

How do teachers perceive students' belonging? A qualitative interview study on teachers' attitudes in Austrian basic digital education

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Abstract

Purpose – The sudden implementation of Basic Digital Education (BDE) in lower secondary education in Austria called for teachers without subject-specific training to instruct BDE. Thus, BDE is currently highly influenced by teachers' attitudes and personal experiences with digitality. The purpose of this study is to investigate teacher's social practices within the new school subject, centring the question what attitudes teachers hold toward students' belonging and how teachers' beliefs underpin these evaluations.

Design/methodology/approach – This paper focuses on eight semi-structured interviews with Austrian BDE teachers. The data were analysed with a combination of reflexive thematic analysis to categorise overarching themes and documentary method for in-depth understanding of tacit, social knowledge. Notably, this paper focuses on teachers' perspective only.

Findings – The analysis according to documentary method revealed two types of BDE teachers: type I teachers who prioritise traditional teaching practices and type II teachers who prioritise student-centred teaching practices. While type I teachers focus on academic achievement and rely on power imbalances, type II teachers try to break with these norms by focusing on strong relationships and participatory learning. The data further suggest teachers' ambition to include all students.

Originality/value – The findings of this study show that BDE offers a freedom to learn – meaning a shift from direct teaching into participatory learning – which opens the opportunity to break with structural norms and mitigate inequalities. To further support this movement, the conclusion suggests implications for more inclusive practice in BDE.

Keywords Basic digital education, Belonging, Teachers' attitudes, Educational inequality, Digital divide, Postdigital condition

Paper type Research paper

Introduction

The digital transformation has created the need for the education system to adapt. In response, Austria introduced the mandatory school subject Basic Digital Education (BDE) in the school year 2022/2023 (BGBl. II Nr. 267/2022) in lower secondary grade. The curriculum includes competences like critical reflection, computational thinking and creativity. It is grounded in the “Frankfurt triangle”, which features three perspectives on digital artefacts: structures and functions of technology and media, interrelations with culture



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and society and interaction in terms of use, agency and subjectification. A digital artefact can further be analysed, reflected on and actively created. The curriculum of BDE tries to include all three perspectives and works with exemplified digital artefacts and fields of application (BGBl. II Nr. 267/2022).

Nevertheless, experts in the Austrian context have criticised the curriculum (Kayali *et al.*, 2022; Swertz *et al.*, 2022). A key shortcoming is its broadness – especially for a subject taught merely once a week – which inevitably creates uncertainty about what to prioritise in class. Furthermore, cyberbullying prevention receives little attention. With BDE introduced at short notice, there was no subject-specific training for teachers either, leaving many struggling to meet curricular demands. In line with Sustainable Development Goal (SDG) 4 – “Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” – BDE could offer the opportunity to mitigate educational inequalities stemming from the digital divide (van Dijk, 2020). However, this aim is feasible only if teachers are equipped to teach the subject effectively.

At present, BDE is, thus, strongly shaped by teachers’ personal knowledge and interests (Gartner and Weixelbraun, 2024). These dynamics are further complicated by the postdigital condition – where analogue and digital are inseparably entangled (Jandrić *et al.*, 2018) – and learners who have grown up as digital natives that “often find traditional pedagogical approaches inadequate due to their reliance on rote memorization and passive learning” (Rathnasekara *et al.*, 2025, p. 432). Collectively, these developments shape BDE and make cultivating a sense of belonging across the student body especially challenging.

Given the recent national rollout of BDE, the breadth of its curriculum and limited subject-specific preparation for teachers, BDE provides a relevant context in which teachers’ attitudes and teaching practices may shape students’ inclusion, participation and belonging. It is, therefore, a suitable case for examining how teachers’ attitudes and underlying beliefs relate to students’ belonging in a newly mandated subject.

Accordingly, this paper investigates teachers’ attitudes toward students’ belonging in BDE by centring eight semi-structured interviews with teachers. By focusing the question what attitudes teachers hold toward students’ belonging and how teachers’ beliefs underpin these evaluations, the paper seeks to find implications for more inclusive practice in BDE. A combination of reflexive thematic analysis (rTA) and documentary method (DM) will be used to answer the research question.

In a first step, school belonging will be defined with Goodenow (1993) and further discussed in relation to Rogers (1961, p. 283) principle of “unconditional positive regard” and self-determination theory by Ryan and Deci (2000), which highlights the interplay between teacher–student relationships and student motivation. In a second step, belonging will be discussed from a postdigital perspective, underscoring the need for investigating social practices within BDE. Yuval-Davis’ (2006) belonging concept will specify how belonging can be determined on the individual and societal level and further reveal that belonging is rooted in ethical and political values. In a third step, the results of the eight interviews with teachers will be discussed and placed in context with theory. The discussion will highlight that teachers’ attitudes toward students’ belonging are influenced by underlying norms. Finally, this paper concludes by questioning the accessibility of BDE, structural educational inequalities and suggesting practical implications toward more inclusive practice.

School belonging

Belonging in school and class can be described as the amount to which students feel “personally accepted, respected, included, and supported by others in the school social environment” (Goodenow, 1993, p. 80). When students feel like they belong, they are more

likely to engage in learning and participate in class activities (Roorda *et al.*, 2011; Ryan and Deci, 2000). This feeling of belonging can significantly boost school motivation and academic achievement, as students feel valued and supported by both peers and teachers (Goodenow, 1993).

