iBecome: iPads as a tool for self-making

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ABSTRACT

Mobile devices, such as iPads, are described as supporting 'anywhere, anytime' learning by enabling students to move fluidly between at-school and beyond-school contexts. However, research on mobile digital tools in schools has largely been preoccupied with issues of design and implementation rather than with how mobile devices transform the nature of learning per se, and the identities of students both at school and beyond. In this paper, we draw on Bakhtin to explore the dialogical self-making of iPad-using students as they take up and resist various identities mediated by these cultural tools. Our focus requires a research methodology that accounts for the fluid nature of identity, and considers digital tools as mediational means deployed by students in knowledge-making as well as self-making. We illustrate how Bakhtin's view of the self as inherently dialogic – 'I-for-myself', 'I-for-the-other' and 'the-other-for-me' – provides insight into how and why particular identities are taken up or rejected by students in the fluid movement between lifeworlds at school and beyond.

We adopt a reflexive microethnographic research approach to capture the identity work undertaken by iPad-using students in a high school where everyone in Year 11 and Year 12 had received iPads to assist with their learning. In this paper, we report our in-depth analysis of one student, Phoebe, whose self-making shifts in nuanced and subtle ways in relation to the device. We see Phoebe deploy the iPad to render a dialogical version of who she is and might become, comparing herself across time to her past and future selves as well as in relation to others in her social world. Our analysis makes visible how Phoebe negotiated and traversed the challenges of relational self-making, both in relation to iPads and to others—including the dynamic multiplicity of her own voices. In this way, we demonstrate how a Bakhtinian perspective can be theoretically and methodologically responsive to the fluidity and complexity of twenty-first century learning and learning contexts.

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1. Introduction

We respond to recent calls for explicit engagement with the ontology of learning (e.g., Dall'Alba, 2009; Herrenkohl & Mertl, 2010; Packer & Goicochea, 2000), along with the relationship between knowing and being, by exploring ontological questions associated with secondary school student use of iPads as mobile learning tools. We conceive 'learning' as a process of developing knowledge and skills (epistemology), as well as selves (ontology), and values and beliefs (ideological becoming). Rather than conceiving iPad-using students as abstracted objects of study, we approach these young people as

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actors who participate not only in school but other contexts which dynamically interact with one another and contribute to meaning-making and self-making (Akkerman & Van Eijck, 2013). We suggest that understanding learning as ontological and ideological as much as it is epistemological supports a more holistic understanding of learners and challenges the technocratic framing of education as principally concerned with efficiency and effectiveness. By deploying a reflexive microethnographic approach in combination with Bakhtin's notions of dialogical self and ideological becoming, we show how students employ iPads not simply as neutral cognitive instruments, but as ideological tools for self-making and identity (trans)formation.

2. Conceptual framework

We begin with an overview of scholarly engagement with holistic views of learning as comprised of both epistemological and ontological development, and articulate our view that such approaches open up ways of contributing to much-needed, theory-based learning technology research. We discuss the key Bakhtinian concepts that we deploy to demonstrate how Bakhtin's theories support interrogation of the 'something missing' from accounts of learning (Herrenkohl & Mertl, 2010). Bakhtin's theories can take inquiry beyond the cognitive and social aspects of learning and offer ways of considering who students are and are becoming in relation to the meditational affordances of the iPad.

2.1. Learning as knowing, being and becoming

Over the past two decades, an increasing number of theorists have explored the intertwined relationship between knowing and being (e.g., Erstad, 2012; Herrenkohl & Mertl, 2010; Hull & Greeno, 2006; Packer & Goicochea, 2000; Wortham, 2006). While this has resulted in more complex and dynamic conceptualisations of human learning, tensions persist (Roth & Lee, 2007). The relationship between ontology and epistemology has been approached in a variety of ways in learning technology research generally, and mobile (or m-learning) more specifically. M-learning involves the mediating influence of a technological tool (Kearney, Schuck, Burden, & Aubusson, 2012; Wu et al., 2012) that facilitates learner mobility across various dimensions including: physical and social space; interest (or 'conceptual mobility'); and time (Vavoula & Sharples, 2002; Sharples, Arnedillo-Sanchez, Mildrad, & Vavoula, 2009). These various forms of mobility are captured in the concept of 'seamless' or 'anywhere anytime' learning (Wong & Looi, 2011), often employed alongside the term 'fluidity' in m-learning literature.

