organized around social issues (Bennett & Segerberg, 2013, p. 42). Nevertheless, this mode of action fundamentally relies on practices of sharing as individuals share their political ideas or personal points of view within their peer network (Bennett & Segerberg, 2013, p. 35). In this sense, digital media do not merely represent supplementary tools that facilitate achieving predetermined goals for political action, but reconfigure the way social movements are organized to begin with. Consequently, the analysis of current social movements showcases that the digital is inseparably connected with discourses about social issues.

Despite interspersing examples of social networks, the two approaches reviewed so far look at social movements that emerge in conjuncture with digital practices in regard to digital media in the broader sense. Berg, König and Koster (2020) specify these perspectives by highlighting the role social networks play in voicing political issues. Drawing on the use of hashtags within the #MeTwo debate, a follow-up to the #MeeToo movement focusing on raising awareness about racial discrimination, the authors emphasize the connective function of hashtags in public opinion formation. By adding a hashtag to a statement, individuals are able to share their personal experience under the umbrella of a larger set of social issues (Berg, König & Koster, p. 92). Thus, the use of hashtags provides users of social networks with the possibility to relate their own point of view to public discourse in a way that contributes to the framing of public concerns (ib.).

Case studies about the significance of social networks in shaping social movements generally confirm what conceptual approaches of digital publics suggest: The horizontal communication structure to be found on social networks opens up spaces of possibility for political engagement. For instance, Howard et al. (2011) point toward the salience of Facebook, Twitter, and YouTube during the so-called “Arab Spring”. Their research indicates that social networks initially shaped the way key events were publicly discussed to then transform people’s demands for political change into offline protest (Howard et al., 2011, p. 2-3). Similar conclusions can be found in studies about the impact of social networks within the context of the Black Lives Matter movement. According to Carney (2016), Twitter served as the primary medium within which specific ideological framings

of events in the aftermath of the shootings of Michael Brown and Eric Garner became, if only temporarily, dominant in public discourse. Complementing narrative processes of ascribing meaning to certain events, Mundt, Ross and Burnett (2018) highlight the pivotal role of social networks for extending the scope of the Black Lives Matter debate by means of building coalitions and mobilizing activists as well as external resources.

Empirical evidence drawn from the cases above suggests a correlation between the usage of social networks and increased political participation. This relationship has been extensively studied in political communication research. While that debate has largely been revolving around social media activities during governmental elections periods (for example Bode, 2012), in recent years, research incrementally incorporated social networks as part of young people's everyday lives. For example, Ekström and Shehata (2016) point out that adolescents' interactions on social networks appear to indeed promote political engagement. However, observed effects on the production of own media content such as video clips or the involvement in concerted political actions were smaller than effects on taking part in political discussions (Ekström & Shehata, 2016, p. 11). As Kahne and Bowyer (2018) conclude from their research, what drives young social network users to actively participate in offline political actions are those online activities which are based on interest in the subject matter at hand as opposed to merely exchanging political content with friends.

Having reviewed the subject-specific literature about the nexus between social networks and political participation, we observed how "the digital condition" (Stalder 2018) affects social practices. As exemplified by current social movements, social networks particularly provide young people with new means to express themselves and, therefore, render engaging in political action more accessible.

### **2.2.2 Social movements in civic education discourse**

The steadily increasing popularization of social topics on social networks also harbors risks. Besides ongoing debates about social media effects such as echo chambers, the dissemination of misinformation is particularly worthy of mention, as increased political participation through the use of social networks also results in a higher degree of sharing misinformation (Valenzuela et al., 2019). Similarly, growing political polarization can be traced back to online political engagement (Lee, Shin & Hong, 2018).

If the participatory potential inherent in practices on social networks stems from the same activities which produce phenomena such as the spread of misinformation or political polarization in the first place, this presents an essential challenge for civic education in the digital society: How can the participatory potential of digital media be used to promote citizens that take responsibility for their actions in digital environments? For only if students learn to both discuss social issues and critically reflect on their own actions in digital settings, they can act as responsible citizens in an increasingly digitalized society.

Against this background, the interest in digital media within political education has risen tremendously. So far, the research has been dominated by programmatic contributions that emphasize the need to use young people's digital life-world as a starting point to encourage them to partake in democratic action (Möller & Lange, 2018). This approach is grounded in the didactical principles of subject- and action-orientation which take up the prior knowledge and experience of acting subjects in order to develop perspectives for political participation (Möller & Lange, 2018, p. 104). In a complementary suggestion, Emde (2021) proposes to integrate forms of engagement common in social movements themselves in educational settings as part of civic learning processes to mimic modes of action that students are familiar with.

