CHAPTER 11

Implementing Digital Transformations in Higher Education Following COVID-19: A Norwegian Case Study

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Introduction

Over the past two decades, higher education (HE) across the Nordic countries has been the target of numerous government-mandated reforms, including digitalization (Tømte et al., 2020). On the whole, these reforms aim to ensure effective and efficient public service delivery. These efforts have been accelerated since the outbreak of COVID-19 in the spring of 2020. Digital education and the expansion of digital systems

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have been an unavoidable alternative for academic institutions the world over (Pinheiro et al., 2019). These initiatives include upgrading and introducing new digital systems, training academic and non-academic staff on new digital platforms and systems, providing online support to resolve connectivity issues and other emergencies, and diffusing new digital technologies to faculties and departments (Orr et al., 2019; Tømte et al., 2019). These initiatives highlight, among other aspects, that digitalization requires a substantial assembly of resources for effective and efficient implementation (Swanson, 2012).

Organizational digitalization entails adjustments in resources, staffing, culture, decision-making, communication, and reward systems (Lokuge et al., 2019). This means that the successful implementation of digitalization does not only depend on the scope and nature of digital technologies but also on ICT decision-makers and a supportive bottom-up organizational culture (Nylén & Holmström, 2015). Scholars have observed that organizations' readiness to change is a critical factor in digitalization outcomes (Weiner, 2009). Studies suggest that many change efforts fail in their intended aims and do not foster sustained change due to the lack of preparation or readiness of the organizational members for change (Fullan, 2007).

Indeed, organizational readiness for change is considered a critical antecedent to the successful implementation of changes and innovation in organizations (Lokuge et al., 2019; Weiner, 2009). According to Gartner (2009), a major technology consulting firm, public and private organizations lose substantial opportunities due to the lack of readiness to change (Gartner, 2009). Studies on HE dynamics show that universities' central administration, faculty, and departments readiness to change are crucial factors in adapting to a new and complex digital environment (Ahmad & Cheng, 2018; Ifenthaler et al., 2021).

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One element however that is often underplayed in the literature on organizational readiness, is that within organizations, contestations and tensions over different approaches to what constitutes desirable change and how such change should be implemented are the norm, rather than the exception (see for instance Hover & Harder, 2015 on organizational change for sustainability in higher education). A similar trend is found in the literature on digital transformation in higher education (e.g. Benavides et al., 2020; Kopp et al., 2019) and beyond (Vial, 2019): digital transformation is often assumed to be a linear process with, at least in principle, clearly defined content and processes, with obstacles encountered on the way towards what is often described as an inevitable process (Stief et al., 2016). In previous work (Laterza et al., 2020), we have critiqued this stance and proposed instead to pluralise the concept into *digital transformations* (DTs), leaving behind the assumption of a linear move from something worse to something better, but rather hinting at the variety of processes and outcomes that DTs can encompass, with rather uneven outcomes that are often context-specific and cannot be determined a priori, or by uncritically applying what works in one context into a different one.

Drawing on Weiner's (2009) theory of organizational readiness for change and Lokuge et al.'s (2019) conceptualization, and taking a more critical approach to organizational readiness that takes seriously actors' different and sometimes conflicting understandings of change and digital transformation processes, this chapter explores the implementation of digital tools and systems in Norwegian HE prior to and following the outbreak of the COVID-19 global health pandemic. The analysis focuses on the challenges and bottlenecks associated with digital implementation in a complex environment by focusing on contextual and situational factors. The chapter investigates ongoing developments in Norwegian HE in the context of dynamics across the Nordic region, illuminating the micro-level practices, experiences, and responses to digital transformation of university actors at multiple levels in a Norwegian university selected as the main case study. The following research question is posed:

> *What characterises the implementation of digital transformations initiatives (within teaching) at a Norwegian university, and what has changed following COVID-19?*

Digital Transformations in/of Nordic Higher Education

Digital Transformations Enters the Field of Higher Education

Governments in Europe and beyond have focused on adopting digital transformations (DTs) policies as means for preparing their societies and public sectors to the challenges posed by wicked problems such as climate change, urbanization, globalization, and growing socio-economic inequality, among others. The HE sector has also been the target of such "modernisation" measures, and higher education institutions (HEIs) across Europe have launched digitalisation strategies or added Information Communication Technologies (ICT) perspectives as part of their strategic plans. Such top-down governance processes for DTs of HE are thus observed at multiple levels: at the *macro* level, as governments propose new directions for HEIs to take advantage of the opportunities brought by DTs; at the *meso* level, as HEIs are responding to governmental policies and strategies by developing their own strategic frameworks and organizational architectures that address DTs in its various forms; and, finally, at the *micro* level, as academic communities adjust their norms, values, and practices to the emerging digital environment.