Student-centred learning approaches value teacher–student relationships (Rogers and Freiberg, 1994, p. 154). Rogers (1961, p. 283) principle of “unconditional positive regard” further demonstrates that the teacher’s congruence, empathy and acceptance enables significant learning (Rogers and Freiberg, 1994, pp. 153–158). This aligns with self-determination theory (SDT) (Ryan and Deci, 2000). SDT is a psychological framework that explores human motivation and personality. It posits that people are driven by a need to grow and achieve fulfilment. The theory emphasises three basic psychological needs (BPNs): autonomy, competence and relatedness. The alignment of teachers’ student-centred teaching practices and their willingness to focus on students’ BPN was already noted in previous research (Basileo and Lyons, 2024). In classroom practice, unconditional positive regard supports autonomy by offering meaningful choice and acknowledging students’ perspectives, which further strengthens relatedness by cultivating warmth, respect and trust. Meeting the three BPNs in accordance with SDT promotes students’ motivation, engagement and well-being, with belonging emerging as a central outcome of sustained relatedness. Consequently, teachers’ attitudes play a crucial role in students’ well-being (Blandford, 2024).

When theorising belonging in digital education, it is essential to acknowledge the ongoing digital transformation. From a postdigital perspective (Jandrić *et al.*, 2018), belonging emerges from social practices that are entangled across classroom interactions, messaging platforms and everyday digital communication. With this understanding, digitality becomes the main driver for societal transformations, highlighting Reckwitz’s notion of singularity (2017, pp. 243–247) and Rosa’s (2023) reflection on acceleration. Singularity refers to late-modern societies prioritising the unique and distinctive over the general, intensifying competition for visibility and aesthetic recognition (Reckwitz, 2017, pp. 243–247). In education, this means students and teachers negotiate belonging amid pressures to perform individuality across on- and offline spaces. The postdigital condition further constitutes acceleration (technological, social and pace of life), which encourages an even stronger focus on outcomes rather than the learning process itself within formal education (Rosa, 2023). A central challenge in this context is the digital divide, conceptualised as a three-level framework of inequalities in access, use and outcomes/benefits (van Dijk, 2020, pp. 7–14). While the second-level digital divide was once strongly associated with age and gender, van Dijk (2020, p. 93) argues that differences in the use of digital technologies are now predominantly grounded in social class and status.

Ways to determine belonging

Building on Yuval-Davis’ (2006) framework, there are three critical factors to determine belonging: social location, identifications and emotional attachment and ethical and political values.

Social location encompasses identity categories such as gender, socio-economic status, migration background or ability (Yuval-Davis, 2006). For instance, family background significantly impacts students’ educational opportunities in Austria (BMSGPK, 2024, p. 45). Further, students with lower socio-economic status, disabilities or migration background have fewer opportunities to attend grammar schools and graduate (Astleithner *et al.*, 2021).

Identifications are the narratives people construct about themselves (Yuval-Davis, 2006). These narratives, whether individual or collective, are linked to emotional attachment. According to SDT, relationships and emotional attachment play a crucial role in self-determination within the

educational context (Ryan and Deci, 2000). Thus, teacher–student relationships are significant for student motivation. This is especially relevant for students from disadvantaging backgrounds, such as those with low socio-economic status, migration background or disabilities, who are at risk of school failure, but benefit greatly from a strong teacher–student relationship (Roorda *et al.*, 2011).

In addition, Yuval-Davis (2006) argues that ethical and political values are closely connected with belonging on the individual level. By that she means that our understanding “where and how identity and categorical boundaries are being/should be drawn” (p. 203) are highly influenced by political ideologies. An example of boundaries in educational settings could be the implementation of German support classes and courses in the school year 2018/2019 by the Austrian Government. As many students have German as their second language, students need to pass the MIKA-D test to attend regular classes. The MIKA-D test is a standardised test in Austria that assesses the German language skills of children with German as a second language. Students, who barely pass this test, must attend German support courses (German courses parallel to regular classes). Students, who fail this test, must attend German support classes (non-degree German classes, BMBWF, 2024). Other examples of structural exclusion could be Austrias history of the segregation of regular and special schools (BMBWF, 2019).

Method

Sample

This paper focuses on eight interviews with Austrian teachers in BDE and/or Computer Science that were conducted in April and May 2024 for a study centring teachers’ perspective on empowerment and belonging in BDE. The sample size was chosen in accordance with the principle of “information power,” introduced by Malterud *et al.* (2016).

The recruitment followed convenience sampling, meaning that existing connections of the department were used to contact teachers. Inclusion criteria for the recruitment were in-service teaching or substitute teaching of BDE in secondary schools in Austria. Further, the recruitment primarily focused on the inclusion of teachers with minimal teaching experience, as early career teachers could face even more challenges when teaching subjects out of their own field of training. To enable comparisons, the selection also prioritised a mix of rural and urban schools. Notably, convenience sampling may have resulted in selection bias. Table 1 provides an overview of the selected sample.

Interview guideline

In a pre-prepared guideline to support the interviews, 21 questions were provided. The questions were divided into four clusters: (C1) Demographic data, (C2) Course of the lesson, (C3) Diversity of students and (C4) teachers’ and students’ empowerment. The guideline was reviewed by fellow researchers and adapted accordingly.

