The (Scientific) Digital Culture

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Abstract

Die Rede von der „Kultur der Digitalität" ([7] Stalder 2019)sorgt in Universitäten regelmäßig für Unruhe. Der Titel löst dann Irritationen aus, wenn damit die Implikation verbunden ist, dass von einem Umbruch, von einer Ablösung auszugehen ist, dessen Folge es sei, dass die Universität, wie wir sie kennen, fortan nicht mehr existiere. Das Gegenteil ist der Fall – denn, wenn man das eine tun kann, bedeutet es nicht zugleich, dass man das andere lassen muss ([1] Lasch 2020). In meinem kurzen Beitrag möchte ich deshalb (1) das Konzept erläutern, es (2) auf unsere Communitas Universität übertragen und (3) ein Projekt vorstellen, das sich konsequenterweise genau dann etablieren kann, wenn man Universität als Universitas in einem umfassenden Sinn als Institution einer „(Wissenschafts-)Kultur der Digitalität" versteht ([2] Lasch & Schoop 2021): „virTUos" (Virtuelles Lehren und Lernen an der TU Dresden im Open Source-Kontext).

Talking about a "digital culture" ([7] Stalder 2019, in translation: the digital condition) regularly causes a stir in universities. The phrase causes irritation insofar as it implies that there is an upheaval, a replacement, the consequence of which is that the university as we know it will henceforth cease to exist. The opposite is true - because if you can do one thing, it does not mean at the same time that you have to leave the other ([1] Lasch 2020). In my short contribution, I would therefore like to (1) explain this phrase, (2) apply it to our communitas university, and (3) present a project that can be established precisely when university as universitas is understood in a comprehensive sense as an institution of a "(scientific) digital culture" ([2] Lasch & Schoop 2021): "virTUos" (Virtual Teaching and Learning at the TU Dresden in an Open Source Context).

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1. Digital Culture

Living in a *digital culture* (according to [7] Stalder 2019, in translation: under *the digital condition*) means that transformations and distortions of forms of social interaction with knowledge are not only in the offing, but are *already a reality.* This means that established processes of knowledge appropriation, the production and communication of knowledge, as well as the status of knowledge itself and forms of its adequate transmission are at stake. The question of what knowledge is and to whom it belongs has never been as open as it is today. A retreat to a pre-digital culture is not an option. So if this option is ruled out, the only question that remains is *how to* relate to the transformation process that is currently taking place and *whether* and *how one* wants to help shape it. I am of the opinion that universities must act and position themselves as actors in this process.

Stalder speaks of three central characteristics that shape a digital culture and that bring down traditional cultural orders: *Referentiality*, *Communality* and *Algorithmicity*. According to Stalder, our society and its institutions are at a crossroads: "Our actions determine whether we will live in a post-democratic world of surveillance and knowledge monopolies or in a culture of commons and participation. "([7] Stalder 2019, blurb, own translation) By *referentiality,* Stalder addresses the fact that knowledge (as knowledge of domination) can no longer be hegemonically owned, locked away, managed and accounted for, or guarded like a treasure, but becomes available and re-referentialised quite independently (e.g. of discourses on copyright). Digital practices drastically accelerate this process, which has long been known and named in cultural techniques such as copying and collage: "Cultural works of all kinds become freely available in a comprehensive, practical sense, despite existing legal and technical restrictions. " ([7] Stalder 2019: 112, own translation) Communities in digital space have a similarly catalytic effect, which he addresses with the principle of *communality.* Stalder emphasises that new epistemic communities of practice, in which knowledge is processed in a new way, in alternative ways

and fields of practice, compete with the established institutions and communities of pre-digital culture. "They [sc. communities of practice as epistemic communities] emerge in a field of practice, characterised by informal but structured exchange, are focused on the generation of new possibilities of knowledge and action and are held together by the reflexive interpretation of one's own practice. Especially the last point [...] constitutes the central role of community formation." ([7] Stalder 2019: 136, own translation). And *algorithmicity* is the hallmark of techniques that open up completely new possibilities of exploration and analysis as well as modes of production, but also confront us with new challenges that relativise our practised cultural practices: "Activities that not long ago seemed unquestionably reserved for human intelligence, for example the composition of texts or the content analysis of images, are now increasingly being taken over by machines. " ([7] Stalder 2019: 173, own translation)