Some scholars engage with the role of affective factors in mobile learning technology such as mood, emotion, attitude and value (Oatley & Nundy, 1996). However, apart from the broad contention that mobile devices may be associated with having a 'cool' identity and that "affect and cognition should be tightly coupled" (Jones, Issroff, & Scanlon, 2006; p. 18), this work has primarily been concerned with why learners are motivated to use mobile devices (e.g., Alhinty, 2014; Jones & Issroff, 2007; Jones et al., 2006). Other scholars have ventured more deeply into the role of ontology in learning technology, but not necessarily in relation to mobile devices. Lipponen (2002) acknowledges that both knowledge and human identity are constructed in technology-mediated collaborative learning. Steinkuehler (2004) adopts a community of practice perspective to consider the ontological transformations that are facilitated by massively multiplayer online game play (MMOG). McConnell (2006) explores how e-learning can be approached in ways that give learners a sense of belonging to a community. Kearney et al. (2012) propose a sociocultural framework that highlights the social and personal aspects of m-learning. However, none of these approaches explicitly engage with learning as a process of personal and social transformation which involves more than "becoming a member of a community . . . but also taking a stand on the culture of one's community, in an effort to take up and overcome the estrangement and division that are consequences of participation" (Packer & Goicoechea, 2000; p. 228).

While sociocultural approaches offer ways of approaching m-learning that go beyond the pragmatics of learning design, a lack of explicit ontological interrogation means that the view remains partial and incomplete (Dall'Alba, 2009; Dall'Alba & Barnacle, 2007; Herrenkohl & Mertl, 2010; Packer & Goicoechea, 2000). To consider the fluidity of contemporary learning contexts, we look beyond questions of design and academic development. We explore the fluid shifts and transformations of learner identities in response to the mediating influence of the iPad. We suggest that Bakhtinian perspectives can engage with the ontological by making visible the ways students negotiate their identities in relation to others (social resources) and the iPad (material resources), sometimes taking up and at other times resisting and rejecting various possible selves.

2.2. Bakhtin and education research

Using Bakhtin's work arguably remains challenging to Western English-speaking researchers. Translations from Russian have been haphazard (Ginsburg, 1996) and direct engagement is unavailable without several translations: from Russian to English; from literary philosophy to educational theory; and from the Russian-Soviet context to a contemporary Western context (Matusov, 2007). Despite these challenges, many scholars have extended Bakhtin's ideas to fields including feminist,

post-structuralist and queer theory, film analysis, fine art and, since the early 1990s, educational research (Dentith, 1995; Matusov, 2007; Vice, 1997).

While some Bakhtinian philologists assert that educational researchers have misapplied Bakhtin's scholarship[1] (Matusov, 2007; Tsitsipis, 2004), there is a growing body of educational scholarship that draws on Bakhtin's ideas. Matusov (2007) counters philological criticism by pointing to the particular role of Bakhtin's work in developing a more ontological approach to the goals of education that goes beyond the traditionally understood primary goal as acquiring skills and knowledge. Freedman and Ball (2004) employ Bakhtin's term "ideological becoming" to describe the ways students develop ways of viewing the world, belief systems and values (Freedman & Ball, 2004; Maguire, 2007). Similarly, Sullivan, Smith, and Matusov (2009) contend that educational models that fail to consider the links between cognitive development and student identity are insufficient, and draw on Bakhtin's interpretation of Socratic dialogues as carnivalesque moments that can overturn existing power relations in the classroom. We build on such scholarship in our research by deploying several Bakhtinian concepts, explanations of which follow.

2.3. Ideological becoming

'Ideological becoming' (Bakhtin & Medvedev, 1978; Voloshinov, 1973) is core to Bakhtinian theory (Delp, 2004). Unlike the connotations of political inflexibility and propaganda of the English term 'ideology', the Russian term *ideologija* is understood simply as an 'idea system'; that is, "something that *means*" (Emerson, 1983; p. 247, emphasis in original). This involves making political decisions about, for example, the extent to which students will acquire school 'ways', and whether they will continue to identify with their own socioeconomic background (Freedman & Ball, 2004). Ideological becoming is thus not an isolated process, but involves the mediating influence of the social world or "ideological environment" (Bakhtin & Medvedev, 1978; p. 14). In our research, students occupy multiple ideological environments: the classroom; the school more broadly; home and family worlds; peer and social worlds; and the virtual world. Each environment has its own voice, and the diverse voices of participants. Bakhtin argues that the orchestration of different voices is critical to an individual's ideological development (Bakhtin, 1981). While this process involves tension and conflict, struggle with other discourses is necessary to the process of ideological becoming.

