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Democratic Pedagogy in the Digital Age: Challenges and Opportunities for Initial Teacher Education

Abstract

Digitisation poses opportunities and challenges for both education and democracy. Digital tools have the potential to open dialogic spaces and support inclusion. However, they also have the potential to normalise market-driven approaches and transform education into a space of competition and measurement. In view of these contrasting perspectives, this article presents a critical analysis which draws on the results of two research studies in initial teacher education (ITE). Drawing on the results of the studies the article examines the influence of digitisation on democratic pedagogies in ITE.

Keywords: *digitisation, democracy, initial teacher education (ITE), democratic pedagogy, assessment*

Zusammenfassung

Prozesse der Digitalisierung eröffnen gleichermaßen Chancen und Herausforderungen für Bildung und Demokratie. Mit digitalen Instrumenten können Dialogräume eröffnet und Inklusion gefördert werden. Zugleich haben sie jedoch auch das Potenzial, marktorientierte Mechanismen weiter zu normalisieren sowie Bildungsräume in solche des Wettbewerbs und der Messungen zu verwandeln. Angesichts dieser gegensätzlichen Perspektiven präsentiert dieser Artikel eine kritische Analyse, die sich auf die Ergebnisse zweier Forschungsstudien zur Lehrererstausbildung (ITE) stützt. Auf der Grundlage der Ergebnisse zweier Studien wird der Einfluss der Digitalisierung auf demokratische Pädagogik in der Lehrkräfteerstbildung untersucht.

Schlüsselworte: *Digitalisierung, Demokratie, Lehrkräftebildung, Bewertung, Demokratiebildung*

Introduction

Teacher education is tasked to prepare future generations of teachers for the classroom. In Scotland, a country with a democratic political system, the values-based approach to teacher education aligns with the aspirations of democratic education. Democratic education connects personal and political domains and engages directly with the social reproduction of society (Gutmann in Sardoc, 2018). It seeks to prepare pupils to both live free lives and respect the institutions that allow them to do so, embedding values of respect, tolerance and deliberation (Gutmann & Ben-Porath, 2015). Teacher education aims to embed the values of social justice, integrity, trust and respect in teachers' professional practice (GTCS, 2021). These values develop respect, tolerance and deliberation in their pupils and students. Both democratic education and teacher education (in the Scottish context) share a focus on inclusion and valuing diversity. Democratic education, as a broad descriptor, is aligned with the aims of teacher education programmes in many countries in the global north where teachers are prepared to work in education systems within democracies. Both are impacted by current challenges related to democracy, as neoliberal ideologies that normalise market-driven approaches and competition (Ovens & Lynch, 2022), transform education systems into sites of competition and measurement (Kennedy, 2024).

Digitisation (defined below) influences both education and democracy. It has the potential to be a 'democratising force' (Rebes, 2024) but this has yet to be realised (Fraser, 2014). The Covid pandemic and the move to digital education during lockdowns led to greater inequity in education provision (Green, 2021; Montacute, 2020), rather than realising the potential of digitisation here. The influence of digitisation, therefore, is an important consideration, particularly for teacher-education programmes, who aim to enable new teachers to enact democratic values in their classrooms. Focusing on the context of teacher education (introduced below) this article examines the influence of digitisation on democratic pedagogies. The impact of digitisation on democratic education is a key consideration in the context of Education preparing pupils and students for society and playing a key role in social progression. Drawing on data from two research projects the analysis poses the question: *In what ways does digitisation frame and constrain democratic pedagogies in ITE?*

Theoretical Framework
Democracy, Democratic Education and Digitisation

The relationship between education and democracy is mutually constituting; democratic societies require educated citizens. While there are many different types of

democracy, in the global north most countries operate under liberal democracies (Kennedy, 2024). Scholars of democratic pedagogy also predominantly focus on liberal democracy (Sant, 2019). Liberal democratic education foregrounds freedom as the most privileged democratic value and educates students about the democratic systems that enable this (Sant, 2019). Democratic pedagogy, in this article, is defined broadly, while acknowledging the wide scope of democratic approaches and their variables and similarities (Sant, 2019). It understands education in relation to its role in preparing future citizens to both act in socially appropriate ways and to participate within civic institutions and structures (Gutmann & Ben-Porath, 2015). In the context of teacher education – the focus of this article – democratic pedagogy is understood as pedagogy that enables knowledge sharing (Sargeant & Lynch, 2021), values dialogue (Raymond et al., 2024) and is inclusive of all (Gutmann & Ben-Porath, 2015).