Turning to examples of implementing these digital practices in civic education, a prevailing topic is the spread of mis- and disinformation, commonly referred to as "fake news". While endeavors such as these address a pressing phenomenon in our digital society, they shed little light on participatory practices that ascribe meaning to issues characterizing social movements. To a smaller degree, however, approaches that fit our aim of learning through the digital can be found within the existing literature.

For instance, Kenna and Hensley (2019) describe three social media techniques in classroom settings designed to enhance students' abilities to "discuss public issues facing society by expressing their thoughts, feelings, and concerns" (Kenna & Hensley 2019, p. 2). Firstly, teachers could instruct students to create character-restricted posts offered by micro-blogging services such as Twitter. Set aside from the main classroom events, this technique encourages students to share their own perspective on the subject matter at hand in a condensed manner (ib., p. 4). Secondly, teachers could provide an open forum within which students can get into conversation. By enabling students to ask or respond to questions that might occur during a presentation, this allows for a more in-depth discussion about a specific topic (ib., p. 5). A third conceivable technique comprises the use of social networks in a "real-world setting" (ib., p. 6). This method is detached from specific classroom topics yet guided by the teacher. Here, teachers assist students in constructing or further developing a social network account in order to help them learn finding and critically evaluating online sources of political information tailored to the student's interests.

As these three techniques all attend to social media practices students are already familiar with, they contribute to them learning to "purposefully, responsibly, and meaningfully channel those amenities afforded by social media use" to strengthen civic participation (ib., p. 2). Therefore, Kenna and Hensley's (2019) proposal presents an elaborate example of how to integrate digital practices conducted by social movements into learning processes. In encouraging students to actively engage in communication and content production on social networks, they promote a way of civic learning that demonstrates spaces of possibility for taking political action and enables students to reflect on their decision-making in digital environments.

### 3 THE DIGITAL IN SOCIAL SCIENCE EDUCATION

We opened this article by illustrating the inseparability of the digital and society as such. Up until now, we have introduced two corresponding examples: constructions of space and social movements. Both examples serve to show how the digital is manifested in everyday life and shapes societal processes on the micro-, meso- and macro-scale. For constructions of space, geography-specific didactical examples already exist (cf. Kanwischer & Schlottmann, 2017; Hintermann et al., 2020). While we believe that these approaches have great potential for the specific examples, we see the need for a broader foundation to address the digital in social science education on a broader scale first. In a future step, an inclusion of the existing approaches could be targeted.

To respond to the digital in social science education on a broader scale, it is necessary to identify pedagogical approaches that take an integrative stance towards a digital society. Such an approach is necessary because it enables us to take into account 1) the digital world as one side of the coin and 2) foster digital literacy. Following these requirements, we have identified one approach that can be particularly well applicable: Creative design as a practice (Richter & Allert, 2015). Here, the involvement of human actors with their digital environments is a prerequisite for all following considerations. In this, the approach aligns with the establishment of a digital society that we have outlined in the introduction.

Creative practices in this context can be defined as “those collectively shared patterns of action and interpretation that orient the productive engagement with those situations that are experienced as uncertain, ambivalent or unsecure and hence are open to multiple forms of interpretation and interaction” (Allert, Richter & Albrecht, 2018, p. 12). Following this, creativity is identified as an ability that is called for constantly. Especially in a digital society, the large variety of ambivalent environments is amplified through social networks, as opinions are multifarious and can be communicated by everyone.

It is important to note, in this context, that “creativity” here is defined from a relational stance as opposed to a cognitive or individualistic view (Richter & Allert, 2015). This means, that creative practices are embedded in contexts and become relevant in relation to encounters with others and the environments they recursively contribute to. In summary: in the digital world, creative practices are the norm, not the exception. Through the presence of social networks, ambivalent and multifaceted interpretations of the world are omnipresent and require constant creative engagement. Creativity is therefore the *modus operandi* of the digital society.

When applying creative practices with the goal of addressing a specific subject matter, this pedagogical approach needs to be reevaluated in the light of the subject-specific requirements. For social science education in the digital world, creativity, in its emancipatory interpretation, can contribute particularly in the area of fostering participation and innovation (Scharf et al., 2019). These are of ultimate relevance for social science education, as they form constituents of fostering the societal participation of actualizing citizens (cf. Bennett, 2009). Such citizens can explore their own needs and take

their own decisions through developing new ideas. This demonstrates that creativity is closely interconnected to reflexivity, as the exploration of the self is channeled into the identification of solutions (Scharf et al., 2019). For social science education, creativity in learning through creative practices should thus be narrowed down with the goal of participating through creative approaches to societal problems. This means, that in formal learning contexts, learning through creative practices should be applied to social science content that holds potential for fostering citizenship in the digital world. As we have illustrated in 2.1 and 2.2, constructions of space and social movements on social networks pose multifaceted challenges for citizens in a digital context. Learning through creative practices could present one way of reflexively encountering these everyday realities through “being creative” and by finding approaches to addressing the resulting issues in relation to the self and the world. To foster precisely this creativity consequently has to be a part of social science literacy. The question of how to include creativity as a defining principle into social science education in the digital society remains, however. We will address this issue in the following paragraph.