The last aspect in particular should be an incentive for us and should always make us think about the fact that consistently closing ourselves off to the outside world and sticking to established forms of knowledge transfer will lead to a solidification of institutions that have dedicated themselves to the elaboration, preservation and transmission of knowledge for centuries, not to their vitalisation.

2. Universities in the knowledge society of the 21st century

So, as a communitas whose most important characteristic is to create and process knowledge, we see ourselves exposed to cultural processes that permanently challenge our institutionalised approach to knowledge. A university is, at its core, a (high) medieval institution. The more recent universities in the Federal Republic of Germany in the 1970s or the foundations and expansions after 1990 have also adopted this order and understanding. A university is a self-governing communitas, a literally *universal community of* research, teaching and learning. A university creates hybrid and volatile forms of knowledge: it is always this, provisional, in its self-image. Interestingly,

this correlates in a special way with the principles Stalder identifies for a digital culture, in which universities as institutions have long been placed. Not only do they carry the traditions of inherited communitisation and produce new communities that Stalder speaks of, but they also carry the conflicts that go with them internally and externally: "The old orders in which cultural material has so far been filtered, organised and made accessible [...] can channel this flow neither on a small nor on a large scale. They hardly function any longer as gatekeepers between the realms that were once defined as 'private' and 'public' with their help. " ([7] Stalder 2019: 114, own translation) What opportunities open up if we think of universities *again* as places where only *one way* was never the right way? The initial observation, and one that has been particularly brought to the fore in the last year, is that technology-sceptical debates obscure the need to address the question of what the university can and wants to be. There is much more at stake here (cf. [1] Lasch 2020: 241-244):

- Participation: Universities are places of exchange where not only work is done together, but also community is shaped together.
- Transparency: We value traceability. How can research data be generated in such a way that its genesis is transparent? How should the interpretation of research data be designed so that it is not hermetic?
- Visibility: How can research data and results be made visible? How can teaching be opened up? How can visible research data and teaching and learning materials or results be made open and still be protected?
- Interconnectedness: How can data and results from research and teaching be effectively related? How can this be anchored in academic understanding?
- Generosity: What is the status of our data? How can we benefit from them together? How to promote willingness to share in academic education?
- Collaboration: What research data and results and what teaching and learning con-

tent can be developed jointly? How can collaboration be motivated in research and teaching?
- Goal orientation: Which goals can only or more effectively be achieved through collaborative work? Can new objectives (for one's own or joint work) be created through collaboration? How and where can objectives be made explicit?
- Value orientation: How can we promote these principles in research and teaching?

The answers to this question all converge here: *Openness*. I would like to present three examples in detail in this section, which I would like to understand as expressions of a *scientific digital culture* and which are committed to the principles mentioned, each with a different weighting. One is, by way of example, the blog *Lingdrafts. Linguistic Workshop Reports*. The other is *Open Educational Resources* (OER). The third is *collaborative projects* with students. As I will try to show before presenting the *virtTUos* project (section 3), it is above all the field of action of academic university teaching that opens up creative freedom for us.

2.1 Lingdrafts

Two years ago, we set up *Lingdrafts*, a blog project with interested academics without regard to status group differences, in order to position ourselves *at the interface to* the *public, to visibly* present our research questions and to seek *connection to* current topics. Our editorial team is now colourful and large, communicates via messenger and, above all, at *eye level*. It's a real *community project*, one of those epistemic *communities of practice that* Stalder talks about. Blog communication is characterised by visibility, topicality, reciprocity and resonance, hybridity and volatility as well as a specific mediality (cf. [1] Lasch 2020: 238). It thus runs counter to established academic mediation practices, but on the other hand follows the principles of the new communities just outlined. In a scientific digital culture, we can therefore help develop the forms and exploit the possibilities of processing knowledge in an alternative way - *in* the university community. We are sure that it is the right way to bring new

impulses into the discussions of our universities, as is happening with this contribution.