Digitisation is defined in relation to the increasing ubiquity of digital technologies in all areas of society. Digital technologies are tools which are connected to the internet. This enables them to connect people, and information, across traditional boundaries of space and time. In being connected to the internet digital tools provide a means for the corporate structures, which shape the internet, to mediate peoples' experience (Cormier et al., 2019). In education digitisation changes the ways in which knowledge is accessed which has implications for the role of the teacher (Virmani & Williamson, 2016). Challenges of confidence and competence when using digital technologies can influence the quality of teaching. Infrastructure and socioeconomics lead to inequity of access to digital technologies for education (OECD, 2022). The ways in which stakeholders are recognised and represented online is also an important consideration (Coker & Mercieca, 2023). Use of digital technology has intensified, and the digital infrastructure is changing peoples' interactions with political, economic, cultural and social structures (Örtegren, 2024a; Valles-Peris & Domenecn, 2024).

Digitisation influences democracy, providing the context for much democratic practice today. Digital technologies provide an opportunity to *revitalise democratic governance* (Fischli & Muldoon, 2024, p. 819) and empower citizens (Rebes, 2024). But digital technology also has the potential to destroy democracy through fake-news, manipulation of social media and the resulting polarisation of citizens (Fischli & Muldoon, 2024). In 2024 more than half of the adult population, globally, had the opportunity to exercise their right to vote, in multiple national elections (Atwood et al., 2024). This would seem to be positive for democracy enabling citizens to *enjoy liberty, opportunity, and the respect of others* (Gutmann in Sardoc, 2018). However, democracy is observed to be diminishing, as neoliberal discourses dominate political rationales and new forms of popularist parties emerge (Zembylas, 2023). The right to vote is not a straightforward determinate of democracy (Atwood et al., 2024). Digitisation is potentially playing a role here; this is an important factor in the backdrop of this analysis.

Digitisation and Initial Teacher Education
The growing ubiquity of digital technology in society has changed the ways we see the world and make individual, and collective, decisions (Peters & Jandric, 2017). Teacher education is now required to prepare teachers for a digitally infused education system (Starkey, 2020) and digital competencies feature in the professional requirements of teachers in most European countries (European Union, 2019). New teachers are expected to be competent and confident using digital technology in their classroom practice, and for administration and professional development. Research examining the preparation of new teachers' digital skills and literacies has not always been positive (Napal Fraile et al., 2018; Lund et al., 2014) and initial teacher education has not always succeeded in preparing student teachers adequately (Gudmundsdottir & Hatlevik, 2018). The Covid pandemic foregrounded digital literacies and skills in education and in doing so highlighted gaps and inequities (Green, 2021; Montacute, 2020). For teacher education digitisation is therefore an important consideration.

Teacher education is influenced by local and global discourses. While it is guided by national and local policies it is influenced by global meta-narratives which situate it as a *policy problem* and often result in a neoliberal focus on measurement (Kennedy, 2024). Digital technology is very good at measurement (Peters, 2020) and so has the potential to exacerbate this neoliberal focus on performativity. Peters and Jandric (2017) posit that three 'turns' have influenced the context of global democracy, and these influence the context in which teacher education operates. The first; the 'global' turn, attends to the rise of neoliberalism and globalization in which market forces are foregrounded and citizenship moves beyond the nation state. In education systems the tension between preparing pupils for a global community and valuing local culture is a key consideration. The 'knowledge rhetoric' which is observed globally, focuses on generic competencies which education should deliver (Deng, 2020), rather than localized knowledge. The second turn; the 'environmental turn' attends to 'ecological democracy' and speaks to sustainability discourses, which are often foregrounded in school-based education. Movements such as 'De-Growth' highlight the impact of digital technology on ecological sustainability, highlighting the *environmental harms associated with the production, consumption and disposal of digital technology* (Selwyn, 2024, p. 187). The third turn; the digital turn, continues to influence education as digital technology becomes ubiquitous in education systems globally. These three turns all influence teacher education in various ways, playing out in education systems across the world as teachers grapple with an increased focus on performativity, sustainability discourses, and digital technology.

