Everyday datafication and higher education: student agency, trust and resignation

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Abstract

Datafication—the transformation of human life into quantifiable digital data—raises important questions for student agency in higher education. Student agency is central to learning and engagement within university, and the development of agentic selves in students forms a core purpose of higher education. Data-driven practices such as learning analytics promise to support the development of student agency in the context of learning, while at the same time introducing new information and power asymmetries into the relationship between students and the university. Critical research on datafication, meanwhile, has highlighted the threats to student agency posed by data-driven analytics practices that reinforce structural inequalities and depend on the surveillance of student behaviours and bodies. This paper explores student agency in relation to datafication through a discussion of the findings of ethnographic research with university students in Scotland. Drawing on literature from the field of critical data studies that focuses on people's everyday experiences of datafication, the paper will highlight how students understand, feel about and respond to datafication in their everyday lives, and what this means for their relationship with the university. Students draw on a range of everyday data literacies developed through their experiences of datafied platforms and academic knowledge to make sense of university data practices. They employ diverse tactics for coping with datafication, including minimizing perceived risks by taking measures to protect their privacy and disconnecting from certain platforms. They tend to trust the university with their data, but this trust is conditional and closely related to their overall perception of the university. Above all, perhaps, students are resigned to datafication within and beyond the university. Thus, while students demonstrate agency with respect to datafication in a range of ways, data relations between the university and students are fundamentally top-down, reflecting wider societal dynamics whereby people routinely give up their data in exchange for access to digital services, with little ability to opt out or control what happens to it. Universities, it will be argued, have the potential to introduce participatory forms of data governance that reframe these relations, thus supporting the development of student agency over datafication within and beyond the university.

Keywords

Datafication, student agency, everyday life, learning analytics, data literacy, trust, digital resignation, critical data studies

Introduction

Datafication—that is, 'the transformation of human life into data through processes of quantification, and the generation of different kinds of value from data' (Mejias & Couldry, 2019, p. 3)—raises important questions for human agency. While critical research on datafication has largely focused on structural changes that threaten to reduce or undermine human agency, for example through behavioural manipulation at the hands of 'surveillance capitalism' (Zuboff, 2019), there have also been sustained calls for more attention to the role of human agency in processes of datafication (Couldry & Powell, 2014; Kennedy, 2018; Kennedy et al., 2015). Research on people's everyday experiences of datafication demonstrates that people exercise individual and collective agency over data practices in all manner of ways as part of their daily routines and engagements with data-driven platforms, employing a range of strategies and tactics for making sense of and coping with digital life (Burgess et al., 2022; Møller Hartley & Schwartz, 2020; Pink et al., 2018). In the context of higher education, datafication promises to affect student agency, with proponents of learning analytics claiming that they can help understand and enhance student agency (Hooshyar et al., 2023), while others point to the harmful and disempowering effects of data-driven surveillance (Gourlay, 2022).

This article presents findings from research on student perspectives on datafication in Scotland and considers the implications of datafication for student agency within and beyond the university. I argue that a focus on students' everyday experiences and agency with respect to datafication highlights the unequal power relations involved in university data practices and points to how reorienting these relations might contribute to enhanced student agency over datafication within and beyond the university. The next section will present literatures on student agency,

datafication and everyday life which will form the basis for the analysis that follows. I will then outline my research methods and present findings from my research with students. The paper will close with a discussion of the findings as they relate to literature on student agency and datafication, and what this might mean for the role of university in relation to datafication.

Datafication and student agency

Student agency forms an important part of literatures on student engagement and student voice (Klemenčič, 2023) and is arguably fundamental to the purposes of higher education, understood as 'student self-formation' (Marginson 2023). Klemenčič (2015, 2023) argues that student agency comprises the agentic 'possibilities' and 'orientations' that enable students to navigate university structures and processes and influence their own learning to varying degrees. Student agency is 'temporally embedded', combining 'past habits of mind and action' with 'present judgments of alternatives' and 'projections of the future', and 'socio-structurally and relationally conditioned', interacting with the broader socio-political-economic context of a higher education system ('space') and the local characteristics and cultures of a particular institution ('place'). Building on the work of Klemenčič and others, Stenhalt (2021) proposes a framework for the critical analysis of how student agency is 'constructed and constrained' in the context of digital education, which highlights, among other things, the importance of questions related to data production, management, access and use and reuse to student agency.