High quality digital infrastructure influences quality work within HEIs, and these may benefit from overall support services and infrastructure provided by governments. Infrastructure as a service thus includes all the data resources stored in data centrals or data rooms, such as servers and networks. The various services have both common features and differences that make them suitable for different purposes. As a result, HEIs may select infrastructure services appropriate to their profiles and needs, such as cloud services and data warehouses. These digital services touch upon key security issues in diverse ways and may encompass areas where edtech-providers, such as Canvas, Microsoft, Apple, Google, and the like (see Chapter 2 in this volume), and HEIs and governments hold conflicting values and strategic interests.

In a study of HEIs in the UK, Komljenovic (2022) calls for regulation beyond the question of data privacy. While digital data property is already a reality, governed by terms of use, and protected by the intellectual property rights regime, the study underscores that, as COVID-19 has led to emergency pedagogy, concerns of data value redistribution have been less

debated. Consequently, there is a need for renewed public awareness and political action to address issues of value extraction and redistribution within HEIs. Similar debates are observed in Norway, e.g., around the issue of intellectual property (IP) rights when it comes to procurement and use of learning management systems (Høivik, 2022).

From a leadership and governance perspective, DTs interferes with a range of HEIs' duties within the broader scope of their relatively autonomous status as public institutions. This raises several challenges for management and administration at multiple levels (Duarte & Martins, 2013). Some HEIs have opted for embedding or integrating ICT in their overall strategic and operational plans, whereas others prefer to have distinct, or separate approaches (Tømte et al., 2019). Nonetheless, to set these plans into practice, there is a need for governance capacity. The latter implies guidelines for what types of digital infrastructures should be pursued, the use of digital technologies and, also how and by whom should these guidelines be elaborated, and in what ways they might be communicated to various user groups. A key finding from a systematic literature review of HEIs in an international context (Khouja et al., 2018), indicates that there are several ways to implement ICT governance. The study concludes that, regardless of contextual variations, there is a need to establish a committee structure for ICT assets and open and regular communications among the actors involved, including ICT staff, alongside university and other external parties.

Digital transformation may impact teaching and learning in diverse ways and at different levels within HEIs. New possibilities for innovative and improved teaching and learning resulting from technological advancements depend, to a large extent, on adequate technological infrastructures and organizational capacity. They also rely on local cultures (norms, values, and identities) that are open to change, and more specifically, willing to embrace pedagogical innovations. In addition, faculty staff and students require adequate (digital) skills and competencies to benefit from these new possibilities (Zhao et al., 2021).

Recent and Ongoing Policy Developments in Norway

The Norwegian government has funded and monitored the DTs of HEIs since 2009, in the form of tri-annual surveys. These surveys shed light on the digital dimension of learning processes and quality development in HE and are centred on four distinct areas: (1) scope and use of digital

technology in teaching and learning; (2) access to digital technology and support functions at educational institutions; (3) competence needs and training; and (4) strategies and educational management. Findings from the 2018 report *The digital state of HEIs in Norway* document an increase of faculty staffs use of technology for teaching purposes since last monitoring (2014), but still points to the need for more competence development insofar as the pedagogical use of technology is concerned (Norgesuniversitetet, 2018). The study also shows that academic staff were positive about the pedagogical potential in digital technology, while emphasizing that the use of technology must not take place at the expense of the academic content. These statements point to the lack of academics' awareness of the fact that, in some disciplines, the technology might also influence knowledge domains by causing epistemic changes (Lund & Aagaard, 2019). The monitoring also revealed that most Norwegian HEIs had in place strategies for DTs with the ultimate goal of fostering teaching quality.

Infrastructure, equipment, and the design of the classrooms or spaces for teaching and learning are important prerequisites for exploring and using digital technology within teaching (Durek et al., 2017). However, findings from the 2018 monitoring demonstrated that the status in these areas remains unchanged. The report suggests that the equipment in the classrooms must support this goal, and that classroom design must accommodate for more flexible forms of digital-mediated learning centred on student-active teaching methods. The assessment also revealed a need for competence development in pedagogical and professional use of digital technology.