In a shrinking world, where the internet and new communications technologies expose us to diverse people and their ideas, cultures and values, these ideological environments extend far beyond physical spaces such as home or school (Freedman & Ball, 2004; Hermans & Hermans-Konopka, 2010). As a result, the classroom is a rich 'contact zone' (Bakhtin, 1981; p. 345) for students to develop their own ideologies as they encounter and struggle not only with various authoritative discourses, but also with the various internally persuasive dialogues that their peers (and teachers) bring into the ideological environment or 'contact zone'.

2.4. The classroom as 'contact zone'

Pratt (1991) describes contact zones as "social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power" (p. 34) and describes how people use language to negotiate the classroom contact zone. A student may, for example, struggle to meet or comply with teacher views while still maintaining control over his or her own ideas and identity. While Pratt (1991) does not cite Bakhtin directly, many educational researchers draw on her articulation of 'contact zones'. Fecho (2001) demonstrates how a Bakhtinian view of classrooms as contact zones helps students to transact their own identities as they dialogue with diverse voices, illustrating how classrooms are "rife with possibilities for perceived threat as well as for opportunities for engagement" (p. 13). Similarly, in their discussion of the process of 'ideological becoming', Freedman and Ball (2004) argue that exposure to multiple voices and their multiple perspectives is critical for students to learn and grow.

Like these scholars, we conceive classrooms as contact zones—"dialogically agitated and tension-filled environment[s] of alien words, value judgements and accents" (Bakhtin, 1981; p. 276). We suggest that this opens up an understanding of classroom spaces as opportunities for students to come into direct contact with the wide range of attitudes, values, and experiences that stretch far beyond the classroom's space-time location. Further, as students negotiate and resist these multiple viewpoints through dialogue, we see them transacting with their own identities (Fecho, 2001).

2.5. Bakhtin's discourse categories

Individuals encounter and struggle with a multiplicity of discourses in various social contexts. Bakhtin (1981) saw these multiple discourses as belonging to one of two broad discourse categories: authoritative discourse, or internally persuasive discourse. Bakhtin (1981) describes authoritative discourse as:

the word of the fathers. Its authority was already acknowledged in the past. It is a prior discourse, for example, the authority of religious dogma, or of acknowledged scientific truth or of a currently fashionable book. (pp. 342–243)

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[1] Tsitsipis (2004) draws on Urban (1991) when pointing out that critics "derive their basic argumentation from critical, literary theory, not sociolinguistics, and . . . linguistic anthropology and literary theory are not expected to make an identical use of certain concepts" (p. 589).

Internally persuasive discourse, unlike authoritative discourse, does not require privilege, and it is "backed by no authority at all, and is frequently not even acknowledged in society" (Bakhtin, 1981; p. 342). Nevertheless, internally persuasive discourse is subjectively compelling and influences an individual's thought processes in the same manner as authoritative discourse. Appropriated from everyday discourses that are encountered as individuals come into contact with others, internally persuasive discourse is "the discourse of personal beliefs, ideas that influence responses to the world and others" (Maguire, 2007; p. 173). Unlike the rigidity of authoritative discourse, internally persuasive discourse is 'freely developed', allowing "new material, new conditions, and new contexts" to be adopted (Hsu & Roth, 2014; p. 733).

While this freedom encourages creativity and productivity, forming one's own ideas and political stances – ideological becoming – involves struggle. However, the coming together of the different voices of and from within each environment is critical to an individual's ideological development (Bakhtin, 1981). Students thus need to be exposed to multiple voices and their multiple perspectives in order to learn and grow (Freedman & Ball, 2004). This struggle with a multiplicity of voices or discourses occurs not only between the individual and an *externalised* Other, but also *within* the individual through dialogical engagement with three categories of selfhood.