Literature on student agency intersects with research on datafication in different ways. Proponents of learning analytics have argued that learning analytics can help measure and enhance student agency. Jääskelä et al. (2021), for example, have developed 'student agency analytics' for measuring and analysing student agency by classifying students according to their self-assessed personal, relational and participatory resources. This research relates to a widespread belief that learning analytics can be used to 'empower' students and cultivate agentic capacities in students, such as self-reflection, self-efficacy and self-regulation (Hooshyar et al., 2023). But these optimistic claims are complicated by information and power asymmetries between students and higher education institutions that threaten to undermine the potential of learning analytics to enhance student agency (Prinsloo & Slade, 2016) and 'tensions between increasing student agency in making learning-related decisions and "datafying" students in the process of collecting, analysing and interpreting data' (Tsai et al., 2020, p. 554).

Critical accounts of datafication in higher education expand on some of the threats that these asymmetries pose to student agency. In the context of university governance, Raaper and Komljenovic (2022) argue that the changing political economy of higher education recasts students as 'users' with limited control over what happens to their data and how it feeds into institutional decision-making. Whitman (2020), furthermore, shows how, through the use of student data for predictive analytics, universities construct student 'success' as related to behaviour and, therefore, under the control of individual students, obscuring the role of structural inequalities in students' lives. Jarke and Macgilchrist (2021), similarly, argue that analytics dashboards tell particular 'stories' that cast teachers, students and education in ways that limit agency and reinforce structures of marginalisation. Gourlay (2022), meanwhile, argues that the implementation of learning analytics systems risks reducing students to the status of 'documents' that cannot exist outside the systems of data-driven surveillance in which they are bound.

There is thus disagreement in the literature over whether datafication promotes or hinders student agency. However, this brief review also raises a different, though related, set of questions regarding student agency over datafication itself. That is, rather than asking whether datafication is good or bad for student agency, we might ask: What kinds of agency do student exercise over datafication? What difference does this make to their experiences at university and beyond? How can universities support student agency over datafication? The remainder of this paper will take up these questions, drawing on critical data studies research that explores everyday experiences of datafication to discuss findings from research on student perspectives of datafication in Scottish higher education. This 'everyday data studies' literature provides useful concepts that can enhance our understanding of student agency in relation to datafication by attending to how students understand, feel about and respond to data practices in their everyday lives.

Everyday data studies

Datafication research has recently begun to centre the everyday experiences of ordinary people in response to a perceived tendency of critical data studies to prioritise powerful actors, discourses and structures and expert perspectives at the expense of 'the perspectives of the people upon whose data datafication is built' (Kennedy, 2018, p. 18). This research builds on calls to focus critical attention on the ways people might have agency in relation to data practices, responding to wider critical data studies literature that suggests they do not (Couldry & Powell, 2014; Kennedy et al., 2015). Centring agency in analyses of datafication is valuable because it fills an

important empirical gap regarding the impact of datafication on real people and better aligns critical data studies with political struggles over datafication (Kennedy, 2018). As Burgess and colleagues put it, attending to the everyday is important 'precisely because datafication is itself becoming so ubiquitous and so ordinary' and because the everyday is 'where most people feel these processes most deeply, and where they have the most capacity to act upon them, albeit in constrained and ethically complicated ways' (Burgess et al., 2022, p. 34). Everyday data studies scholarship has explored the relationship between everyday experience and agency with regard to datafication by attending to what people know and believe about data practices, how they feel about them and how they respond to them. Expressions of excitement, anxiety, fear and frustration with respect to algorithms illuminate important collective dimensions of datafication in everyday life and point to the potential for alternative social arrangements (Ruckenstein, 2023). People draw on a range of literacies and forms of vernacular knowledge to understand and interpret data practices (Burgess et al., 2022; Pangrazio & Selwyn, 2019). These feelings and understandings underpin how people respond to datafication. Møller Hartley and Schwartz (2020) characterise these responses as 'coping tactics' for dealing with datafication, including trust, disconnection, minimising risk and apathy. Particularly relevant to the present study is the relationship between anxiety, trust and apathy, or resignation. Pink et al. (2018) highlight people's anxieties around data and how they attempt to mitigate them through data management routines, arguing that trust is essential to the ability to act in the face of uncertainty. Steedman et al. (2020), meanwhile, explore 'complex ecologies of trust' in the relations between people, institutions and data-driven systems through a discussion of people's perceptions of public service media data practices. Other research has highlighted the role of 'digital resignation', as opposed to trust or apathy, as a rational response to power asymmetries in people's relations with corporations and public services that increasingly require them to 'consent' to data collection in exchange for access (Bagger et al., 2023; Draper & Turow, 2019). The everyday data studies literature thus highlights the structural conditions and power relations involved in people's everyday experiences of datafication and what kinds of agency people might have over data practices. In what follows, I will illustrate how this literature can help illuminate the relationship between student agency and datafication in higher education, drawing on research with university students in Scotland.