### **3.1 Creative practices in social science education**

Applying Richter and Allert’s (2015) and Allert et al.’s (2018) arguments onto social science education, the following characteristics need to be exhibited by learning environments to facilitate learning through creative practices in social science education:

- Learners create own content.
- Learners reflect their own creative practices (in the context of social networks, for example).
- Learners experience the embeddedness of their own creative practices in collaborative creative practices.

For social science education, these characteristics need to be applied with the goal of citizenship in the digital world in mind, as outlined in 3. Here, educators need to provide learning environments that facilitate those three actions as a foundational level. This is a demanding task of its own, as these environments need to allow for a broad enough set up for creative practices to be applied in a real-life manner. The order of the three characteristics is not meant to imply a hierarchy. Instead, creating, reflecting and experiencing embeddedness can occur in all possible orders or simultaneously. In this, the characteristics of learning through creative practices aim at mirroring the navigation of everyday life in all its “messiness”. We will elaborate on this in the following:

#### **Creation of own content**

As Richter and Allert (2015) understand creativity in an all-encompassing sense, the creation of own content can refer to all kinds of actions that require learners to productively engage with their environment: designing posts, taking pictures, writing

comments or simply (but in a metacognitive manner) “scrolling” through one’s social media feed are, among many others, viable options. Adopted for social science education in a formal learning context, all these actions can – theoretically – become the focus of subsequent reflection. However, seen through the lens of societal participation, instructors should analyze suitable content in advance. This way, they can suggest focal points for the creation of learners’ own content.

### **Reflection of one’s own creative practices**

Drawing on this, the reflection of one’s own creative practices can focus on any or a combination of these various actions. In reference to Dewey (1938) and Schön (1983), Allert and Richter (2017) define reflection as situated and as bound in social interaction. Therefore, they view reflection as one way of accessing possibilities for action and the imagination of alternatives (ib.). This can become particularly fruitful for the goal of citizenship in the digital world, as societal change could be rendered the point of concern. For formal social science education, this endeavor may be channeled through the concept of “reflection in action – reflection on action” by Schön (1983). Through this, a creative action, such as compiling a post, could be, on the one side, reflected upon during the process itself – for example regarding the impulse to take a photo or the choice of caption. It could, on the other side, be reflected back upon later on – for example regarding other users’ reactions. In this sense, the reflection on creative practice asks learners to “step back” from their consciously or unconsciously performed actions to identify patterns or habits that govern processes of making the “self” and the world surrounding it.

### **Experience of the embeddedness of own creative practices in collaborative creative practices**

The experience of the embeddedness of learners’ own creative practices in collaborative creative practices is essential to the departure from both individualistic and cognitive positions on creativity that Richter and Allert (2015, p. 2) present. Richter and Allert (2017) also suggest that learning is a social, collaborative situation where learners and educators come together on an equal level. This assumption cannot entirely hold true for the inherent restrictions of formal educational settings. However, adopting this mindset may provide possibilities for experiencing the dependence of one’s own creative practices on socially negotiated and mediated practices. An example of this is contextualizing the practices carried out in the creation of own content through comparing or discussing them with others. This constituent of learning through creative practices must not be neglected, as it balances out the closer focus on the “self” prominently featured in the first two characteristics introduced. In this, it also refers back to the features of the digital society as presented by Stalder (2018), who introduces “communality” as defining for the digital condition. Under the scope of fostering citizenship, experiencing embeddedness of own creative practices may also be supplemented by material such as posts, maps, photos, etc.,

selected by the instructor. This could contribute to a more nuanced discussion. It could also aid to avoid learners “arguing in a circle” and simply repeating each other’s ideas.