With a focus on semi-structured interviews, the guideline needed to be flexible enough to invite narrations of participants. Therefore, the interview opening question was unspecific: “In unserer Studie wollen wir uns auf die Perspektive von Lehrpersonen fokussieren und deswegen würde ich dich einfach einmal darum bitten, mir vollkommen frei alles, was du gerne über das Fach Digitale Grundbildung und deine Unterrichtspraxis, den Umgang mit Schüler:innen etc. sagen magst, erzählst. Sollten bei mir Fragen offen bleiben, stelle ich sie dir im Nachhinein” [In our study we focus on teachers’ perspective. I invite you to share all that you would like to about Basic Digital Education, your teaching practice, your work with students, and anything else you consider relevant. I may ask some follow-up questions afterwards; author’s translation].

Table 1. Sample

Teacher	School type	Experience	Subjects	Federal state	Class level
T1	Middle school	1 year	BDE, Art, Physics	Upper Austria	5th and 7th grade (10–13 years)
T2	Middle school	2 years	BDE, English, Art	Lower Austria	5th grade (10–11 years)
T3	Middle school	1 year	BDE, History	Upper Austria	5th, 7th and 8th grade (10–17 years)
T4	Middle school	1 year	BDE, German, History	Vienna	8th grade (13–16 years)
T5	Grammar school	12 years	BDE, Computer Science, Psychology, Electives	Vienna	6th grade (11–12 years)
T6	Grammar school	3 years	BDE (Substitute), Computer Science, Physical Education	Vienna	5th, 7th and 8th grade (9–15 years)
T7	Grammar school	1 year	BDE, Computer Science, English, Geography	Burgenland	5th and 7th grade (9–13 years)
T8	Grammar school	1 year	BDE, History, Geography	Vienna	5th, 6th, 7th and 8th grade (9–15 years)

Note(s): Class level only refers to lower secondary classes, BDE = basic digital education

Source(s): Gartner and Weixelbraun (2024, p. 997)

Follow-up questions were based on the guideline, but in line with Galletta and Cross (2013, pp. 71–73), flexible in accordance with the interview situation. Consequently, participants had the opportunity to digress from the guideline and were encouraged to introduce other important topics. As one participant tends to move off topic, they asked for the interview guide beforehand. Nevertheless, the resulting interview had the longest duration time and most narrations. Across participants, interview length ranged between one and two hours.

The interviews were conducted online by two researchers, transcribed using the AI-supported software noScribe and revised manually. The interviews were held and transcribed in German.

Analysis

This study is embedded in Big Q qualitative research. Big Q rejects positivist research values in relation to objectivity and quantity of data. Instead, knowledge is understood as partial and situated, and researcher subjectivity is treated as resource (Braun and Clarke, 2025; Haraway, 1988).

For this study, integrating rTA and DM is essential to answer the research question. Notably, both methods are embedded in Big Q research and treat knowledge as situated, partial and subjective. While DM helps interpreting both, participant's and interviewer's statements, rTA complements this by reflecting coders' personal background and its possible influence on development of codes and themes. Thus, the combination of both methods helps to understand researchers' positionality during the whole research process.

In addition, the combination of these analysis methods is essential to capture both patterned, overarching meanings and the tacit, socially shared orientations underlying teachers' statements. While rTA interrogates the meanings that lie beyond the literal account, DM complements this by analysing speech acts and micro-pauses, bringing to light contextual meanings as well as speakers' underlying orientations. The combination of both methods, therefore, offers an in-depth understanding of several sequences.

Finally, both methods are suitable for capturing different aspects of teachers' attitudes. Because of its dual focus on the content and structure of interaction, DM is especially suitable for educational and subject-specific research in schools (Bonnet, 2009) and rTA was originally developed for psychological research (Braun and Clarke, 2021).

Reflexive thematic analysis

rTA enables the identification, analysis and organisation of themes across the data set (Braun and Clarke, 2021; Braun and Clarke, 2013). In this study, a reflexive approach was adopted (Rigby and Iacovides, 2026). Two researchers – one with a background in teacher training subjects other than computer science and one with a background in educational science – conducted the coding in English. Notably, both interviewers share teaching experience in secondary education and are fluent in German and English.

Researchers began their coding separately with an inductive approach via MAXQDA. Once completed coding, the researchers met to discuss their coding and resolve any disagreements. If researchers could not agree, then the differences were embraced according to rTA (Rigby and Iacovides, 2026), and several codes were used for the segments in question. The data sets were combined using MAXQDA's feature "fusion". After combining the data sets, the analysis was put into theoretical context and further codes were derived from literature.

The previously described coding allowed the forming of themes directly from the interviews. In a further step, themes and subthemes were contrasted with existing literature and placed in relation to each other. In addition, other researchers with educational backgrounds were included in the discussion of themes to test the reliability of coders. The analysis according to rTA was finished in June 2024.

The rTA lead to three themes, which were further divided into several subthemes. Table 2 gives an overview of themes. The findings of rTA were already discussed in previous work (Gartner and Weixelbraun, 2024). Building on these findings, this paper focuses on the detailed interpretation of the subthemes *students' social location* and *relationships and emotional attachment* related to the theme *Challenges for equity in BDE* according to DM.