Researching datafication with students

The research involved ethnographic engagement with students at a large research-intensive university in Scotland to understand their experiences of and perspectives on datafication in their everyday lives, and what this meant for their relationship with the university. This engagement began with a series of workshops in which participants performed a version of Powell's (2018) 'data walkshop' to explore and map university digital infrastructures and discuss issues and possibilities related to student data. The purpose of the workshops was to sensitise participants to processes of datafication and provoke reflection on and discussion of data practices (Noteboom & Ross, 2024), enrolling students as 'critical companions' in the exploration of datafication (Ziewitz & Singh, 2021). To that end, the research drew on speculative methods (Ross, 2022), particularly their use of 'objects-to-think-with' and their emphasis on engaging publics to explore and intervene in futures.

I held five workshops between May 2022 and April 2023 with 22 participants in total, of which 14 subsequently agreed to be interviewed. Each workshop lasted approximately two hours, and interviews lasted between 40 and 90 minutes. Participants were students on undergraduate and postgraduate programmes in computer science, sociology, design, education and digital humanities. Participation was voluntary and participants were recruited primarily via course mailing lists and received a gift voucher worth £10 for attending a workshop, and another for being interviewed.

These activities generated rich qualitative data in the form of participant-produced maps, photographs and notes from the workshops, notes of my own observations from the workshops and interview recordings, which I subsequently transcribed. Issues and concerns that arose in workshops informed the conduct of interviews and subsequent workshops, and I analysed the data throughout my fieldwork in an iterative, abductive process (Timmermans & Tavory, 2012) that involved continuously moving back and forth between data from workshops, interviews and fieldnotes and theoretical literature, 'cluttering and shedding' (Benzecry, 2022) to arrive at the analysis that follows. I will now present findings from this analysis to illustrate participants' everyday experiences of and perspectives on university data practices, followed by a discussion of the implications for student agency.

Awareness and sense-making
Participants reported having a generally low level of awareness of and interest in how student data was used, particularly prior to the workshops. There was a sense that datafication was a ubiquitous presence in their lives, but that it was often invisible and taken-for-granted. Participants generally felt that many students found discussions of student data 'boring' and were for the most part unconcerned about how their data was used,

described by one participant as a state of 'blissful ignorance'. A common complaint was that there was a lack of information from the university about what data was collected and how it was used, but no participant recalled having read the university privacy statement, despite 'consenting' to it during enrolment in each year of study, which they attributed to its length and the use of 'legal jargon'. There was also a sense that university data practices were considered relatively insignificant compared to students' everyday use of internet services and platforms like Google, Spotify, WhatsApp and WeChat. The students I spoke to were keenly aware of the ways in which tech companies collect and make use of data about them for targeted advertising, personalized recommendations and more and reported trying to protect their privacy online by rejecting cookies, using VPNs and deciding not to use certain platforms because of privacy concerns. These everyday experiences online provided a powerful lens through which participants interpreted university data practices.

Potential data uses

Many participants felt that the university could make better use of student data. They identified ways in which data could be used to enhance teaching, provide more targeted student support and improve user experiences, both on campus and online. For example, one participant recounted a story of wandering from building to building trying to gain access with his student card, complaining, 'They have all this data about me, and I can't even find a bathroom'. It was also suggested that student data could be used to make university webpages and platforms more user-friendly and to improve the information students receive from the university, for example telling them about available study spaces and providing personalised notifications of important information and opportunities. Relatedly, participants felt that the university could use this data more effectively for planning and resource allocation, for example in the context of timetabling, which several complained resulted in inappropriate rooms, scheduling clashes and long walks between classes. Finally, a few participants felt that student data could be made available, with appropriate safeguards, to students themselves for use on coursework and other projects aimed at improving the university.

Surveillance and control

Along with these possibilities, participants raised a number of concerns about potential uses of student data. Participants were concerned that data may not be a meaningful reflection of student life or activity, for example in the context of the analysis of platform trace data. Participants worried about potential losses to privacy and frequently referred to undesirable feelings of being 'watched' or 'tracked'. While some participants felt access to their own data, for example through a learning analytics dashboard, could be useful, others noted that comparing themselves to others and being reminded of their mistakes could bring additional stress or feelings of shame. Participants frequently expressed fears related to data breaches and the potential misuse of student data. For example, multiple participants reported being targeted via their institutional email address by predatory essay mills and wondered how their email addresses had been acquired. Another concern related to a perceived lack of control over the use of third party platforms, for example the institution's learning management system, and a lack of awareness about what happens with data shared with the platform companies. Overall, participants felt they had a lack of meaningful control over their data at university and that the mechanisms for informed consent to data processing could be made more robust, including more granular options to withdraw consent.

