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Rebuilding our Toolkits for the future - How social science research educators changed their teaching in 2020 and 2021 to be fit for a digital future

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Abstract

Adaptation to digital teaching during the COVID-19 crisis was very much discipline-specific. Subject-specific pedagogical concepts were sometimes more or sometimes less easy to transfer to this new environment. In particular, teaching areas like social science research methods (SSRM) that on the one hand require personal interaction, practical application and individual support of students, and on the other hand have little previous standards and didactic know-how, with digital or virtual teaching elements, faced specific challenges. In an Austrian interview case study, experiences of SSRM educators have been analyzed. Digitization related changes are less apparent on the content level, but pronounced at the didactic level. Main challenges are: encouraging students' attention and participation, providing opportunities for good collaboration on all levels. Chances for the future are seen in the newly expanded pedagogical toolbox. Implementing tools supporting communication in the virtual space could free resources for direct support for students.

Keywords: *Social science research methods; Research Education; Distance Teaching; Acceptance of Distance Teaching; Case Study; Austria.*

1. Introduction

The effects of the digital transformation of society on higher education have long been the subject of controversial debates. However, the COVID-19 pandemic thwarted this discourse and initiated a far-reaching, potentially long-lasting transformation of the teaching and learning process as digital elements were moved to the center of academic education (Prandner & Hasengruber 2021).

The resulting challenges and strategies to adapt to this situation, as well as the acceptance of virtual learning environments and digital teaching initiatives, have been addressed in many research projects (e.g. Moorhouse & Kohnke, 2021; Núñez-Canal et al., 2022). While all academic disciplines have been confronted with this digitization push, specific opportunities and challenges are also tied to disciplines as subject-specific pedagogical concepts were more or less transferable to this new environment. This paper takes a closer look at effects of the digitization push in the field of teaching social science research methods and methodology, which has generally gained in importance as the datafication of society continues and interest in societal data is increasing (Döring & Hocks, 2021).

This particular domain of higher education is characterized by face-to-face interaction, practical application and immediate and individual support for students by instructors, on how data collection and analysis have to be conducted. In this respect, there was little experience and didactic knowhow on how digital teaching elements – especially distance teaching – can be included in this field, despite the high level of technology use for computer-based data collection and data analysis. Accordingly, for a long period studies have shown that social science research methods courses are often individually tailored and there is little standardization, resulting in the perception that they are challenging for students and lecturers alike (Carter et al., 2017).

Against the background of these particularities, we examine the perceived advantages and disadvantages that research methods educators identified, after introducing digital elements to their teaching repertoire. The empirical foundation for this discussion is based on the *Digitize!*-project, a case study from Austria, by using qualitative interviews with social scientists who teach social science methods and/or methodology at Austrian universities.

The following section two outlines the current state of research and theoretical arguments, while section three gives an insight into the methodological approach. Subsequently, the results are presented in terms of perceived advantages and disadvantages of virtual teaching environment's, aspects of teaching particularly affected by it, and how educators deal with it (4). A discussion concludes the paper (5).

2. The specifics of the digitization of social science education research

Prior to the COVID-19 pandemic, the number of digital elements in higher education was steadily increasing, but skepticism was generally high and especially the push for digital technology based virtual teaching environments (e.g. distance teaching via tools like *SKYPE* or *ZOOM*) was seen as problematic (Ali, 2020). Institutional resistance to adapting to virtual teaching formats has been particularly strong in disciplines and courses primarily concerned with teaching application-oriented content based on interactions between students and instructors, like social science research methods (Prandner & Hasengruber, 2021). This comes to no surprise, as missing homogeneous didactic approaches in methods teaching left instructors with fewer opportunities to draw on a canon for virtual learning and pedagogical digitization strategies (Nind & Lewthwaite, 2018). Often the quality of digital lessons depends on the instructor's individual commitment as well as his or her media and communication skills (Bolliger & Martin, 2018).

However, a recent case study from Austria shows that there is at least some acceptance of virtual teaching environments (Prandner & Hasengruber, 2021), as two-fifths of the respondents showed interest in implementing digital aspects in their post-pandemic teaching. It also highlighted that educators who perceived preparation and follow-up of virtual teaching as more time-consuming and interactions with students as more difficult were less willing to implement digital elements in their teaching, while respondents who described themselves as open to new didactic methods were more likely to include digital elements in their courses.

3. Methods Used

The data that will be used in this case study was collected as part of the *Digitize!* initiative, which is funded by the Austrian Ministry on Education, Science and Research (*BmBWF*). It aims to continuously accompany the digitization of social science research methods education in Austria.