Documentary method

DM is a reconstructive approach that proceeds sequentially through interactional passages to uncover the "modus operandi of practical action" (Bohnsack, 2010, p. 103), meaning the common knowledge a group holds. It distinguishes between formulating interpretation (what is said) and reflecting interpretation (how it is said and what this reveals), followed by comparative analysis and typification. While originally developed for group discussions (Bohnsack and Nohl, 2013; Nohl, 2008), DM is applicable to analyse semi-structured interviews with teachers, where sequential talk and interactional cues reveal tacit knowledge.

After the rTA was finished, data were reviewed again for an in-depth analysis of teachers' attitudes in November 2024. Sequences connected to the theme *Challenges for equity in BDE* were further analysed in-depth according to DM in MAXQDA by the author. The interpretation was divided into four steps: *formulative interpretation*, *reflective interpretation*, *genre separation* and *case description* (Bohnsack et al., 2013).

The formulative interpretation included the division of passages into meaningful sections and the summarising of content. This process was partly reviewed by an expert in reconstructive methods in qualitative research during regular meetings over the course of a semester. In a further step, reflective interpretation of segments was conducted. During this process, several sequences were discussed in small interpretation groups (three to five

Table 2. Themes and subthemes

Themes	Subthemes	Example
Empowerment in BDE	Competences addressed by teachers* Personal growth of teachers and students* Teachers' empowerment Students' empowerment	"Und wie er dann plötzlich gemerkt hat [...], dass das mit der Hand eigentlich keine Rolle spielt, [...]wenn man eine Maus hat. Und dann interessiert es ihn auf einmal und dann geht es viel besser. Also das war so ein bisschen, nachdem wir die erste Hürde überwunden haben und gesehen haben, es geht, jetzt rennt es. Also, ja, das finde ich schon recht schön zu sehen." (Teacher 2) [When he realised his disability doesn't matter when using a mouse, he got interested. Overcoming that hurdle was key, and it's nice to see his achievements; author's translation]
Challenges for equity in BDE	Students' social location* Students' and teachers' previous experience Relationships and emotional attachment* Students' individual struggles from teachers' perspective Structural challenges regarding BDE	"Also ich kann mir auch gut vorstellen, dass [...] [Kinder,] die in der Deutschförderklasse sind, dass die wahrscheinlich auch Schwierigkeiten hätten. [...] Weil, also die Kinder haben immer bis inklusive der vierten Stunde sind sie im Deutschkurs, wenn sie die volle Zeit dort sind. Und DG-Stunde ist in der vierten Stunde. Also das haben sie einfach immer verpasst." (Teacher 4) [I think children in the German support class likely struggle with this learning content. These children always miss the BDE lesson since it coincides with their German course; author's translation]
Strategies for inclusion in BDE	Individual support and assistance for students Making learning content more accessible Reducing learning group size Encouraging self-regulated learning Individual assessment of achievements Teachers' time management Teachers' professional development	"[...] während sie dann im eigenen Tempo arbeiten, melden sie sich und dann gehen wir zu den einzelnen Kursen, gehen wir zu den einzelnen Kindern hin und können wirklich dann die individuelle Betreuung machen [...]." (Teacher 2) [While they work at their own pace, they ask and then we go to the individual children and can really provide individual support; author's translation]

Note(s): BDE = basic digital education, *subthemes related to literature

Source(s): Authors' own work

researchers) or research workshops. Multiple experts guided and reviewed this process for several interviews. The segments were put into context of the genre (how participants spoke) and reviewed and discussed with further segments. If an interpretation was true for multiple segments, then it became meaningful to the whole interview (=interview case) and identified as underlying orientation of the participant. Discussions during the interpretation groups and written interpretation were held in German.

After the case description of interviews was finished, the author started the process of comparative analyses and typification with a special focus on the following criteria: inclusive aspirations, understanding of norm students, hierarchies and roles, relationships with teachers and students, self-conception as teacher and teaching style. This step led to the conclusion of two teacher types within the sample in April 2026.

Results

According to the rTA, the interviewers located five main challenges for equity in BDE. [Table 3](#) gives an overview of challenges articulated by participants.

Based on an in-depth, DM-guided analysis of sequences concerning the subthemes *students’ social location and relationships and emotional attachment*, two teacher types were identified: type I, prioritising traditional teaching practices, and type II, prioritising student-centred practices. [Table 4](#) summarises the typology.

The two types are distinguished by both their underlying beliefs and their classroom practices. Type I teachers hold more hierarchical, teacher-centred beliefs. Although they acknowledge the importance of teacher–student and peer relationships, they rarely translate these beliefs into instructional practices. Hence, they seldom design activities that build or leverage relationships during lessons, but prioritise direct instruction and, in some cases, a non-device policy during explanations or whole-class teaching.