#### **4 DIGITAL LITERACY AND SOCIAL SCIENCE LITERACY AS TWO SIDES OF THE SAME COIN**

As varying definitions of digital literacy have been introduced over the last twenty years (cf. Belshaw, 2012 for an overview), we will begin with a short introduction of what we mean by digital literacy in the context of social science education. The term “literacy” today is no longer limited to the traditional notion of reading and writing, but in our context refers to navigating the digital world. Through this, it builds on notions of “social literacies” that are applied in literacy practice (Street, 1995). This theory stresses the importance of the application of literacy as situated in specific situations. As has been continuously referred to in the previous sections, this “situation” for us is the digital society. Building on the concept of social literacies, we extract a definition of digital literacy through the lens of social science education as being able to participate in the digital society responsibly and sovereignly. “Digital literacy” is selected here purposefully opposed to the concept of “digital competence”, as we seek to emphasize the holistic notion of the digital world. For a thought-provoking impulse on the related discussions in media education, as well as a possible reworking in light of a digitally augmented world, see Kačínová and Sádaba-Chalezquer (2022).

Our definition of digital literacy expands from simply “existing” in the digital world (e.g. handling a smartphone or googling information) to critically evaluating one’s digital surroundings. This surfaces when deconstructing the power structures underlying digital information (visual, audiovisual or textual) or in creating own ideas. Here, our definition is in line with what Buckingham (2006, p. 25) refers to as a “more critical notion of literacy” in a digital context. Additionally, we combine this view of digital literacy with definitions of digital literacy as “situated practice” (cf. Hansen, 2018, p. 150). Such approaches acknowledge that the digital reconfigures the world and thereby learning contexts themselves. Therefore, the related practices cannot be fully “escaped from” or abandoned through critical reflections, but always remain part of the social practice of interacting with the world and others. Being digitally literate consequently also necessitates being critical in practice. Furthermore, it is accompanied by the awareness that the nature of social practices renders a dissemination from them impossible and, more importantly, nonsensical. Productive interaction with the world and others would be stopped.

This also holds true for social science literacy, which can only arise in meaningful interactions. In the digital age, social literacies in areas relevant to social science education for actualizing citizens, as defined by Bennett (2008), are situated in digital practice. Thus, social science literacy is part of digital literacy in areas of concern of social science education and vice versa. What these areas are exactly (beyond the examples we provided), needs to be discussed in the future.

For corresponding points of orientation, we would like to reference the two issues published in this Journal on “social science literacy” in 2010 and 2011 respectively (cf. Weber & Szukala (Eds.), 2010; Weber (Ed.), 2011). More than a decade ago now, the relevance of the digital for social science education was not explored. Contrasts between our definition of social science literacy as woven into digital literacy, and prior approaches can thus be identified. However, this does not imply a devaluing of topics of social science literacy themselves as defined in the past, but presents a reason for reevaluating these topics through the lens of the digital. This is increasingly pressing due to the changed demands in citizenship education in the digital age (cf. Bennett, 2008).

Circling back to our examples above, it becomes evident how learning in social science education needs to be situated in practices that constitute the world – and this world is digital now, as constructions of space and social movements illustrate. Acting responsibly and sovereignly in this world is thus necessary to foster digitally literate citizens. Here lies the core of our argument, which has been used similarly in education discussions for decades: in order to become digitally literate, learners need to be immersed in the everyday environments and interact in the contexts of the digital world. In short: only through creative, social, situated practice can digital literacy be evoked.

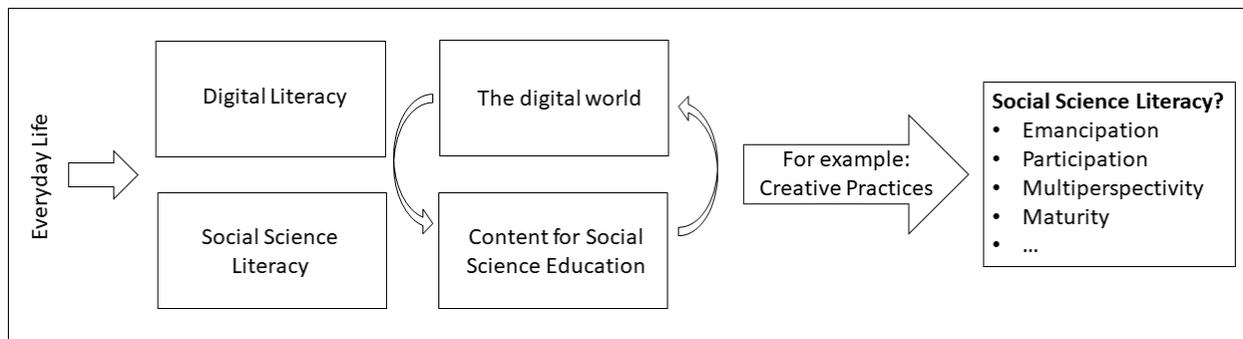
What we tried to demonstrate here is that digital literacy and social science literacy symbolize two sides of the same coin. On one side, including the digital world in social science education through creative practices also contributes to the goal of digital literacy. On the other side, employing creative practices in digital literacy in social science education for actualizing citizens renders the digital world a topic of interest. This is because the digital is part of practice already and through addressing digital literacy, educators encounter the digital world as the environment to foster citizenship in. The digital world does thus not necessitate new goals for social science literacy. However, moving past a technology-focused perspective on the digital itself and viewing it as the “noise floor” of everyday life calls for new approaches, such as learning through creative practices. These are, nevertheless, subordinated under the aforementioned objective.