2.6. Three categories of selfhood

Bakhtin's conception of self reflects his dialogical ontology. To achieve a sense of personal identity, every self needs to coordinate and integrate three categories of selfhood: 'I-for-myself', 'I-for-the-other', and 'the-other-for-me'. 'I-for-myself' describes how I sense myself from within, but because I cannot perceive my own boundaries, I cannot achieve an autonomous representation of myself through this way of knowing (Erdinast-Vulcan, 2008). In Bakhtin's words, when "experiencing life in the category of [my] own *I*, [I am] incapable of gathering [myself] by [myself] into an outward whole that would be even relatively finished" (Bakhtin, 1990; pp. 35–36). 'I-for-myself' is restricted, "to a partial 'inside' perspective, which can only be transcended through an external vantage point" (Erdinast-Vulcan, 2008; p. 4). We develop a sense of our own identity through 'I-for-the-other' and 'the-other-for-me' because these amalgamate and project back to us how we are viewed by others. Human beings *need* the other (Erdinast-Vulcan, 2008); without the other, the self cannot exist (Bakhtin, 1990). In this paper, we see the coordination of Bakhtin's tripartite view of selfhood made visible through close analysis of Phoebe's self-reflective utterances in interviews ('I-for-myself'), and performed identities in group interviews and class observations ('I-for-the-other' and 'the-other-for-me'), which reveal identity work associated with *being* and *not being* a particular kind of iPad-using student.

We thus draw on several of Bakhtin's ideas to consider our research question: ideological becoming; the classroom as contact zone; authoritative and internally persuasive discourse; and a tripartite understanding of selfhood. In so doing, we make visible some of the ways students engage in identity work in relation to iPads, and demonstrate how this identity work "does not respect boundaries between the academic and non-academic" (Wortham, 2006; p. 25) nor between lifeworlds (Habermas, Habermas, & McCarthy, 1985) at and beyond school. We suggest that this holistic view of learning as inseparably comprised of knowing and being opens up new ways of engaging with the fluidity of contemporary learning contexts in which students participate as whole and complex people whose being and becoming matters to them, and should thus matter to researchers.

3. Method

Ethnographic tools and concepts were used to generate and interpret rich data in this microethnographic investigation. Microethnography typically draws on a smaller sample (Leininger, 1985; Werner & Schoepfle, 1987) and has a tighter focus (DeWalt & DeWalt, 2011; Knoblauch, 2005; Leininger, 1985; Rosenberger, 2001) on specific practices. In this research, the specific practices associated with iPads at the site school, St. Isidore's College[2] are of interest. We refer to 'iPads' specifically in this paper, rather than the more generic term 'handheld devices'. While it is possible that aspects of the analysis and discussion may apply equally to other mobile device brands, we are wary of an unquestioning application of principles and ideas beyond the immediate context. A few students at the site school purchased and used their own device (e.g., an iPad, iPad mini, or a Samsung Galaxy tablet) rather than the school-issued iPad. This suggests that eschewing the school-issued iPads and purchasing a different brand or type of device could itself be an ideological decision.

The relevant research question with respect to iPad-related practices was, in what ways do iPads enter into the process of self-making for students at school and how does this process of self-making interact with curriculum-related learning at school? To capture the richness of this struggle in classroom "contact zones" (Bakhtin, 1981; p. 345), we observed a small sample of four students intensively and reflexively across different facets of their school lives, and interviewed them about their experiences within and beyond school. This paper focuses on one participant student, Phoebe. We see Phoebe's talk as offering rich insights into her self-making when considered using Bakhtinian perspectives.

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[2] All names are pseudonyms.

3.1. Research site

Situated in a growing regional city in Queensland, St. Isidore's College was selected because the iPad program was only in its second year. Students were thus well placed to reflect on their learning with and without iPads. Additionally, because of the first researcher's pre-existing relationship with the site school (as a parent and supply teacher), we were aware that the iPad program was one aspect of the College's 2012–2014 Strategic Vision; specifically, that all programs be supported by "appropriate, contemporary technology". Further, the Head of Technology at the time indicated that the decision to deploy iPads rather than laptops, for example, was in part ontologically motivated. In interview, she commented that she wanted St. Isidore's students to realise that they had the same opportunities as neighbouring high-end private schools. St. Isidore's context within a local competitive marketplace of schools is relevant because adopting new educational technologies is a strategy frequently used by schools to attract enrolments and represent their approach as innovative and cutting-edge. Our awareness of the ontological underpinnings of the iPad program became part of the interplay between personal, professional and scholarly spheres, and was key to the explicit focus on iPads as a tool not only for developing knowledge and skills, but for students' identity work.

3.2. Data sources

Data was generated across an eight-week school term at St. Isidore's College where iPads were provided to all students at the commencement of their Year 11 Studies. Participant students self-nominated for involvement to support the ethical goal of attending to issues of informed consent surrounding working with young people. Self-nomination treats students not as research 'subjects' to be exploited for the researcher's gain, but as competent social actors (Alderson & Morrow, 2011). The primary data sources were: semi-structured, ethnographic interviews with participant Year 11 students; observations of these students, their peers, and teachers in various classes; and reflexive field notes kept by the first author.