Trust or resignation?

Participants' perspectives on student data were closely related to their perceptions of the university overall and their relationships with it. Participants reported generally high levels of trust in university data practices, referring to the university's good reputation and status as a public institution, as well as the university's established processes for research ethics and duty of care for its students. This trust, however, was complicated by experiences and events that caused participants to question the university's benevolent nature. The research took place in the immediate aftermath of the COVID-19 disruption and during a protracted industrial dispute across the UK higher education sector, and several participants pointed to a series of strikes in particular as changing their perception of the university and its leadership in ways that called into question their trust in the institution, and by extension its data practices. Trust in the institution, moreover, was often overshadowed by feelings of uninterest, powerlessness and resignation. Expressions of trust were often unenthusiastic and equivocal, with participants pointing more to a lack of distrust instead of any sort of affirmative feelings toward the university. This was closely related to the lack of control described above. As one participant put it when discussing the use of a third party learning management system, 'I don't care enough to be comfortable about it. Like, it's gonna happen anyway, if I don't have another way of accessing my reading, then I don't have a say in it, so it's just like okay, let them do that I guess'.

Discussion and conclusion

The findings thus demonstrate that students exercise agency with respect to datafication in a number of ways. While most students may not actively consider university data practices on a daily basis, participants' responses point to the ways in which students draw on everyday experiences with data-driven systems to make sense of data practices in the university. They use a range of 'everyday data literacies' (Burgess et al., 2022) developed through their experiences of datafied platforms and academic knowledge to make sense of university data practices. They employ diverse 'coping tactics' (Møller Hartley & Schwartz, 2020) to engage with the university and other platforms, such as minimizing risk by using VPNs, rejecting cookies or switching platforms, as in the case of a participant who reported using WhatsApp instead of WeChat to discuss Chinese politics free from state surveillance. But in the context of the university, their freedom to disconnect is more limited, underscoring the importance of trust. While the findings broadly concur with previous research that has indicated high levels of trust in university data practices among students (e.g., Jones et al., 2020), the idea of 'complex ecologies of trust' (Steedman et al., 2020) highlights the ways in which this trust is conditional and dependent on an array of other factors both within and beyond the university, and points to the limits of student agency over datafication.

The findings also illustrate how student agency is limited by informational and power asymmetries between students and the university. As can be seen in participants' feelings of 'blissful ignorance' and lack of control over their data, current university data relations are primarily top-down, with students giving up their data to the university and other actors in exchange for improved services and an enhanced experience. This is also evident in many of the potential data uses identified by participants, which tend to involve the university making better use of the data it already collects, without any change to the fundamental relations involved. As Fourcade and Kluttz (2020) have argued of the wider platform economy, this amounts to a 'Maussian bargain' in which users are enticed to give up their data in an unequal exchange. In the context of higher education, this form of exchange encourages students to behave as passive data subjects, promoting 'digital resignation' (Draper & Turow, 2019) rather than agency over data and education.

Alternative accounts have argued for greater student participation in digital governance and decisions about how their data is collected and used (Knox, 2022; Prinsloo & Slade, 2016). As Knox (2022) argues, universities should be fertile ground for institutional experimentation with participatory data governance, given their traditions of democratic and collegial governance and interdisciplinary expertise. Steps in this direction could help promote student agency over data within the university, and in their lives beyond higher education. Just as students' everyday experiences of datafication inform their views on university data practices, their experiences of datafication within higher education carry over into their lives beyond the university. Experiences with alternative forms of data governance might therefore contribute to the development of critical data literacies that are essential components of agency and democratic citizenship in contemporary society.

Thus, attending to student agency in relation to datafication not only helps us understand what datafication means for higher education, but points to an important role for universities in promoting agency over datafication more broadly. The literacies and tactics discussed above are increasingly important 'agentic capabilities' (Klemenčič, 2023) for students to succeed not only in higher education, but also, and especially, beyond the university. The idea of higher education as 'student self-formation' (Marginson, 2023) focuses our attention on the role of higher education in developing reflexive agency that will serve students in their lives beyond university. But as research on datafication reminds us, 'to participate in datafied social, political and civic life, ordinary people need to understand what happens to their data, the consequences of data analysis, and the ways in which data-driven operations affect us all' (Kennedy et al., 2015, p. 6). The role for universities, then, is to help cultivate agency over datafication that students can bring with them into the future, as workers, consumers, carers and citizens beyond the university.

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