2.2 Open Educational Resources (OER)

Participation and re-use in the common pursuit of goals succeeds especially well when *content is shared freely,* without any interest in gain. This is precisely the concern of *Open Educational Resources* (OER). Two challenges are associated with this: What content may be made available as OER and how can quality assurance be realised? Both questions touch our university as an institution at its core: how do we make our provisionally developed knowledge visible, usable and communicatively connectable? The same applies to *Open Access* (OA), the mode in which this article appears, and *Open Educational Practices* (OEP) in general. In order to put the OER discussion at our university on a sound footing, an OER display was created with interested academics from the Humanities and Social Sciences Department (GSW) and the Saxon State Library - Dresden State and University Library (SLUB), which not only explains OER, but also presents best practices. An important element is OER advice, which all staff and students can take advantage of. Further training offers from the Centre for Interdisciplinary Learning and Teaching (ZiLL) flank these efforts.

2.3 Collaborative work

In practice, *collaborative work with students,* the third example, can reveal new potentials. Prof. Dr. Simon Meier-Vieracker from the Chair of Applied Linguistics at the Institute of German Studies, for example, is, like me, massively promoting forms of open academic culture. He blogs "fußballlinguistisch", is active on Twitter, Instagram and TikTok. He produces vid and podcasts that he keeps openly accessible. WiKis and podcasts are created with students - as a matter of course, at eye level. Much of this linguistic content is OER and is on the aforementioned display, some is not. Some we discuss on *Lingdrafts,* others not. And we are currently busy creating collections (e.g. under TelekollegLinguistik) that document the diversity of offerings and establish *interfaces to the pub-*

*lic (*also as new forms of scholarly communication), without advancing the claim that the offerings may then please be perceived by the public(s) (cf. on this expectation in the context of blog communication [1] Lasch 2020: 239).

Fig. 1: Learning in open communities under the auspices of the (scientific) digital culture. CC BY 4.0 International.

They are experimental spaces that we use to show what is provisional and also to have it evaluated: For several years, I have been using forms that allow anonymous feedback by students at any time. Since the 2020 winter semester, I have decided to make this feedback public for reasons of transparency. The feedback flows directly into the formulation of objectives, at the heart of which is the effort to inspire the idea of an open Communitas University, where learning takes place together, about each other, from each other and with each other.

Openness cannot be prescribed. Openness must be worked out together. Our universities faced massive challenges last year under the auspices of the pandemic; a great deal was demanded of everyone, sometimes beyond measure. We have learnt a lot and it is to be hoped that some of the developments in higher education didactics will be consolidated. It is worth the effort for the medium-term anchoring of digital examination formats, as well as for the stronger interlocking of institutions with comparable concerns in the matter (in Dresden, these are the TU Dresden, TUD, the Dresden International University, DIU, the SLUB, and the Carus Academy at the University Hospital Carl Gustav Carus Dresden, CA/UKD). In the future, digitally supported university teaching should always be possible where it is didactically indicated. This can also extend to distance formats, for example to an-

chor blended learning formats in the curriculum. In this way, international teaching, learning and research cooperations are easier and, in many cases, even possible in the first place, and barriers can be lowered that previously made participation in knowledge processed at universities unnecessarily difficult.

3. *virTUos*

As I have tried to show, academic teaching in particular brings with it ideal conditions for experimenting with new forms of collaboration, documentation and presentation. These experiences and the consistent further development of digitally supported formats are now the focus at the TUD in cooperation with the DIU, SLUB and the CA/UKD in the inter- and transdisciplinary teaching and learning project *virTUos* (Virtual Teaching and Learning at the TU Dresden in an Open Source Context), which I have the honour of presenting on behalf of all those involved in the project - Henriette Greulich, Simon Meier-Vieracker, Antje Neuhoff, Stefan Odenbach, Ingo Röder, Beatrice Schlegel & Eric Schoop.