A conversational and reflexively pragmatic approach was taken to conducting interviews and analysing the resulting talk (Alvesson, 2003; Baker, 1997). Participant accounts are viewed as reflexive products that produce multiple realities (Riach, 2009) rather than as 'true' accounts (Geertz, 1973); and researchers accept their own perspectives are not neutral, but embedded in a particular socio-historic moment (Clifford, 1988; Clifford & Marcus, 1986; Geertz, 1988). This stance supports the first investigative principle outlined in the following section by explicitly interrogating the 'oughts' and working to make visible those elements that are 'taken for granted'.

Observations of participant students, their classmates and teachers in a range of subject areas including Physics, Chemistry, English, Maths A, Geography, Dance and Modern History were recorded in handwritten, reflexive field notes using 'thick description' (Geertz, 1994) designed to make visible researcher perspectives and thought patterns (Day, 2012). This approach supports active engagement with the shifting roles and identities of both researcher and participants, and enables conscious reflection on multiple interpretative possibilities. This is again synergistic with the interpretive principles by which we have been guided; in particular, the importance of attending not only to students' utterances as formed material but to their lived experiences (Cresswell & Hawn, 2011).

3.3. Data analysis

Bakhtin did not ever fully articulate his approach to interpreting human action and his writing invites dialogue and ongoing questioning rather than imposing authoritative perspectives (Cresswell, 2010). There are thus no methodological absolutes by which we 'do' Bakhtinian analysis. However, we have been guided by the interpretative principles proposed by Cresswell and Hawn (2011), who draw on Bakhtin's early work in relation to art, in which he was specific about his method of inquiry. Two of these principles are particularly salient to this paper.

First, analysing content involves interpreting language systems, including their experiential quality. Researchers examine what participants say and do and thus experience as being 'true' in the context of the language system in which they are participating. This involves asking: (i) what is taken for granted in this expression? (ii) what kinds of 'oughts' are expressed in research participants' actions? For example in Phoebe's talk, she and the interviewer (first author) share certain understandings about what constitutes a 'good' student and about the qualities of "the general teenagers" to whom Phoebe refers. Second, to study language systems, formed material must also be studied. Language systems are expressed in a material form and thus interpreting human action "involves attending to the concrete minutiae of what is done in both verbal and embodied stylistics inherent in language systems" (Cresswell & Hawn, 2012; p. 18). In short, the investigator's method should involve close analysis of the details of utterances (formed material) but at the same time, not neglect the lived experiences (content) that are revealed in this analysis.

In Bakhtinian thinking (Bakhtin, 1986), understanding human action involves "making visible the 'content' of the act" and analysing 'concrete doings' (Cresswell & Hawn, 2011; p. 5). These concrete doings can be understood as the analysis of utterances, and the content of utterances within communicative relationship. Bakhtin provides a way of understanding iPad-using students' being and becoming through his view of the self as being constituted through concrete relational acts of communication with others (Davies & Renshaw, 2013). Fine grained micro-analysis of student interview talk is therefore consistent with microethnographic approaches and guided by the interpretative principles of (i) attending to experiential

dimensions when analysing language systems, and (ii) making visible the concrete doings of utterances. In this way, students' identity work becomes visible as they struggle with the multiplicity of voices in their lifeworlds.

Drawing on these principles, in the next section we closely analyse Phoebe's utterances for the interplay between Bakhtin's concepts of 'I-for-myself', 'I-for-the-other', and the 'other-for-me', and consider possible ways of understanding developing consciousness, including when various kinds of selves in relation to the iPad are taken up or resisted.

3.4. Participant students

Year 11 students were invited to self-nominate for participation by returning an expression of interest form. Approximately ten students indicated interest in being involved. In consultation with the gatekeeper (Head of Senior School), two boys and two girls whose subject selections provided a range of offerings were identified. In this paper, we focus on Phoebe. We became interested in the ways she both appropriated and resisted being understood as a particular 'kind' of iPad user in her talk. Our analysis captures Phoebe developing ways of viewing the world and her belief systems and values in the ways she aligns with (and sometimes distances herself from) others (Maguire & Curdt-Christiansen, 2007). We also see Bakhtin's ideas about 'I-for-myself', 'I-for-the-other' and 'the-other-for-me' at play as we consider Phoebe's sense of 'who she is' as an iPad-user.