Key findings from the 2021 monitoring (DIKU, 2021), reveal a large diversity on the nature and capabilities of local support centres for DTs across Norwegian HEIs. While some were more general in giving pedagogical support, others provided specialized value-added services like media labs and other digital infrastructures. An important observation was that the majority of the existing centres were loosely coupled with both the overall DTs work within HEIs as well as their local governance structures (DIKU, 2021).

Norwegian Higher Education as a Case

As alluded earlier, this chapter illustrates ongoing DTs developments across the Nordic region by focusing on Norwegian HE. More specifically, two levels of analysis are investigated; (a) policy (macro level) initiatives as well as (b) institutional (meso level) arrangements. Regarding the latter, we resort to qualitative data derived from one public university, a multi-campus institution (former university college) geographically located in a peripheral setting (with strong links to regional public and private sectors), and with a traditional educational profile centred on the professions; teaching, engineering, nursing, social work, among others. As is the case of its Nordic counterparts, Norwegian HE has, in the last two decades or so, been the target of New Public Management (NPM) reforms centred on quality, efficiency, accountability and responsiveness, alongside implementing the European-wide structural arrangements emanating from the intergovernmental Bologna process (cf. Pinheiro et al., 2019). The system has also been the target of a structural reform that has culminated on a series of voluntary mergers (since 2010) between different types of providers, resulting in larger and more complex universities centred on hybrid arrangements (Frølich & Stensaker, 2021). Overall, Norwegian HE has, since the early 2000s, been gradually moving from a binary system based on fully fledged universities and university colleges towards a unitary system centred on comprehensive universities as the dominant organizational template. The latter is supplemented by strategies of differentiation according to local, regional, national, and global market imperatives and strategic priorities.

Readiness for Change

Organizational readiness for change has been defined as a multidimensional, multi-level, multifaceted construct or comprehensive attitude that is influenced by the *content* (i.e., what is being changed), the *process* (i.e., how the change is being implemented), the *context* (i.e., circumstances under which the change is occurring), and the *individuals* (i.e., characteristics of those being asked to change) involved (Holt et al., 2007). Collectively, readiness reflects the extent to which organizational members are cognitively and emotionally inclined to accept and adopt a particular plan to purposefully alter the status quo and move forward.

Specifically, organizational readiness for change refers to two key dimensions: (a) at the micro level, organizational members' commitment or willingness to change (*change valence*) and, (b) at the meso level, the sets of resources and capabilities required to successfully implement the planned change (*change efficacy*) (Weiner, 2009).

Lokuge et al. (2019) assert that organizations' success in coping with complex situations or when facing volatile environments largely depends on key factors like flexibility, responsiveness, adaptability, and agile decision-making. As an external shock, and as attested by other contributions in this edited volume, COVID-19 posed unprecedented challenges to HEIs (see also Pinheiro et al., 2023), thus providing an ideal case for studying the degrees of and internal willingness and capacity for adaptation to emerging circumstances and disruptive events. Below we provide further insight on the two constructs underpinning organizational readiness to change.

Change Valence

Change valence is a psychological process associated with organizational members' commitment or willingness to change the course of action (established habits) by adapting new working methods, practices, procedures, mindsets, etc. (Weeks et al., 2004; Weiner et al., 2008). The main argument reads as follows:

> […]the more organizational members value the change, the more they will want to implement the change, or, put differently, the more resolve they will feel to engage in the courses of action involved in change implementation. (Weiner, 2009, p. 70)

Organizational members might value the new system (e.g. set of practices) because they consider it effective in help solving an emerging problem, or because it is thought to benefit internal and external stakeholders alike (Weiner, 2009). As a construct, change valence aids inquiring the extent to which members of an organization collectively value the change and its overall implementation or institutionalization (Lokuge et al., 2019).

In the context of DTs in HE, the assumption is that the value and the benefits that digitalization brings to both teaching and learning as well as administration are expected to positively influence members' commitment towards the effective implementation of digital systems. Yeap et al.