Fig. 2: virTUos. CC BY 4.0 International.

virTUos is one of 139 projects that will be funded by the Foundation for Innovation in Higher Education (Stiftung Innovation in der Hochschullehre) from mid-2020 as part of the initiative "Strengthening Higher Education Teaching through Digitisation" for a total of three years in order to provide an institutional framework for the possibilities of change and design of digitally supported higher education teaching.
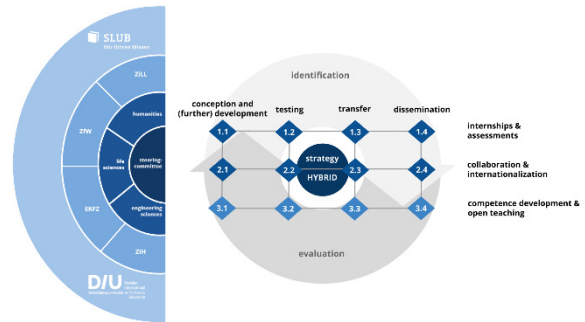

Fig. 3: virTUos structure. left: Orchestrated interaction of virTUos departments, support and transfer partners. right: Project matrix with work packages that can be assigned to three fields of action (rows) and four project steps (columns) and whose results are integrated and implemented in a university-wide strategy HYBRID. A high-resolution version of the structure can be viewed here. CC BY 4.0 International.

For up to now, the ideas and implementations, as outlined in section 2 with three examples, are largely insular without anchoring in curricula and regulations. Hybrid teaching and learning can be a pillar of a collaborative higher education development strategy in the fields of *internships and assessment formats (cf. for* example [3] Pfeiffer et al. 2018), *collaboration* (exemplary [2] Lasch & Schoop 2021) & *internationalisation (exemplary* [6] Schoop, Clauss & Safavi 2019) as well as competence development *(cf. e.g.* [5] Röhle, Horneff & Willemer 2021) & open teaching (cf. [*4] Redecker* & Punie 2017).
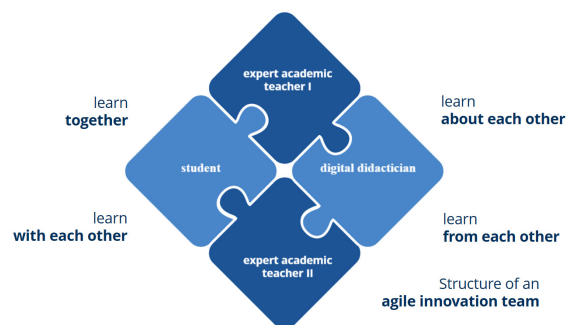

Fig. 4: Structure of an agile innovation team. CC BY 4.0 International.

Students accompany and help shape a process in which novel teaching and learning scenarios are tested, tried out and constantly developed further by interdisciplinary *agile innovation*

teams (cf. Fig. 4) from mechanical engineering, medicine, linguistics and economics, each with concrete project plans.

Concepts of open teaching as OEP are developed interdisciplinarily and further developed and used across the universities (DIU and CA/UKD); results can be re-used as OER (SLUB). An *integration team* coordinates scaling as well as transfer and, in the *HYBRID strategy,* develops the interlinking of central and decentralised support structures, which include the ZiLL, the Centre for Continuing Education (ZfW), the Centre for Information Technology and High-Performance Computing (ZIH) and the Else Kröner-Fresenius Centre for Digital Health (EKFZ), along the requirements for study programme development and examination law interpretation. In order to make the innovative ideas visible at the university, the institutional anchoring and realisation of the solutions developed in *virTUos* is necessary in close consultation with the university management. In this way, a relevant contribution can be made to the university-wide harmonisation of digital teaching and learning approaches, which at the same time represents the structural prerequisite for strengthening a culture of digital learning in the targeted fields of action and promoting a (scientific) digital culture.

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