4. Becoming Phoebe

During fieldwork at St. Isidore's, Phoebe displayed what we describe as a relatively detached attitude to the iPad. In the first extract from an individual interview with Phoebe, she is responding to the interviewer's description of Phoebe as a "pragmatic" iPad-user. The transcription key is provided below (Table 1).

Phoebe	Yeah I tend to pride myself in being .. the kind of teenager who .. uses technology? and they enjoy it when they h:have it? but I can live without it?
Interviewer	Yeah, right. That's a conscious decision.
Phoebe	Yeah
Interviewer	Why is that?
Phoebe	Because I don't really like being .. y'know one of the general teenagers? that everyone sees n it's just like, "Oh, you use technology and you can't live without it" n I read a lot and .. I like being different? and it's just who I am? And . . . I dunno I just never saw the point in dedicating my life to an iPad? Like .. if there's games in there and stuff that you can n th— that's quite distracting? So, if I'm .. I'm doing assignments, I tend to handwrite a lot of stuff or um .. just use my um .. laptop because I have a a school account on my laptop as well, just to take away .. any um .. anything else that I want to do? like use the internet and stuff?

Bakhtin's concepts of 'I-for-myself' and 'I-for-the-other' provide one way of understanding the iPad's role in Phoebe's ideological becoming. Phoebe ('I-for-myself') feels proud of being a teenager who can use and enjoy technology yet "live without it"; this is her sense of herself from within herself. However, this 'I-for-myself' is insufficient for Phoebe's identity formation—she needs the other ("general teenagers") because, "consciousness is impossible without an Other" (Baxter, 2011; p. 24). This phenomenon manifests particularly clearly when Phoebe indicates that she does not want to her 'I-for-the-other' to be as "one of the general teenagers"—the Other (lines 7–8). We suggest that Phoebe draws here on shared cultural knowledge of the negative stereotypes of her Generation Y peers which include being: self-focused (White & Kiegaldie,

Table 1
Transcription key: explanation of transcription codes.

Symbol	Meaning	Comments
Name		Speaker attribution
.	Short pause	Brief silence; break in phonation
. . .	Lengthy pause	0.2 s or longer
– – –	Lines of data removed	Keeps illustrative extracts to a manageable length
[ ]	Speakers overlap	
.	Terminative	Intonation signals full stop
,	Continuative	Intonation morpheme signals comma
?	Rising vocal inflection	Intonation signals appeal
Wor—	Truncation	Intonation signals aborted speech unit
( )	Empty parenthesis	Inaudible, not transcribed
(word)	Single parenthesis	Author's suggested hearings/description
		Pseudonym use
(( ))	Double parenthesis	Author's description
@	Laughter	One @ per pulse
@no @way	Laughter during word	@ marks laughter pulse
<u>word</u>	Underscore word	Indicates stress or emphasis placed on intonation
<u>Wo</u>:rd	Lengthened word	Indicates hearable lengthening in pronunciation of a word or sound (um, ah etc.)

2011); ambitious, demanding, entitled, over-confident (Woodruffe, 2009); and highly capable, constant 'digital native' users of technology (Prensky, 2001a, 2001b; White & Kiegaldie, 2011) who can't go without their device for more than a few minutes (Walter, 2012). Phoebe's statement, "I like being different and it's just who I am" (lines 9 and 10) captures quite beautifully the need for others in self-making: who Phoebe is (self) can only be grasped in relation to the alterity of who she regards herself as not (other).

In distancing herself from these stereotypes through the deliberate construction and projection of a particular 'I-for-the-other', Phoebe is also making the political decision to move away from school and broader social ways of being in relation to technology (Freedman & Ball, 2004). Microanalysis opens a window into the role played by the iPad in Phoebe's way of viewing the world and system of ideas, or ideological becoming. Further, we see here a lovely intersection of Bakhtin's ideas. For Bakhtin, "consciousness is always linguistically – and hence ideologically and socially – constituted" (Barta, Miller, Platter & Shepherd, 2001; p. 2). Phoebe's developing ideological self in relation to the iPad can be read as the result of tension and conflict between competing voices that reflect dissonant discourses; a necessary element of ideological becoming (Bakhtin, 1981). Phoebe's internally persuasive discourse is struggling with the authoritative discourse surrounding the "generally acknowledged beliefs" (Bakhtin, 1981; p. 342) about adolescents and technology previously described.