Table 3. Challenges for equity in basic digital education

Subthemes	Description
Students’ social location*	Social categories that are part of the identity of students, that is, family background, migration background, gender or disability
Students’ and teachers’ previous experience	
Relationships and emotional attachment*	Relationships between actors in BDE, that is, teacher–student relationship or student–student relationship (e.g. struggles like lack of teachers’ empathy or mobbing)
Students’ individual struggles	Lack of qualities from teachers’ perspective, that is, motivation, logical thinking or comprehension skills
Structural challenges regarding BDE	Challenges in relation to class size, staff, material, time, teacher education and limited resources

Note(s): *Subthemes related to [Yuval-Davis \(2006\)](#) and [Ryan and Deci \(2000\)](#), BDE = basic digital education

Source(s): [Gartner and Weixelbraun \(2024, p. 999\)](#)

Table 4. Typology of teachers

Types	Teachers	Attitudes
Type I teachers who prioritise traditional teaching practices	4 and 8	(1) Academic achievement is more important than strong teacher–student relationships (2) Reliance on power imbalances and teacher-centred practices (3) Do no act on practices that foster strong student–student relationships (4) Focus on accessibility of BDE, individual and inclusive practices
Type II teachers who prioritise student-centred teaching practices	1, 2, 3, 5, 6 and 7	(1) Strong teacher–student relationships are as or even more important than academic achievement (2) Withdrawal of strong hierarchies, student-centred practices (3) Act on practices that foster strong student–student relationships (4) Focus on accessibility of BDE, individual and inclusive practices

Note(s): BDE = basic digital education

Source(s): Authors’ own work

Type II teachers, by contrast, de-emphasise hierarchical norms and emphasise participatory learning. They actively align beliefs and practice by deliberately fostering teacher–student and student–student relationships as integral to learning. Further, they offer students active participation and, therefore, to be protagonists in their own learning process regarding technology (Iivari and Kinnula, 2018) – most visibly through group work and hands-on activities. Notable, teachers across both types articulate aspirations for accessibility and inclusion.

In conclusion, distinction between the two types is not absolute. Both share core educational ideals – such as commitment to student learning and classroom order – but they diverge in how they weight those ideals. While type I prioritises academic achievement, structure and direct instruction, type II places greater value on relationships and participatory engagement as drivers of learning and acts accordingly. Thus, their differences reveal contrasting value emphases. These contrasts are also reflected in their goals: type I emphasises static knowledge, whereas type II emphasises learning to learn.

Building on this typology, the next section details the attitudes teachers articulated regarding students’ belonging in BDE. Drawing on interview excerpts and practice examples, I show how these attitudes align with (and sometimes diverge from) the two ideal-typical orientations.

Teachers’ attitudes toward students’ belonging

Drawing on inductive-deductive rTA and DM approach, four attitudes toward students’ belonging emerged:

- (1) dichotomisation of academic achievement and school belonging;
- (2) reliance on power imbalance within teacher–student relationship;
- (3) practices that foster student–student relationship; and
- (4) individual and inclusive teaching practices.

Dichotomisation of academic achievement and school belonging

Across interviews, teachers frequently framed academic achievement and school belonging – operationalised here largely through teacher–student relationships – as competing priorities rather than complementary aims. In some accounts, they were presented as opposing ends of a spectrum. Teacher 8 argues that she would rather teach students more content than focus on being a likeable teacher: “[...] es ist für mich halb so schlimm eine Lehrerin zu sein, die vielleicht nicht gemocht wird, aber dafür eine, wo sie viel lernen” [It’s not such a big deal for me to be a teacher who perhaps isn’t liked, but one from whom they learn a lot; author’s translation]. In contrast to that, Teacher 5 argues that nowadays AI exceeds the explanatory skills of teachers, which offers the opportunity to shift teachers’ focus from curriculum to relational aspects of teaching.

Conceptualising curriculum and relationships as a spectrum with varying emphases, the analysis suggests two predominant orientations. Type I represents the notion that academic achievement is more valuable than relationships. Yet, type I teachers recognise the benefits of strong teacher–student relationships. Accordingly, Teacher 4 notes: “[...] umso länger die Kinder mich kennen, oder, und besser ich sie kenne, umso besser laufen unsere DG-Stunden. Also [...] weil da eine gewisse Bindung da ist” [The longer the children have known me and the better I know them, the better our BDE sessions run. Simply because there’s a certain bond there; author’s translation]. Nevertheless, the interviews with Teachers 4 and 8 reveal certain conditions that make it difficult to strengthen teacher–student relationships: lack of time, turbulent classroom dynamics, insecurities in relation to teacher role, disagreement

among the teaching staff and no subject-specific training. Consequently, teachers of type I wish for other conditions, but settle for direct teaching or disciplinary measures.

In formal education, a strong emphasis on curriculum and academic achievement is unsurprising (Allen *et al.*, 2016). Teachers “are required to produce measurable [...] outputs” rather than build strong relationships (Ball, 2020, p. 222). This is true for every educational institution, especially for schools. With globalisation, the connection between educational performance and power is even more prominent. Austria, like every other OECD country, is part of this competition (i.e. PISA). Within this logic, curricular content and measurable outcomes often gain precedence over relationships and emotional attachment, even though the latter are vital for students’ well-being and engagement.

In the culture of digitality and acceleration society, the idea of competition is even more prominent. Drawing on Reckwitz’s account of the society of singularities (2017, pp. 243–247) media technologies operate as key drivers of the pursuit of distinctiveness. The result is an intensified race for differentiation and audience reach across online spaces. To participate effectively, individuals need digital competences. This includes not only technical skills, but also the capacity to navigate algorithms, manage identity and engage responsibly, making digital literacy a precondition for competitiveness in contemporary life.