## **5 PROSPECTS FOR RETHINKING SOCIAL SCIENCE LITERACY**

The initial question we posed, was the following: Which theoretical and pedagogical approaches are applied to adopt the digital world for social science education and in how far can learning through creative practices offer new perspectives? The examples introduced in this article illustrated that concrete pedagogical approaches to the digital world are available. However, it also became evident that a broad-ranging consensus is not yet available and additional questions regarding the configuration of social science education in the digital age arose, that need to be answered in the future. Learning through creative practices was identified as one perspective through which social science literacy could be reconfigured in the digital world. Nevertheless, it is but one approach and future analysis could reveal additional angles. Therefore, further work is necessary to establish a conflating theoretic foundation. Here, figure 2 highlights the expected result

that could be explored in future research: a reconfigured social science literacy through digital conditions.

**Figure 2. Adopting the digital world through creative practices reveals the demand for a rethinking of social science literacy (own illustration)**



Following concepts of digital society (cf. Stalder, 2018; Jandrić et al., 2018), this reconfigured social science literacy must start with the assumption that learners' everyday life is digital. Consequently, their life-world is the environment in which digital and social science literacy are applied. In these everyday situations, people make sense of the world and interact with it and each other through social practices. This is why the concept of creative practices (as outlined by Richter & Allert, 2015) could be inserted to reconfigure digital literacy and social science literacy as first constituents of a larger picture. Through this approach, learners engage creatively and collaboratively with the digital world as social science education content. To reflect these 'two sides of the same coin', we suggest merging social science and digital literacy in order to reconfigure social science literacy in light of the digital age. A reconfigured version could then focus questions of emancipation and participation in a world of multiperspectivity. It could also contribute to a reevaluation of maturity targeted towards digital sovereignty as the goal of social science education for actualizing citizens in the digital world. Ideally, the prefix "digital" will disappear and become outdated over time, as "the digital" has already merged with the former pillars of the analog world.

This "flowchart" of digitalization in social science education is a first sketch and should be expanded further. Of course, "creative practices" are not the only way to reach the goal. As mentioned above, the structure of a reconfigured social science literacy could be infused with successful examples of application. These include, for example, pedagogical approaches that have been adopted for the digital world in social science education (such as Jörissen & Marotzki, 2009 or Reich, 2008). Here, both the concepts referenced and their adaptation in the context of social science education need to be taken into consideration. Hintermann et al.'s (2020) categories of analysis could serve as an example for an elaborate analysis of digital material. Correspondingly, Kanwischer and Schlottmann's (2017) adaption of Jörissen and Marotzki's (2009) dimensions of orientation could supplement a reflexive approach. Additionally, clarification regarding additional aspects

for a reconfigured social science education is vital. Economic or history education could be investigated to provide additional aspects of social science education not considered in this paper.

The manner in which discussions on digital literacy are situated in a discourse on media literacy or media competence was not explored in this paper. Nevertheless, it should be noted that the development of new approaches, such as summarized by Kačínová and Sádaba-Chalezquer (2022) under the term “augmented competence”, simultaneously continue in the field of media education. In the future, they could serve also as points of reference for the further integration of digital literacy in social science education.

On a broader notion, both subject-specific approaches and interdisciplinary comparisons resituate our endeavor in citizenship education in the digital age. As societal participation is increasingly approached from a bottom-up perspective, the potential for participation through digital structures, such as social media, is great. Therefore, learning through the digital can aid learners in applying everyday practices with the goal of societal change. Furthermore, the role of an actualizing citizen can be embraced more thoroughly. This is part of a greater goal, i. e. digital sovereignty. Being able to think reflexively and critically and to make decisions accordingly can thus tie together concepts of digital literacy and social science literacy under the premise of citizenship education. It can also lead to a conception of social science education that targets digital and social science literacy equally and therefore meets today’s uncertain and ambivalent lifeworld with corresponding learning contexts. By navigating these, learners practice responsible actions and social science education experiences additional relevance through the digital.

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