Phoebe is not anti-technology, however. She takes "pride . . . in being the kind of teenager who uses technology and they enjoy it when they have it, but [she] can live without it". Phoebe's 'I-for-the-other' is consistent with reflexive field notes about her iPad use during lessons. Phoebe was clearly a competent iPad user, evident in her well-organised documents and advanced use of both school-prescribed and self-sourced apps. In contrast to many other students, Phoebe was never observed engaging in off-task behaviour during class time; if she was not using her iPad for classroom-related activity, it was closed on her desk. Her deliberate agency made us interested in whether she would purchase her own iPad when she goes to university:

Phoebe	Yeah, I would [um
Interviewer	Would you?]
Phoebe	Cause . . . it's like, I—I'm very organised? in the way I do things? And .. it's so difficult to organise things when you have like just paper and pen? So it's just so much easier to do it with um an iPad .. n there's all these different apps and we're very .. you know techy as a family? [so
Interviewer	Yeah] ok
Phoebe	Dad's always like, "Oh my God, this is so cool! Come look at this" and then we'll have this really long conversation and Mum's looking at us shaking her head
Interviewer	Yes, how tragic.
Phoebe	[Yeah.
Interviewer	Yeah]
Phoebe	@@@
Interviewer	So, has your dad influenced you? in terms of the way you see technology? do you think?
Phoebe	Ye:es. Because he's an IT guy
Interviewer	[Ok
Phoebe	And] he's been in that my whole life and . I just . he's always very interested in that kind of thing so we always have like the state of the art programs and technology and stuff and he's always . um kind of talking about it n y'know it's just his life.

We suggest that Phoebe's talk captures her struggle between the broader authoritative discourse around adolescents and technology, and the discourses of her home life. As Phoebe grapples with tensions between these discourses, she is developing her ideologies by deciding what will be internally persuasive for her (Freedman & Ball, 2004). While Phoebe rejects the authoritative discourse surrounding typical adolescent beliefs and behaviours in relation to technology, she also self-identifies as belonging to a family that is "very techy". At first glance, this may seem almost contradictory—surely if Phoebe comes from a "very techy family" it makes no sense for her to object to the authoritative discourse surrounding adolescents and technology?

One interpretative possibility is that Phoebe resolves these conflicting discourses by "selectively assimilating the words of others" (Bakhtin, 1981; p. 341). Phoebe's family ideology is itself seemingly comprised of diverse voices – Phoebe and her "IT guy" father engage in lengthy conversations about technology, but her mother simply shakes her head at this 'tech talk'. Phoebe's ideological development – her decision about what will ultimately comprise internally persuasive discourse for her (Freedman & Ball, 2004) – occurs in this struggle between "various available verbal and ideological points of view, approaches, directions and values" (Bakhtin, 1981; p. 346). We suggest that Phoebe accomplishes this by foregrounding her own agency in relation to technology. She acknowledges the potential distractions of games and other "stuff that you can use" on the iPad, but her self-possession is evident in her management and use of the device. For example, when "doing assignments", Phoebe tends to, "handwrite a lot of stuff or just use my laptop . . . just to take away anything else that I want to do, like use the internet and stuff". Phoebe deliberately removes the temptations and distractions afforded by the iPad's gaming and social media capacity by eschewing iPad use and instead handwriting or using her laptop which can remove temptations such as the internet.

Further, Phoebe's active resistance of the iPad's temptations evokes a moral element to her ideological becoming. Consider the following extract from Phoebe's talk earlier in the same interview, where she describes her beyond-school use of the iPad:

Phoebe	Um when I'm at home, I don't really use it very much? Again I just tend to use it for research and stuff like that like, cause I . . . um .. I read a lot so if I've decided that I'm going to try and find a new book to read? then I'll um I'll look it up on there. I do read quite a bit on here as well.
Interviewer	Novels?
Phoebe	Books I haven't been reading very much in here but I've got into a new series and we don't really have enough money to go buy the specific books, [so
Interviewer	Yeah] is it cheaper to buy it um . do you have wi-fi at home?
Phoebe	Yep
Interviewer	Yeah so does your iPad just click into that as soon as you go home?
Phoebe	Yeah. Um it's a lot cheaper to get um e-books instead of the actual copy too.