By contrast, type II prioritises teacher–student relationships over academic achievement or tries to focus on both simultaneously. Specifically, Teachers 3, 5 and 7 prioritise relationships over academic achievement. Teacher 5 argues that having a good relationship with the students helps him adapting his teaching style to students’ personal needs. He also feels like students are less likely to disrupt class when they like their teacher. Further, they talk to him during breaks whenever they face struggles in their lives. However, he is not sure if this approach is helping with the learning process of students: “Ich weiß nicht, ob man mehr Inhalt weiter kriegt damit, aber auf jeden Fall bessert sich die, die Ebene, die Beziehungsebene zwischen Kindern” [I don’t know if it helps with learning more content, but it certainly improves the relationship between the children; author’s translation].

Despite teachers’ dualistic view on academic achievement and relationships, the interview with Teacher 1 reveals that focusing both at the same time is possible. In her classes, she lets the students work alone and tries to support them individually. She argues that students learn best, when they actively engage with digitality themselves. Other than that, she is also aware that good teacher–student relationships help with students’ discipline because they respect their teacher more. This has been confirmed repeatedly in empirical research (Thompson, 2018). The interviews with Teachers 2 and 6 suggest that they have similar positions. However, they did not talk enough about this topic to specifically confirm their positions.

Consistent with these accounts, the rTA indicates that both aspects can simultaneously be the centre of BDE. This requires a BDE which focuses on key aspects such as self-efficacy, collaboration and creation, critical thinking and problem-solving, which in turn leads to computational empowerment (further development of computational thinking) – meaning an active engagement of learners with digitality (Göbl *et al.*, 2023) – and fostering a sense of belonging.

Reliance on power imbalance within teacher–student relationship

The interviews suggest divergent orientations toward authority in BDE classrooms. Type I teachers rely more on hierarchical, controlling practices, including punitive and compliance-oriented techniques. Accordingly, Teacher 8 adopts a stricter stance; instructing her students to fold their arms behind their backs or heads to secure attention. These techniques echo Foucauldian analyses of disciplinary power in “Discipline & Punish” (1995).

Both Teachers 4 and 8 aim for control and students' attention. Teacher 8 appears to construe effective classroom control as contingent on pronounced hierarchies. She presents this approach as effective, citing compliments from colleagues as evidence. In line with this orientation, her explicit account emphasises curriculum coverage and peer recognition over relationship-building. Yet, she expresses a desire to be liked and uncertainty about her role as classroom teacher. Teacher 4 reports feeling overwhelmed by the classroom dynamic and, therefore, focuses on a direct teaching style: "[...] wenn ich mich entscheiden muss zwischen, (.) ähm ja, (.) bildungswissenschaftlich nicht so (.) äh (lachen) äh BEFÜRWORTENDEN (.) Unterrichtsmodell und CHAOS, äh wähle ich ersteres" [If I've got to decide between a teaching model that isn't exactly endorsed by educational science and chaos, I'd go for the former; author's translation].

In contrast, we find less power imbalances and stronger teacher–student relationships in type II. This notion of stronger teacher–student relationships is significantly represented within the interviews with Teachers 1, 2, 3, 5 and 7. Teacher 7 states that BDE offers a freedom to learn, as there is less pressure to achieve grades. Consequently, she gives her students few constraints: "Und ich bin eigentlich muss ich sagen, ist mein Zugang immer ähm, dass ich ihnen relativ viel Freiraum gebe, weil damit sie sich auch kreativ ausleben können. Weil es hat keinen Nutzen, wenn ich sage, jetzt macht ihr das und genau so und nach Punkt und Beistrich. Und im Endeffekt zaht es sie halt gar nicht" [I like to give students plenty of room to be creative. Sticking to the letter of the instructions isn't very useful if the task doesn't resonate with them; author's translation]. Nevertheless, her students are often overwhelmed by the level of freedom and autonomy they experience in her classes, as they are not used to this freedom in school.

The teachers of this type offer their students to learn individually or in groups and support each other. Further, they share the notion that they need to stay up to date and can learn from their students. This approach of learning on equal footing can also be found in [Rogers and Freiberg \(1994\)](#) student-centred learning, which is Teacher 5's main teaching approach. Accordingly, Teacher 5 states: "[...] ihre Bedürfnisse sind also eben unterschiedlich [...], mit dem personenzentrierten Ansatz [...] ermöglicht dir das, dass jeder sich selbst weiterentwickelt, auf seine eigene Art und Weise" [The students' needs are different and the student-centred approach offers the possibility for personal development of all students; author's translation]. Nevertheless, there are still power imbalances between Teacher 5 and his students. During the interview, he frequently addresses his students as passive or helpless, especially his female students. He in turn tries to help them and be their saviour, which mitigates students' agency.

Teacher 6 adopts project-based, individualised learning but appears to have limited knowledge of students, for example, uncertainty about their out-of-school technology use: "Ich weiß nicht, wer zu Hause mehr und weniger am Computer ist" [I don't know which students use the computer more or less at home; author's translation]. Her lack of knowledge suggests a more moderate type II profile.

According to [Rogers \(1961, p. 283\)](#) principle of "unconditional positive regard" and the principles of SDT ([Ryan and Deci, 2000](#)), a strong teacher–student relationship is essential for learning new skills. Yet, the rTA revealed that teacher–student relationships are sometimes undervalued. With teaching practices that encourage learning on equal footing, teachers not only offer their students individual learning, but also a sense of belonging.