(2021) note that HEIs' staff readiness is crucial for facilitating change and increasing staff commitment towards teaching effectiveness. In terms of DTs in a highly institutionalized organizational field like HE with relatively autonomous HEIs and professionals, the key query is thus (*Research Subquestion 1—RSQ1*):

- *Regardless of individual motivations, do university staff (most notably teaching academics) collectively value DTs enough to commit to its implementation (both before and following COVID-19), and if so, what aspects help characterize this (change) process?*

Change Efficacy

Change efficacy encapsulates the capabilities and resources of the organization, including human, financial, material, and informational resources necessary to implement change policies (Lokuge et al., 2019). Weiner (2020) identifies three determinants of change efficacy: (a) task demands; (b) resource availability; and (c) situational factors. University staff's knowledge regarding DTs, strategies to implement it, and the required time for the implementation are some of the critical *capabilities*, while the availability of sufficient human, material, and financial assets are the needed *resources* for successfully implementing DTs across the board, most importantly within the teaching and learning domain (Gärtner, 2013; Poturak et al., 2020).

Drawing from the change readiness literature, when HEIs' staff at the various levels collectively share a similar and positive assessment of task demands, resource availability, and situational factors, they are also likely to share a sense of confidence insofar as successfully implementing a complex change process is concerned (Weiner, 2020). In the context of COVID-19, HEIs' resource mobilization for effective digitalization, in the form of the adoption and adaptation (localisation) of online-based education and home office during and after the lockdown, are conceived as key variables. Active support to academic communities in the form of flexible digital platforms and access to dedicated training (digital competences) act as facilitators or mediators of the DTs implementation process. Hence, in the context of the DTs of HEIs one key query that needs addressing is (*Research Subquestion 2—RSQ2*):

- *To what extent do Nordic HEIs have the necessary resources to implement DTs effectively, and how has this process been influenced or shaped by the COVID-19 pandemic?*

It is worth noting however that, given the inherent complexity associated with the university as an organizational form (loosely coupled structures, high levels of professional autonomy, multiple disciplinary cultures, local norms, and traditions, etc.) it is unrealistic to assume, at the onset, that university staff conceptions of both DTs and the need for change or readiness naturally converge towards a single model or perspective. Instead, one would expect that internal orientations move away from unidirectional conceptions towards a much more contested notion of organizational readiness around the pros and cons associated with DTs' impact (real and imagined) on teaching and learning. In other words, while unpacking organizational readiness towards DTs in HE it is important to take into account the role played by processes of conflict and contestation manifested as nested tensions, dilemmas, and paradoxes at various levels of the HEI.

Case Study & Methodology

The case university is a relatively newly established multi-campus institution (former university college up to 2007). As is the case of most of its university college counterparts, it is still primarily a teaching-centred university, yet with some recognized pockets of research excellence, and with strong local ties to regional actors across the public, private and civic sectors. In 2021, the university employed 1538 staff, and enrolled a total of 14,215 students, with the bulk of students in undergraduate and postgraduate courses coming from Norway (statistics are taken from an anonymized company source). Given the qualitative design nature of the study, the aim is not to generalize the findings to a broader population but instead to provide an in-depth, single-case account of the dynamics associated with DTs in Nordic HE, within the context of broader lessons in terms of theory and concepts (scientific audience) as well as best practices and other key insights for HE practitioners. Despite its limitations, single case design allows researchers to probe a specific phenomenon, in this case readiness in the context of DTs in HE, while gathering important contextual information and insights necessary to interpret the results (Yin, 2009).

To gain insights into various levels of the organization, eight semi-structured in-depth interviews were conducted between the fall of 2020 and the spring of 2021 with various stakeholders within the university:

- Three from central leadership (AA1, AA2 and AA3): one academic in the central management team, an administrative leader, and another academic who had recently left the central management team;
- Two middle-level staff (AF1 and AF2): one faculty director, and one employee in a university-wide staff support unit;
- Three department-level academics involved in teaching (AD1, AD2 and AD3).

The organizational units covered by the participants included the central management team, the university-wide learning management system support unit, the university-wide teaching support unit, and members of three faculties (Faculty of Humanities and Education, Faculty of Social Sciences, and Faculty of Engineering and Science).

The informants were recruited based on a combination of strategic sampling and the snowball method (Yin, 2009) due to their active engagement with and prior experiences of DTs. The interview guide was inspired by theories of readiness of change, and previous studies on DTs in HE. Various topics were raised, such as the informants' attitudes and perceptions on DTs (in plural rather than singular, see Chapter 1 of this volume, and Laterza et al., 2020), their perceptions on benefits and opportunities of DTs, and pros and cons towards implementations of digital technologies for teaching and learning (T&L) before, and after the pandemic. All interviews were conducted online (zoom), recorded and later transcribed. A codebook was developed, discussed, and agreed upon by all authors, and all interviews were later coded in the software NVivo. The data was stored in accordance with the recommended ethical and privacy guidelines from The Norwegian Centre for Research Data (NSD).