Democratic Pedagogy and ITE in Scotland
Focusing in on the provisional standard for registration (SPR), the standard which Scottish student-teachers need to meet, democratic pedagogy aligns with the core values of teaching in Scotland (GTCS, 2021). Student-teachers need to evidence *'Social Justice', 'Trust and Respect'* and

'Integrity' in their teaching practice. Social Justice is defined in the SPR as *'the view that everyone deserves equal economic, political and social rights and opportunities now and in the future'* (GTCS, 2021, p. 4). This relates directly to the core of democracy in providing all citizens with rights and responsibilities. It also speaks to inclusion, in that *'everyone'* is deserving of equal rights. Trust and respect are defined as the *'expectations of positive actions that support authentic relationship building and show care for the needs and feelings of the people involved and respect for our natural world and its limited resources'* (GTCS, 2021, p. 5). This attends to the actions of democratic citizens, preparing pupils and students to participate in society with respect for others (Gutmann & Ben-Porath, 2015). It also attends to ecological notions of democracy including *'the natural world and its limited resources'*. The values-base of democratic education is aligned with teacher education in the Scottish context. While practice in this context may not always be explicitly described as *'democratic education'*, teacher education shares the values-base of this approach.

Research Context

The research studies this analysis draws examples from were carried out in the context of a one-year teacher education programme in Scotland. The programme was delivered at a mid-size university with a long history of teacher education. About 180 primary (teaching pupils aged 3-12) and 20 secondary (teaching pupils ages 12–18 years) student-teachers enrolled onto the Professional Graduate Diploma in Education (PGDE) each year. The programme consisted of 18 weeks in university and 18 weeks on school placement. Student-teachers were required to pass two types of assessment, to evidence their professional development and meet the Standard for Provisional Registration (GTCS, 2021). Connected to the university inputs a patchwork assignment was designed which scaffolded students' engagement with theory and practice, culminating in reflective narratives that examined wellbeing and social justice (see Coker & White, forthcoming). During placements student-teachers were required to complete digital portfolios which captured their learning journey and were used during assessment of professional placements (see Coker, forthcoming).

The research studies both sought to capture stakeholders' experiences of the assessments. The research examining the patchwork assignment (Study 1) applied a critical-realist framework. Student-teachers' perceptions of the patchwork assignment were collected using a mixed-methods questionnaire. 35 student-teachers on the programme completed the anonymous questionnaire at the end of the academic year 2023–2024, following invitations being sent to the whole cohort. Data was analysed using sequential analysis, followed by convergent parallel analysis for integration. Findings revealed the diversity of student-teachers experience as they worked through the same assessment process (Coker & White, forthcoming). Data for the digital portfolio study (Study 2) was collected the year before in the academic years 2022–2023. Stu-

dent-teachers, University tutors and School-based mentors were invited to share reflections using a semi-structured questionnaire, at three points over the academic year. This captured their experience of the digital portfolio which acted to capture their learning journey on placement and was used in the placement assessment. 30 student-teachers completed the first questionnaire, 31 the second and 23 the third. Values coding identified values, attitudes and beliefs about the digital portfolio (Coker, forthcoming).

Analysis and Discussion

Sant (2019) in a review of democratic education, identified two spectrums of *'ontological primacy'*: Individual-Community, and Particular-Universal. Democratic pedagogies are positioned along these spectrums depending on which type of democracy they align with. For example, neoliberal democracy gives the individual ontological primacy. In the research studies, which both focus on student-teachers' assessments during their one-year programme, these two spectrums are brought into focus. Using three examples the analysis below examines the factors that frame and constrain democratic pedagogy in the age of digitisation. It focuses on the key domains of teacher education which align with democratic pedagogies: knowledge sharing, scaffolding and dialogue, and collaboration and inclusion.