Practices that foster student–student relationship

The analysis indicates that teacher types differ in the extent to which they implement practices that foster peer relationships. Type I is categorised by less practices that support student–student relationships, relying more on direct instructions or levelling approaches. Although Teacher 4 recognises the importance of student–student–relationships, she does not

describe to build them. She explains that her eighth grade class was formed a year ago by students who lost their school place or recently came to Austria. Therefore, she characterises the classroom dynamic as turbulent and reports feeling overwhelmed. Nevertheless, having a good connection with her students helps with discipline during class.

Teacher 8 does not talk about classroom dynamic but rather focuses on students' attitudes toward BDE. She mentions lack of motivation and students' previous experience of BDE as specific struggles during class. While other teachers encourage peer-to-peer support, Teacher 8 slows down the faster, more experienced students to keep all her students on one level: "Vor allem die, die dann schon ur viel können, die sind dann meistens so viel voraus, dass ich die dann einbremsen muss, ja?" [Especially those who've already got lots of skills, they're usually so far ahead that I must slow them down; author's translation]. She fears that otherwise the unexperienced students could be overwhelmed by the knowledge of the faster, more experienced students. In contrast to Teacher 4, she offers her students individual learning and support during class.

By contrast, type II teachers more frequently describe practices that cultivate peer relationships. Teacher 7 elaborates that being "cool" is very important for students around the age of 12 or 13 years. Therefore, their attitudes toward BDE are highly influenced by their peers. Teacher 6 supports that statement, as she feels that when some students are motivated for digital education, others will also be. Further, she notices a gender gap when it comes to confidence in digital education: "(3) Also auffallend ist, dass vor allem am Anfang vom Unterricht die Mädchen öfter sagen, nein sie können das nicht. Nicht alle, auf gar keinen Fall, aber MEHR Mädchen wie Jungs" [Especially during the first lessons of digital education the girls are more likely to say that they can't do that. Not all of them, but more girls than boys; author's translation]. By introducing stereotype sensitive classes, she tries to mitigate (gendered) prejudices. Additionally, she encourages good student-student relationships by letting students support each other during class. Offering students the chance to help each other out is a common practice within said teachers of this position.

Especially Teachers 3 and 5 focus on student-student relationships. Teacher 5 shares his experience with one refugee student, who refuses to get friends in class, as she is afraid of losing her friends all over again. He, therefore, tries to help her family with their residence permit to make sure that the family can stay in Vienna, and the student does not have to lose her social environment again. Teacher 3 talks about turbulent classroom dynamics in relation to differences of religious beliefs and political values of students. She knows that students' rigid opinions come from their parents, "[...] aber da ist das so festgefahren, das kommt von der Familie, dass man die dann aus dem gar nicht so rauskriegt" [but these rigid opinions come from their families, and you can't really change them; author's translation]. To mediate conflicts stemming from students' different opinions, she invites experts for workshops (e.g. workshops on the middle east conflict).

The rTA revealed that lack of empathy, turbulent classroom dynamics and (cyber-) bullying are particularly challenging in BDE. Teaching practices such as offering peer-to-peer support or mediating conflicts are essential for overcoming these challenges related to student-student relationships. Thus, withdrawing from traditional teaching practices like direct teaching, offers the opportunity to foster a sense of belonging in class, which can ultimately boost motivation and academic achievement (Goodenow, 1993).

Individual and inclusive teaching practices

Beyond teachers' attitudes, the data point to a structural dynamic that differentially positions students in BDE – privileging some while marginalising others. At the macro level, Teachers 1, 7 and 8 identify prior experience with digitality as key differentiator among students,

consistent with the first- and second-level digital divide (van Dijk, 2020). Additional differences are attributed to meso-level factors such as organisational routines, curricular design, scheduling and resource allocation. Across interviews, students with lower socio-economic status, non-male gender, disabilities and German language difficulties are perceived as disadvantaged in BDE, often labelled as needy, at risk or excluded. For example, Teacher 4 reports that German support courses overlap with BDE, resulting in the affected students being excluded from BDE.

At the micro level, Teacher 3 states that some teachers at her school exclude disabled students from computer rooms: “Und da stellen sich teilweise auch Kolleg:innen dann ein bisschen quer. Die lassen sie dann unten in der Klasse und dürfen nicht mit in den Computerraum gehen, was ich gar nicht einsehe” [Some of my colleagues don’t cooperate. They leave disabled students in the classroom and exclude them from the computer room, which I really don’t understand; author’s translation]. Teacher 5 points out that very few teachers take the time to really get to know their pupils, which leads to the exclusion of students that need more attention. At the same time, his interview contains indications of heteronormative, gender-essentialist assumptions, evident in a positioning that appeared to privilege male students and associate activity with masculinity and passivity with femininity.

Across both types, teachers describe adapting their classes around individual needs of students or enabling students to adapt their materials if needed. By that, teachers demonstrate their wish for an active participation of each student. Teacher 6 describes several inclusive practices consistent with personalisation. Her students are allowed to adapt the material according to their personal needs, that is, with screen settings or translation programmes. Thus, Teacher 6 recognises disabled or non-German speaking students’ needs for material adaption and inclusion. Yet, she sees potential in letting the students adapt their own material, underscoring students’ agency in meeting their own needs. This allows her to focus on class management while students customise their material. In addition, she provides translated instructions in English for recently arrived students from Ukraine to ensure immediate access.