The population for the study was defined as public university faculty teaching social science research and methods courses in the four core disciplines of the social sciences in Austria: Sociology, Political Science, Communication Science, and Educational Science. A deliberate and criterion-guided selection of individuals was made, including wide variations on the one hand and minimum and maximum contrasts on the other (Hensel & Kreuz, 2018). The dimensions of subject discipline, position, university location, and gender were used. Between March and August 2021, nine semi-structured narrative driven interviews were conducted. Interview duration varied from half an hour to nearly two hours.

Four women and five men between 40 and over 60 years of age from six Austrian universities were interviewed. The positions of the interviewees ranged from scientific staff without (n=1)

and with doctoral degrees (n=4) to associate professors (n=2) and full university professors (n=2). Three of the interviewees work as external lecturers at the university and are not or no longer employed there full-time. The desired breadth of disciplines was also achieved: Sociology (n=3), Political Science (n=2), Communication Science (n=2) and Educational Science (n=2).

The interviews were intended to stimulate (biographical) narrative explanations; especially when it came to the interviewees understanding of social science research methods, as well as their current research and teaching agenda. On the topic of digitization, questions were asked about how the increasing digitization of society affects research and teaching. Data analysis was conducted via thematic coding (Gibbs, 2007), with the use of *MaxQDA 2020*.

4. Perceived advantages and disadvantages of digital instruction of social science research

Overall the interview partners experience pandemic-driven teaching in the virtual space as a boost for digitization. Even if not every one of them completely welcomes digital elements in their teaching, there is still an awareness that the experiences of the last two years will permanently change the pedagogy in higher education – digital elements have become indispensable to university level teaching. The interviews thus reflect what recent quantitative research for Austria has also shown: While there is a certain amount of lecturers, who want to reduce digital elements in the future teaching once again, there is a sizable amount "*advocates*" and "*pragmatics*", who intend to keep digital elements in their teaching, either because they believe in digital elements from a pedagogical perspective or because they do not want to let accumulated experiences, acquired competences and adapted concepts and teaching materials unused (Hasengruber et al., 2021). These arguments can be seen in most of the interviews, as the two following statements – answers to the question if they want to continue with digital in the future – illustrate:

"So as far as teaching is concerned, I think that we have actually made a qualitative leap here in terms of digitizing [teaching], which is important. But again, I warn against completely falling for this technology hype and believe that we can now perfectly design a university purely in online mode" (Interview 01).

"I believe that this digitization, i.e. the forced digitization, has now triggered an enormous boost. So, I also think that in the future we will be confronted with digital environments much more in teaching and research than in the past. So, I think that even if we return to classroom teaching, we at the department will do it in the next academic year, in such a way that we will do about half of the courses virtually and the others in person" (Interview 08).

The challenges described by the interviewees in connection with the abrupt digitization do not refer to the content being taught. The continuous digitization of society, which was already apparent long before COVID-19, also has an impact on social science methods, but obviously the teaching content was not so strongly influenced by the pandemic. The how of teaching is coming to the forefront and has to be reflected upon anew due to the digitization push.

Ultimately, the same content must be transported differently, both in a virtual space created by tools like e.g. *ZOOM* or *WebEx* or using digital platforms that enable communication and content use like e.g. *MOODLE* or *BLACKBOARD*. Accordingly, the interviewees perceive the actual challenges and opportunities on a didactic level. Their main concern regarding digital teaching was the fact that virtual teaching became the norm and paying attention to the lecturer as well as the lecture itself may be difficult:

"[…] I actually admire the students who are actually committed, in the vast majority of cases […] When a survey comes out of nowhere and the whole audience answers immediately, then you know that they are actually all on board and that is very gratifying. However, if it takes some time till half of them press a button, then you know that they have moved on to other spheres, […] I also admire the fact that they are actually relatively present in an online lecture for 1.5 hours [...]" (Interview 01).

To deal with such changes, educators must reflect on teaching methods, mastering their use and finding sensible usage scenarios. The interviewees repeatedly use the image of a toolbox to show the necessary adaptations. In order to design good digital teaching in the future, the didactic toolbox must be rebuilt. After trying out new didactic tools during the pandemic it is now necessary to establish a systematic use. It can be interfered that the interviewees see good social science methods teaching in the virtual space as quite different to in-class teaching. On a general level the most common aspect named was, that they had to rebuild their toolbox regarding their approaches to teaching to keep student's attention and sort out unnecessary tools or tools that may not be necessary:

"I mean, I've also had a learning spurt myself, due to corona, simply to use systems like *MOODLE* or other systems even better or to use them more systematically" (Interview 05).

"It cannot be that you somehow sit down in front of *ZOOM* and record something and then the students listen to it relatively unmotivated at some point. It has to be interactive; you have to think about how to manage it well interactively with breakout sessions, with survey questions for example, which I also like to use quite a bit now. The fact that such controversial content is surveyed in the lecture and then discussed in the lecture" (Interview 01).

"Of course, you have to get involved, you have to use the different tools, these innumerable tools. Use it for the right tasks, but then it gets even better I think" (Interview 03).