Knowledge Sharing

Student-teachers were asked, in Study 1, which resources supported them during their PGDE year. Online teaching resources and social media were used alongside school and university-based resources. The most frequently used resources were 'self-made teaching resources' such as lesson plans and teaching props. In Study 2 student-teachers identified the school-based mentor as the most important relationship regarding their learning during school placements. Both observations suggest that student-teachers were predominantly focused on the context of their placement, on the 'particular' setting in which they were practising. The digitised resources: online resources and social media, allowed them to access knowledge from other places, drawing into focus the 'universal' to 'particular' spectrum. The prevalence of self-made resources highlighted the 'particular' in terms of pedagogy. Student-teachers made resources for the 'particular' context in which they were working. They also made use of digital resources though, accessing more 'universal' repositories. This speaks to the ways in which knowledge now flows into classrooms. Digitisation enables the flow of knowledge from global sources such as UNESCO and OECD, this knowledge enters curriculums and teachers' practice, implicitly and explicitly shaping their practice (Coker et al., 2023). For the student-teachers this brings into focus the globalised context of education. Digitisation provides conduits for universal and globalised knowledge. Depending on your perspective this may provide a positive or negative frame, and further research is required to understand the connotations in this specific example. What it does highlight though, is one of the ways in which digitisa-

tion opens a conduit for wider educational discourses and perspectives, to inform student-teachers professional development.

The knowledge which student-teachers engage with during school placements is framed by the local context of the classroom, and so by the values embedded in local policy and practice. Digitisation enables wider flows of knowledge to flow into the classroom, knowledge which is not framed or constrained by a policy system or the professional community of teachers. Knowledge accessed online, and through social media, accesses a much wider domain of knowledge, in which may be embedded universal notions of pedagogy and practice. This implicitly shapes student-teachers experience and is potentially one avenue for 'universal' social structures to become embedded in education, risking values of competition and individualism seeping further into education systems (Sant, 2019). This has implications for teacher education and for democratic pedagogy as little attention has, so far, been given to *'whose knowledge'* should count in teacher education (Zeichner et al., 2014, p. 2). Considerations of knowledge are important in teacher education and have been widely researched (Darling-Hammond, 2017; Shulman,1986). For democratic pedagogies and practice the values which inform that knowledge and the ways it flows into the education system are also key considerations.

Scaffolding and Dialogue
The digital portfolio (Study 2) was designed to scaffold student-teachers' learning whilst on placement and utilise digital technology to open spaces for dialogue, a key facet of democratic pedagogy (Raymond et al., 2024). The digital portfolio enabled students to share their learning with their university tutor and school-based mentor. It was completed over three school placements, designed to move from a scaffolded to an autonomous learning experience, congruous with democratic approaches. In the first placement learning was scaffolded through directed tasks which enabled student-teachers to engage with the professional standard (GTCS, 2021). In the second placement the digital portfolio became more student-teacher focused, with guidance rather than tasks, and in the third the students were given autonomy to capture their learning journey. On all three placements the digital portfolio was used as part of the student-teachers assessment and accessed by both the school-based mentor supporting them in school and a member of university staff who visited the school to assess their development.

In the research study student-teachers and university staff were invited to share their experiences of working with the digital portfolio (see Coker, forthcoming). For university tutors the digital portfolio enabled them to observe students' progress throughout the placement, providing – from their perspective – a fairer assessment. By being able to access the digital portfolio before they visited the student-teacher in school they were able to extend the dialogue that happened during the placement visit:

'It helps to present the bigger picture that you cannot see in a 45 minute lesson. It shows how the student has approached the placement' (Tutor)

'I see the purpose as giving evidence of things that can't be fully assessed in a lesson - so reading, planning, assessment etc.' (Tutor)

This was enabled by the digital affordance of the tool, when the portfolio was completed on paper students shared it with their university tutor and school-based mentor physically when they met them. The digital affordance of a shared workspace created a different learning tool to the material paper-based precursor, allowing university tutors to access it before they entered the physical space of the classroom. This aligned with the design intention, the structure of the digital portfolio provided scaffolding and the access the digitisation afforded extended the dialogic exchange, as tutors could observed student-teachers learning throughout the school placement.