The knowledge gathered through the interviews was complemented by in-depth background knowledge the authors have as staff members of the same university. This means that we have had the opportunity to follow DTs processes at the university for several years, and this provided crucial insights to interpret the data from this specific sample of interviewees, and enhance the quality and validity of our analysis.

Findings and Analysis

Our findings and analysis are structured in three subsections: we will first discuss the "antecedents" of organizational readiness, in other words the recent history of DTs at the case university. This will constitute the important background for the two main conceptual dimensions explored empirically in the next two subsections: one on *change valence* and one on *change efficacy*.

Antecedents—The "History" of Digital Transformations at the Case University

Our data suggest that DTs at the case university began well before the COVID-19 outbreak in the spring of 2020. This was manifested through the university central administration effort and policies to build digital infrastructure, introduce the new Learning Management System (LMS), Canvas, since 2017, expand IT support, provide specialized support for video recordings for lectures and seminars, and set up a broad range of support services to increase the digitalization of T&L. This process was not without challenges: a current central management executive (AA1) and a former one (AA3) highlighted the tension between the central management's push for increasing digitalization of T&L and the unwillingness or inadequate skill set of many lecturers to embrace different forms of digitalization that went beyond conceiving digital tools such as Canvas as mere repositories for lecture content. This theme was acknowledged from different perspectives by almost all interviewees.

> I think the sort of challenge is that most of the technology and digitalisation we have seen so far in teaching, has been used more as an administrative tool … So, what do we need to do? We need to use it in a more pedagogical way. That is more challenging. I think we also see with the COVID-19 situation that we have a sort of speed digitalisation now … That makes it probably easier to explore the possibilities offered by the technology. But just having lectures on Zoom or record lectures … we need to do more than just that. (AA1)

The university's approach towards DTs as a top-down driven process including the provision of overall digital infrastructure and central support services is consonant with similar findings across HEIs in Norway (Tømte et al., 2019). As demonstrated, LMSs, software providing assessments,

communication, and administration support for DTs are offered to all staff across the universities. Yet, as suggested by AA1, these generic types of digital technologies are to be adopted by teachers, and there seemed to be still some way to go, even after some months of emergency remote teaching caused by the pandemic. When interviewing the teachers (AD1, AD2 and AD3), a similar picture emerged as some were quite experienced with the use of digital technologies for teaching purposes, while others had only limited experiences with integrating digital technologies in their pedagogical work. After some months of emergency remote teaching, teachers' opinions remained largely unchanged, although with some new insights on the possibilities and benefits of DTs.

Change Valence

As previously stated, the research literature suggests change valence to be associated with the organizational members' commitment, or willingness to change (Weeks et al., 2004; Weiner et al., 2008). In our case, we explored how the informants considered the pros and cons of digital technologies encompassing T&L. If the pros outperform the cons, we may interpret this as a first necessary step towards their willingness for embracing change.

One main observation would be that there tends to be disagreement among actors' understandings of DTs content and goals. For example, the managers saw COVID-19 accelerated digitalization as a catalyst for DTs, moving beyond"technology as technical tool" towards a transformation of pedagogy via digitalization (a way to push teachers "resistant to change" to actually change), as stated by AA1:

> … if you look at the whole HE sector, I think that digitalisation will change the way we teach …. The new national strategy under discussion actually says that in every [study] subject we need to put in some technology or use some digitalisation. But, not just for the sake of technology. (AA1)

The interviews, and our own experiences as teachers in the university under study, suggest that the interests of central administration and mid-level support services and faculty managers seemed to be largely aligned, reflecting somewhat the managerialist ethos that distinguishes this case university from more traditional (old and research-intensive) domestic universities, also as a result of the former university college cultural ethos

that preceded the upgrade to university status in 2007. While the rector is elected by the university community, all other executive positions at the various levels all the way down to department heads are appointed, creating a rather vertical structure of line management. Tensions tend to emerge between this relatively homogeneous line of management by the leaders at different levels working closely together with each other on one hand, and the academic teaching staff on the other hand. Many of the latter value academic autonomy and freedom as per the statute of the Humboldtian university, a model embodied by traditional universities (in Norway and other Nordic countries) where decentralized autonomy tends to be greater than in more managerialist (younger and more vocational) HEIs such as the one studied here. Central management is aware of this tension:

> Because as a lecturer, as a professor, you have autonomy. So, it's very difficult to go to a professor, and say you should teach like this. … Well, if I think [as a lecturer] this is the best way to teach, then I'll do it [that way]. But in this case, I think we need to be more specific on how we do things. I think that we've got kind of push people in a way. (AA1)

The perspectives of two interviewees involved with providing leadership in and support services towards digitalization of T&L (AA2 and AF2) were also quite interesting in this respect, and reflect this overall structure where administration and support services tended to have quite closely aligned interests with the leaders. Except for two interviewees lecturing at the department level (AD2 and AD3), all the others tended to construe somewhat negatively, even if often empathetically, the lack of skills or resistance from lecturers to significantly transform their pedagogy with the use of digital tools.