Drawing on experience with students who are deaf or autistic, Teacher 8 lets students constantly make notes: “Und dann ist es wichtig, dass viel mitgeschrieben wird. Und (.) das mache ich [...] immer in allen Klassen, weil ich es persönlich einfach (.) gut finde, wenn ein Arbeitsauftrag nochmal verschriftlicht ist” [It is important to make notes. In all my classes we write down instructions because I think that’s good; author’s translation]. She also mentions that students with a hearing disability or autism have assistant teachers. Further, she keeps the instruction in easy German for students that have German as their second language or struggle with German language in general. To further support these students, she reads out loud task instructions together with students. With her teaching practices, she demonstrates her aspiration to include all students in BDE.

In accordance with Mahmood *et al.* (2024), these and further inclusive practices of teachers help fostering a supportive educational environment in which students’ sense of belonging can emerge. Nevertheless, once students are marked as in need of extra support, certain teacher-ascribed categories (i.e. reading difficulties) may stick with them. When categories become “sticky” (Ahmed, 2014, pp. 90–91), they possibly solidify students’ identities in ways that restrict their capacity to be seen otherwise, with implications for belonging. This resonates with Hanses (2013) and Spies (2019) on subjectification through addressing. Thus, teachers’ beliefs can shape students’ educational opportunities and play a major role in educational equity.

Conclusion and practical implications

Cultivating a sense of belonging among student bodies can significantly boost school motivation and academic achievement (Goodenow, 1993), but is often undervalued (Allen *et al.*, 2016). Hence, teacher's attitudes play a crucial role in students' well-being (Blandford, 2024). Accordingly, the aim of this paper was to examine teachers' attitudes toward students' belonging in BDE and find practical implications for more inclusive practice in BDE. Following a brief theoretical review, data were collected through eight semi-structured interviews with teachers from different schools and federal states in Austria. The analysis featured the connection of rTA and DM, which lead to various findings. Building on the subthemes *students' social location* and *relationships and emotional attachment*, the DM revealed different orientations of teachers, which can be distinguished into two types.

The two types of teachers share common educational ideals like commitment to student learning, inclusive practices and classroom order but differ in weighting these ideals. Type I *teachers who prioritise traditional teaching practices* focus on academic achievement, structure and direct instruction. Type II *teachers who prioritise student-centred teaching practices* places greater value on relationships and participatory engagement.

Most teachers share the notion that centring academic achievement and cultivating a sense of belonging across student body does not always go hand in hand. While type I focuses on academic achievement, type II prioritises building relationships or both at the same time. Consequently, type I relies on hierarchies and power imbalances, while type II focuses on group works and autonomy of students. Hence, type II implements more practices that foster student–student relationships than type I.

In line with Yuval-Davis (2006), these attitudes toward students' belonging are related to several norms that are rooted in political ideologies. Teachers are obliged to focus on outputs rather than processes (Ball, 2020). Thus, a strong emphasis on academic achievement is unsurprising (Allen *et al.*, 2016). Yet, type II teachers seem to break with these norms. For them, BDE offers the opportunity to withdraw from common teaching practices and explore student-centred and individual learning.

Underlying beliefs are also related to students' social location. Across interviews, students with lower socio-economic status, non-male gender, disabilities and German language difficulties are frequently perceived as disadvantaged in relation to BDE. They are either marked as needy, at risk or excluded from class, suggesting the presence of exclusionary mechanisms at macro, meso and micro levels.

When theorising belonging in digital education, it is essential to acknowledge the digital transformation, also known as postdigital condition (Jandrić *et al.*, 2018), and inequalities associated with it (van Dijk, 2020). Accordingly, findings indicate that prior experience with digitality significantly influences BDE. Thus, including all students can be challenging for BDE teachers, especially when teacher–student ratio is inadequate and time is limited. Therefore, it is crucial to interrogate teachers' beliefs – including teachers' attitudes toward students' belonging – as they shape pedagogical practice and can facilitate either inclusion or exclusion.

As the postdigital condition and acceleration are targeting all of us, all students deserve the opportunity to learn a critical approach toward digital artefacts. The interviews indicate that middle/upper class, male, non-disabled, German-speaking students are privileged in relation to BDE. That means that currently materials and further sources are mostly oriented toward these students. To make BDE accessible for all students, structural conditions must change: allocate protected instructional time for BDE, provide adequate subject-specific pre- and in-service training and sharpen the BDE curriculum so it is coherent, feasible and anchored in students' lived realities. Moreover, materials need to be stereotype-sensitive, translated into various languages and address diverse perception channels. These

Limitations

Given the small sample and the teacher-only perspective, claims are offered as indicative rather than definitive. Future work incorporating classroom observations and student perspectives would strengthen and extend these findings.

Further limitations include the convenient sampling of teachers, which may have introduced selection bias. Most teachers appeared confident in their teaching practice, while the absence of subject-specific training also gave rise to reported uncertainties. Consequently, the findings may not generalise across subjects; different recruitment strategies or disciplinary contexts could yield different outcomes. In addition, most teachers were non-male and had a maximum teaching activity of three years. The merely exception was Teacher 5, who identifies as man and has been teaching for 12 years. Notable, he was also the only teacher who depicted a gender-essentialist orientation that associates activity with masculinity and passivity with femininity. It should also be noted that the researchers conducted their research from a privileged position when analysing and interpreting the teachers' data.

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