For student-teachers' though the process was not straightforward. The shared space, accessed by their university tutor and school-based mentor left them feeling exposed, reminiscent of previous research findings examining student perspectives on e-portfolios (Evans & Powell, 2007). Rather than providing an opportunity for dialogue with the wider community the focus became the evidence presented and the student-teacher's performance, rather than their learning. The digital Portfolio foregrounded *evidencing* practice rather than *doing* practice, by providing the university tutor access to evidence before the placement visit, when they assessed the student-teachers practice. Capturing their development in a digital portfolio therefore led some student-teachers to feel overwhelmed:

'There is too much to do and not enough hours in the working day for teachers. I really struggled ... I honestly don't know how the teachers manage their own time, they have none!' (Student-teacher)

'At times this felt overwhelming to the detriment of my HWB' (Student-teacher)

From the student-teacher perspective the digital portfolio focused on them as individuals. Rather than providing support from the community around them, it quickly became positioned as a performative task, echoing the neoliberal discourses of accountability that are seeping into teacher education (Kennedy, 2024). Digitisation allows education to focus on the individual and in many ways invites this, even though there is huge potential for collaborative engagement. The race to design personalised learning, heralded by some as an advantage of digital technology and AI brings risks (Peters et al., 2023). When the individual is given primacy over the community the potential of democratic pedagogy is challenged. Digital tools mediate student-teachers experience of learning, but not always in the ways we expect, close consideration of this is important moving forward.

Collaboration and Inclusion
This individualist focus was also observed in the university-based assignment (Study 1). In the year the research took place a new assignment had been designed; a patchwork assignment which enacted the principles of sustainable assessment (see Coker & White, forthcoming). The stimulus for the re-design was the increasing use of AI and

the associated challenges in relation to academic misconduct (Sullivan et al., 2023). Sustainable assessment focuses on developing skills that students will use beyond the lifespan of the module the assignment assesses (Boud, 2016) and so was considered a useful alternative to the essay student-teachers had previously submitted. Like democratic education sustainable assessment prepares students for the future. The patchwork assignment was designed to provide student-teachers with opportunities to collaborate and reflect on their learning. Each semester three 'patches' were completed, these focused on social justice with semester one examining wellbeing, and semester two inclusive practice (see Fig. 1). These topics aligned with democratic pedagogy and the professional standard.

The assignment provided opportunities for collaboration and dialogic exchange which were met with different reactions by the student-teachers:

'The case study was really useful. I benefitted significantly from the conversations that came from this task, hearing others perspectives and developing my critical thinking' (Student-teacher)

'Although we received feedback from our peers, I feel as a peer myself that we were all focused on being kind and positive and not always constructive due to the nerves around the room' (Student-teacher)

'I found some of the patchworks, working with peers challenging. The peers changed things last minute, therefore I did not feel confident in knowing what I was doing in a presentation of a group task. I felt this was not fair and hindered my presentation. I would have rather worked on my own, however I do realise this communication and peer working is an essential skill for teaching' (Student-teacher)

These three quotes highlight the diversity of student-teacher experience. This was a key finding of the research study; student-teachers experienced the same patchwork assignment in very different ways. Classrooms are becoming more diverse and democratic approaches provide ways to approach this, to open spaces where students can *dwell in difference together*' (Sameshima & Orasi, 2022, p. 52) but it is not a straightforward design task.

The first quote suggests that for this student-teacher the assignment tasks provided an opportunity for dialogic exchange which was meaningful and supported their learning. The quote suggests that the student-teachers in this group took part in a dialogic exchange which deepened their thinking and in which they were able to share different perspectives. This speaks to an inclusive experience in which student-teachers shared different views. This directly aligns with the aims of democratic education (Gutmann & Ben-Porath, 2015) in which pupils are taught to respect different opinions and perspectives. The assignment task enabled student-teachers to model a democratic approach which could then be revisited in their own practice.

The second quote speaks to the hesitancy of student-teachers to engage in constructive dialogues in assessment situations. The structures of the education system have not empowered these students to engage confidently in dialogue directly associated with assessment. It highlights the need for this to be overtly taught to student-teachers, as their personal values – in this case being kind - may lead to actions which, while well intentioned, constrain the learning experience. Being inclusive is more than being kind to each other, opening spaces to listen to different perspectives and learn from others requires skilful design and facilitation.