Teachers, on the other hand, hold other perspectives. Some of them are rather reluctant towards the DTs that promote online teaching, which one teacher framed as in danger of turning the institution into a "YouTube university":

> I think for the students, I can see some benefits. They can watch my digital lessons and repeat them as often as they want. They can sit at home and they don't have to be [on campus] in this COVID-19 situation. It's beneficial for them. For the society, I'm in doubt. … I'm very much afraid of that, that we will kind of use the lessons, repeat them and just make the university become a YouTube University. Because that's quite easy. (AD2)

Here it is suggested that the privileged focus put on online learning for campus students may not foster the enhanced seminar- and dialogue-based type of education that is recognized as conventional campus-based education. In addition to these colliding views on DTs between central leadership and teaching staff, we observed differences in views on DTs between support staff and teaching staff, and within teaching staff. Below are two extracts that demonstrate some of these variations. In the first, a teacher (AD3) reflects upon one's teaching online and on campus, in the other, an administrative staff responsible for university pedagogy support (AF2) share their thoughts on how to assist teachers in their mastering of teaching with technology.

> Then these students when they are thrown in [an online synchronous classroom] and they don't know each other, it's even worse. I feel that the students' activity is not good. Even if I send them into breakout rooms. They don't know each other, they cannot [do] small talk. They don't know what [to talk] about, they can do the task, but they might be too self-conscious. And it's much easier in real life. Because again, you can read the body language, you can make each other more comfortable by smiling or something like that, which [is not the case] in Zoom. (AD3)

> But I guess some will have bad experiences and think "never again" and students will have bad experiences, but not all the lectures are as good as they could be… if we had more time… And this could be to do with both how to use different tools, and also technology itself and not knowing [the technology well] enough, we see the bad side of it now, for instance some teachers have lectures on Zoom … and they do exactly the same as in [the] classroom, instead of taking advantage of all the possibilities such as breakout rooms, surveys, being able to cut down lectures to [shorter lengths than in the classroom]. (AF2)

Based on our interviews with different actors across the university, a preliminary conclusion as regards change valence would thus be that both before, and during the pandemic the university staff disagreed on the overall value of DTs in teaching. This means that their readiness for change as an organization remains undetermined. While leaders tended to be more positive towards this change, a greater diversity of opinions were observed across teacher staff. Some possible explanations of this discrepancy may relate to teachers' degree of readiness towards changing their ways of working. Here, their readiness for change comprises held (old

and new) attitudes towards digital technologies, their pedagogical beliefs, and their self-efficacy towards technology (Scherer et al., 2021). These are intrinsic tensions at the micro level that may be difficult to solve. Yet, to map this landscape of various attitudes and motivations may be useful in this respect. However, this goes beyond our study, but might be worth pursuing in future studies. That said, we will in the next sections elaborate more on some of these dimensions, as they may relate to the "change efficacy" concept.

Change Efficacy

As shown before, the case university under study is considered as well equipped with IT and human resources in terms of support staff. Yet, in the interviews with the teaching staff, issues related to workplan hours for teaching were not clearly sorted out, for example, who pays for all the extra work when teaching online. Teachers also reported weariness and fatigue as a result of emergency remote teaching. Furthermore, teaching staff were also concerned about the suggested benefits of digitalization from an efficiency and time perspective to scale up. For example, one teacher (AD3) highlighted the fear that once their lectures were recorded and developed in a reusable manner together with online courses, then their work might not have been needed anymore, which again could lead to a major reduction of existing contracts or mass firing (albeit unlikely in a Norwegian context due to strong unions). Teaching staff thus communicated some ambiguity towards DTs of teaching. It provided them with more flexibility and capacity to reach out to larger groups of students, while also spurring fears of losing their jobs due to the potential disruptive nature of DTs in the academic labour markets as commonly reported in other industries.