"So, the learning content remains the same. So, the basic analysis that you want to convey remains. The exciting thing is actually that it is now starting a step further back. It's now purely about the teaching and learning methods, where you have to make certain adaptations [...] you are now trying to convey this learning content differently. [...] You now have a bit of a different methodological toolbox at your disposal and you have to try to use it to develop content in the background" (Interview 02).

As mentioned above, methods teaching requires successful interaction between educators and students, often including individualized repetitions of learning steps, for example during feedback procedures, resulting in new ways that help the students to engage with the material. The interaction should ensure that instructions on data collection and evaluation methods are properly understood and applied and allows direct questioning of students in case of ambiguities. While most of the responses focused on distance teaching several answers go deeper. Those may include strategies using digital elements that are independent of learning in virtual spaces like e.g. flipped classrooms that use asynchronous tutorial videos, interactive assessments that can be completed at the students' own pace as well as assignments that can be completed with their own computer equipment – and not the lab equipment of the university, establishing a more familiar work pattern. Such strategies using asynchronous, unsupervised learning may be combined with synchronous virtual and/or on-site learning activities, while reducing the content load for interactive sessions.

The value of such strategies can be seen when combined with virtual learning scenarios in e.g. *ZOOM* or *WebEx*-Rooms, as those tend to inhibit active participation. It is assumed by most of the interviewees that it is easier for students to ask questions in a typical classroom. Accordingly, those doubt the applicability of virtual teaching formats for future research seminars and practical training, as those require interaction among lecturers and students as well as cooperation between students. Obstacles to collaboration and discussion are assumed to be tied to the lack of personal relationships and too much anonymity:

"But the interesting thing is that students somehow can't form groups so well virtually, because they can't make new social contacts so well virtually. That's quite interesting. So, group work works much worse than before, which I would not have expected. […] Even then, when they are in the group, it is much more so, they say so themselves, that they divide up the individual parts and that somehow, if you don't know each other, you don't have such a good basis for discussion. […] they describe it in a way that it's all so anonymous, because some people don't turn on the camera or the camera doesn't work for some people. And if the whole thing is so anonymous, they are much less motivated" (Interview 08).

However, if a social science methods lessons with virtual participation is designed based on interaction and if content is also made accessible regardless of time, digital elements can have a positive effect. The potentially higher inclusion of students was highlighted as an advantage

of using digital elements in teaching. Participation in virtual learning scenarios is independent of the distance of the student's place of residence and mobility options. Asynchronous elements, such as video recordings of courses, enable time-independent learning, which is a particular advantage for students who must work or meet caregiving obligations. Recordings can also support international students and people who are not native speakers:

"It has advantages when there are records of it, it makes the whole thing much more inclusive. On the linguistic level, on the level of students who perhaps have caring responsibilities or mobility restrictions, even if they are only temporary" (Interview 03).

5. Discussion

Summing up, the role of the importance of faculty-student interaction in teaching social science research methods can be highlighted. Based on quantitative research, the perception of interaction with students as more difficult in distance mode was identified as an indicator of the acceptance of a virtual teaching environment (Prandner & Hasengruber, 2021). Based on qualitative data, this paper was able to specify which aspects of interaction are affected by digitization. The interviewed lecturers emphasized more strongly the disadvantages for students when it comes to both asynchronous and synchronous virtual teaching: attention, active participation and opportunities to ask questions, as well as good collaboration in working groups could be more difficult in the context of virtual teaching.

The interviewees associate the digitization of higher education primarily with virtual teaching and the need of new didactics in this field. This comes to no surprise after the last two years, shaped mostly by the pandemic. However, the provided narrations go deeper and show that some elements of this crisis mode teaching should be kept in the future and become part of the new didactic toolboxes are not only tied to virtual teaching over distance. There are scenarios where the interviewees highlight that there may be chances to improve personal contact and immediate individual support, when expanding the pedagogical toolbox with the implementation of synchronous as well as asynchronous digital elements: The use of (pre-)recordings, materials and interactive elements on digital platforms to forester interaction and more inclusive out of class learning, leaving time and resources during interactive sessions to concentrate on working with the students and their state of knowledge. However, the interviews also showed a realistic assessment of the problems tied to virtual teaching environments, mostly tied to the limited ways to "read the room".

Furthermore, the interviews support previous quantitative data (Prandner & Hasengruber, 2021), insofar that an open attitude towards new didactic approaches promotes the willingness to implement digital elements in future teaching. The fact that certain elements of digital teaching such as pre-recorded videos or interactive materials for pre-class preparation are very time-consuming to create was mentioned in some of the interviews, but

was less emphasized compared to the importance of this aspect in the context of the quantitative analysis (ibid.). Perhaps this is also due to that the preparation and follow-up of teaching research methods are usually time-consuming.

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