The third quote speaks again to collaboration and is perhaps most important regarding democratic pedagogy. It highlights the tensions which the student-teacher is engaging with on the individual-community spectrum. The student-teacher demonstrates their awareness of the importance of collaboration, of engaging with others in their professional community. However, in the university setting, where success is measured individually, the actions of their peers feel unfair, and they would have rather worked alone. The tension between the academic and professional expectations is visible. Democratic education teaches pupils and students to interact with respect for each other (Gutmann & Ben-Porath, 2015) but the education system measures success individually, creating tensions on the individual-community spectrum, particularly for assessment. This is pertinent when considering democratic education regarding designing assignments. It speaks to the way in which digitisation implicitly frames and constrains teacher-education as the response to an increasingly digitised world (of which AI could be considered the latest development) led to development of this assignment. Fawns (2023) posits that it is no longer possible to separate digital and analogue, even when we are not using digital tools, they continue to frame and constrain our actions.

Social Justice Focus	Patch One	Patch Two	Patch Three
Semester One: Wellbeing	Bibliography and short Patch 1; Annotated answer essay response	Lesson plan Micro-teaching Reflection	Retrospective Narrative: Wellbeing Submitted with Patches 1 and 2
Semester Two: Inclusive Practice	Review of the Literature	Case Study Poster and Presentation	Retrospective Narrative: Inclusive Practice Submitted with Patches 1 and 2

Fig. 1: An overview of the PGDE Patchwork assignment (Source: Coker & White, forthcoming: Sustainable Assessment in Higher Education: Examining the Complex Interplay Between Structural Conditions and Individual Agency in Student Experiences)

Limitations
This analysis draws on limited data from previous studies, it does not aim to draw empirical conclusions. Rather, the aim is to form part of a dialogic exchange itself, to stimulate discussion relating to the ways that digitisation frames and constrains democratic pedagogies. In doing so it brings into focus the tensions relating to democracy and the contested nature of the term, at best a slippery concept. As we prepare student-teachers for a digitally infused education system (Starkey, 2020) it is important that we engage with our values, and examine the ways in which they are mediated through the digital and educational tools, structures and resources students engage with.

Conclusion
Digitisation influences practice and pedagogy explicitly and implicitly. In the digital portfolio research study digitisation explicitly shaped the student-teachers experience, as they used a digital tool. In the sustainable assessment research study the influence of digitisation was implicit. The student-teachers experience of this assessment was influenced by the discourses pertaining to a focus on individualised learning in education, which digitisation may be accentuating. The design was influenced by digitisation in being a means to respond to the challenges of the digital context in education currently. The digital portfolio, in foregrounding digital reifications focused the student-teachers on evidencing. This reflects neoliberal discourses of accountability and measurement that are permeating education, and that digitisation does very well. In this way digitisation acted as a conduit, reflecting and perpetuating wider system structures such as the focus on individualism and performativity. However, digitisation also creates new opportunities for dialogue and listening to alternative perspectives. In connecting people across the boundaries of space and time it offers new opportunities for dialogic exchange, the potential to build new democratic processes within and beyond education. Responding to AI through assessment design may also create new spaces for collaboration and dialogue within students' assessments.

Digitisation frames and constrains democratic education in ITE in two ways. The digital tools and spaces we use mediate our practice, implicitly and explicitly. They provide new frames for communication, opportunities for dialogue and scaffolded learning. But they also can constrain our practice and act as conduits for neoliberal and consumer-driven discourses to seep into education. Our response to digitisation also matters. New assessment designs provide more opportunities for values-based practice and collaboration, to be inclusive and to build respect, all key values for democratic pedagogy. Digitisation provides opportunities for this, but care and consideration are required when using digital technology to enhance and develop practice. Democratic pedagogies provide a means to engage with the diversity of the classroom and structure practice to ensure that equity and the values of social justice and inclusion are foregrounded. Consideration of the spectrums of particular-universal and individual-community

provide meaningful ways to analyse practice and ensure that the experienced curriculum reflects what is intended.

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