Central management interviewees showed a more future-oriented positive perspective towards DTs. AA1 and AA3 saw digitalization of DT as a conscious strategy that would favour, competitively, the case university in the future, in the Norwegian and international contexts. While AA1 tended to refer more to the Norwegian context and its policy context with the national government pushing heavily towards DTs in HE, AA3 went further and discussed more openly the issue of global competition for a rapidly changing market, clearly envisaging the case university as a provider of digital education (intended here as flexible and distance, not just an increasingly digitized physical classroom) in order to capture the growing market in that direction. AA3 provided a vision of

a tough competitive market where only those who pushed themselves to the maximum would succeed. So in a sense AA3 was not entirely optimistic about the case university itself, but rather they provided a vision of "inevitable" market competition where the survival of the case university would depend on how rapidly and effectively it could become a digital provider of the higher education of the future.

Virtually all interviewees, on a less visionary level, agreed that one way or the other, there would be no return at the level of teaching practice to the pre-COVID-19 normal. Rather, some of the innovations and radical changes brought in the classroom by the pandemic emergency would stay on as more conscious choices by lecturers and students.

One key theme that was stressed from different angles by multiple interviewees was that of "flexibility", as something positive and benefiting both lecturers and students (e.g. teaching staff could travel for conferences for a few days without having to interrupt their courses, or students being able to have flexibility of watching recorded lectures in their own time and multiple times).

A preliminary conclusion here would thus be that the university studied did have an adequate technical infrastructure for implementing digital technologies for teaching purposes, although there was still some reluctance and ambiguity among teacher staff on how to proceed. There also remained the question of human resources raised by some teachers: will the university make a plan to properly account for the extra hours needed to effectively implement DTs, or will DTs come at the cost of existing workplan arrangements? These are open questions.

Digital Transformations, COVID-19, and Beyond: Concluding Remarks

Our findings and analysis show that the historical tension (antecedents in our conceptual framework) between a top-down push towards DTs and the reluctance among several teaching staff to go ahead as fast as envisaged by central management (in alignment with administrative support services) has led to significant differences in conceiving the desirable content and goals of DTs among different actors—especially between central management, administrators and support services on one hand and many of the teaching staff on the other. This is an important dimension that seems to be missing from much literature on organizational readiness: the fact that what constitutes "readiness" is in itself affected by the

level of agreement or disagreement over what the change the organization is gearing up for should actually consist of. In other words, *change valence* is also affected by conceptions of changes—and the desirability or not of such changes.

Our analysis of *change efficacy* also complicates the picture of much existing literature: the issue of what resources are available for DTs is not straightforward, and here too actors' perceptions and understandings influence the assessment of such resources. While there was general agreement among different actors in the case university that the digital infrastructure and support services for DTs were in place and sufficient resources in this regard were available, this was not the case when it came to a crucial part of human resources: the work of academic teaching staff itself. Teachers were more concerned about the extra work needed to successfully implement the DTs discussed in the case university, while managers and administrators did not consider such concerns in their understanding of DTs and the obstacles to their implementation.

The difference of views around the content and goals of desirable DTs are also related, in our opinion, to the differing tacit or explicit conceptions of the role of COVID-19 in the implementation of DTs. For teachers, there seemed to be more of a sense of "before and after" COVID-19, as evidenced more implicitly through constant references to fatigue with emergency remote teaching and the negative effects that the abrupt move to online for physical classrooms and the various adjustments needed afterward produced. On the other hand, central management and administrative leaders openly stressed a conceptualization of the effect of COVID-19 on DTs largely as a positive accelerator of a long-term trajectory towards increasing and pervasive DTs in all aspects of T&L:

> I think COVID-19 sort of jump-started digital teaching by a couple of years. Because everyone now has been forced to do it. Again, not all, but I think a lot of teachers actually will bring part of what they have experienced now in [their future] teaching. … at our university, we are talking about how, what we will be bringing with us, what should be improved, how should we sort of continue to work with digitalization in teaching. (AA1)

> There are many teachers who had a reaction that they did everything that they would normally do on campus also digitally, if they were supposed to have a four hour lecture they just moved it from campus to Zoom, and

> that is a disaster every time, and now they are thinking more practically, they narrow down Powerpoints, shorter sessions, more groupwork, more seminar-like. And they never return to the old way of doing things. (AA2)

COVID-19 then seems to have brought into sharp relief the tensions and contradictions we highlighted at the beginning of the analysis between a top-down approach from central management and administration on one hand, and the claim for more control and academic autonomy from teachers on the other. But the effects of the rapid wholesale digitalization of teaching seem to have already led to a further stage in this unfolding and still open-ended story of DTs' implementation: even those teachers who were most critical of DTs (AD2 and AD3) seemed, several months after emergency remote teaching, to be ok with blended learning options—i.e., that a mix of online and physical learning modes was now accepted as a new normal to be embraced, rather than resisted. One wonders whether the same teachers would have been ok with the significantly higher level of digitalization of blended learning vs wholly physical teaching even just a few months before the pandemic caused the rapid shift to digital T&L.

The question of organizational readiness then cannot only focus on what is openly and transparently discussed and negotiated among all actors involved. There seem to be structural changes (such as the accelerated DTs brought about by emergency remote teaching) that affect practice beyond what is negotiated more explicitly within a HEI. The words of university leaders seem to suggest that they were indeed aware of such "help" to their cause so to speak, in a way that envisaged COVID-19 digitalization less as a completely unexpected factor to be dealt with as *force majeure* than as an external catalyst accelerating trends already in motion and policies that had already been assertively pursued from central management in previous years.

The tension between top-down approaches to policy changes in HEIs and the rank and file of academic teachers claiming autonomy is a well known one (Hornibrook, 2012), and one that is not particularly distinctive of Norwegian or Nordic HE. But it takes up a particular context-specific dimension in a Norwegian HE setting because of the dominant organizational culture of consensus that still marks Norwegian and Nordic HE. Managerialism in academia might be contested in other settings such as UK, US, or Australia (Anderson, 2008; St Clair & Belzer, 2007), but even more critical voices accept that is an increasingly common

set up in HE in those countries (and in most countries in the world where HE has undergone significant processes of marketization, either in funding or organizational logics or both). In Norway, and in our case university, the idea that major changes to the ways academic teaching staff work could be carried out without a significant degree of employee involvement would be rejected by the vast majority of HEI staff, including those in a leadership position. Leaders accept that their management style is more akin to steering a group (hence also the emphasis on "leader", as the word "manager" is rarely used, also in English-speaking internal discussions) than providing clear instructions that should be carried out by "subordinates". It is not surprising then that, once there is agreement among the leadership that DTs should go ahead and that the university should position itself as a national and possibly international leader in DTs in T&L, then the issue cannot be resolved by relying solely or even primarily on vertical lines of management. That is also why the intervention of factors that are deemed by actors as external—such as the unexpected impact of an unexpected pandemic on T&L—can then be harnessed to achieve policy goals in ways that a negotiated route through complex time-consuming processes of internal consensus might not be so effective in achieving. The question of *change efficacy* then is also a question of what makes a certain path to change socially legitimate within a HEI and the HE sector as a whole. Consensus culture in Norway and the Nordics is less about setting a priori the content of change, and more about legitimizing change (or resistance to change) through processes of employee involvement and democracy that are seen by all actors as foundational to the very existence of the organization as a legitimate social unit. This also explains why, just as leaders cannot be too assertive in their style and proposals, so rank and file academic staff are expected to adopt a consensual outlook that does not put them in stark opposition with the leadership. This emerges quite clearly from the interviewees, in that critiques from teaching staff are couched in a language of consensus where there is an acknowledgment of the positives of certain policies around DTs, soon followed by concerns about potential negative effects of such policies. This is indeed distinctive of Norwegian and Nordic consensus culture, and complicates the often oppositional picture of *us vs them* that emerges from critical literature on tensions and conflicts between management and employees in HE in the Anglo-American world (Alvesson & Spicer, 2016).

What will be important to follow up with future studies is this tension between a certain optimistic vision of the "inevitability" of wide-ranging DTs (often conceived by HE policy-makers and HEI leaders as a singular linear evolutionary process of DT) and the concerns of many academic teaching staff who find themselves on the frontline of such changes and increasingly see the dangers to academic autonomy that these changes might bring. How will these tensions and contradictions play out in Norwegian HE in the future? How far-reaching will the accelerated digitalization brought about by COVID-19 turn out to be a few years from now? And will the organizational consensus culture of Norwegian HE survive such changes, but also provide different trajectories than in countries such as UK and US where this consensual approach is not the norm in HEIs? We hope our chapter has illuminated some important aspects related to these questions, and will spur more debate and research on these crucial topics for the future of HE in Norway, the Nordics, and beyond.

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