Phoebe foregrounds her agency over the iPad; when she does use it at home, it is either for legitimate, school-sanctioned purposes such as research, or for reading. Such use is understood by both Phoebe and the first author as archetypical behaviour of a 'good' student and Phoebe emphasises this as typical of her on several occasions throughout the interview. Notably, the rationale Phoebe provides for reading on the iPad rather than reading a paper edition is cost—it is "cheaper to get ebooks" (line 14) and Phoebe's family doesn't "have enough money to go buy the specific books" (lines 8–9). Thus, cost is a pragmatic consideration, but perhaps also a moral choice about how to use limited resources.

We can see the circularity of the ongoing process of Phoebe's self formation: her utterances are indicative of how she experiences herself from within herself (I-for-myself') as being different to other teenagers; the particular time and space in which her utterances occur reflect the way in which she wishes to be seen by others ('I-for-the-other') as being different to "general teenagers"; and a triadic relationship emerges as Phoebe internalises the other's images and perspectives of who she is as an iPad user ('the-other-for-me').

5. Discussion

Our analysis indicates that it matters to Phoebe who she is and is becoming. In her talk about and in relation to the iPad, Phoebe deliberately constructs particular selves by taking up and resisting various identities. This suggests it is unwise to treat contemporary learners as generationally uniform. Our research disrupts claims about student homogeneity and engages with learning as an ongoing process of 'becoming someone' in space and time. Paechter (2001) argues that our learning experiences "affect our view of who we are and who we might become" (p. 2). This raises the issue of how learners' technological identities affect development in contemporary learning spaces.

Learning spaces are fluid, but so is learning, and learner identity. Phoebe's talk captures her developing self grappling with competing voices as she moves between various physical and virtual spaces. A Bakhtinian perspective reveals her as an iPad-using student who is far more complex and layered than the stereotypes of a 'net generation' (Tapscott, 1998, 1999) or 'digital native' (Prensky, 2001a, 2001b). Phoebe's talk constructs her iPad use as different from normative assumptions, both in terms of mastery and affective engagement. We suggest that it is therefore possible that uncritically accepting contemporary learners as possessing universal attitudes and skills in relation to technology may result negative experiences of schooling.

For instance, at St. Isidore's College, providing iPads arguably creates a set of expectations around learner behaviour. Wortham (2006) describes how over time, students can be constituted by classroom talk and interaction in particular ways, for example, as outcasts or as disruptive. These social identities develop alongside and interconnect with academic knowledge and skills, leading students to enact these identities. This aligns with Youdell's (2011) perspective that teacher judgements about 'who' a student is implicitly and explicitly informs their practice, and that these judgements *produce* students rather than just *describe* them. How then, might Phoebe's teachers orientate to her? Might she be seen as disengaged for her resistant political stance on iPads? We believe these are important questions to ask because learning involves fluid interaction not only between physical and virtual space, but between epistemological development and self-making.

We have focused only on Phoebe in this paper, which sounds an obvious note of caution in relation to the generalisability of our interpretations. However, it is well established that learning does not respect the boundaries between academic and non-academic. Thus, we suggest that like other contemporary learners, it matters greatly to Phoebe who she sees herself and others as being. This is visible in Phoebe's utterances, where she works to construct and communicate herself as being and not being a particular kind of student. And it is not only how Phoebe sees herself ('I-for-myself') that matters, nor only the selves she outwardly communicates ('I-for-the-other'). Phoebe's sense of herself is completed by the third element of Bakhtin's tripartite self: 'the-other-for-me'. To author herself, Phoebe and her peers depend on the teacher-other's view of them "through the intonation of their speaking voice or their loving/hateful gaze" (Sullivan, 2010; p. 368). We believe, therefore, that 'who' students are should also matter to us; that is, practitioners and researchers.

As researchers, dialogue with other sociocultural approaches offers a way forward. For example, Haslam (in press) contends that education research has much to gain from social identity theorising (Tajfel & Turner, 1979), which considers the role of shared social identity in learning. Additionally, making it clear that our interpretations as researchers are but *possibilities* acknowledges that "there are only interpretations; no facts, pure and simple" (Bochner & Ellis, 1995; p. 202), so we cannot speak authoritatively on students' behalf. By writing in first plural voice, for example, we work to understand and

depict Phoebe not as a research subject about whom 'the researcher' can draw authoritative conclusions, but as a complex and layered young person whose 'becoming' matters, not only to her but to us.

Of course, researchers alone cannot make student identity matter. Schools have long been acknowledged as sites for the 'production of persons' (Holland & Lave, 2009). As teachers, we are always making judgements about 'who' students are—everyday judgements that have "massive implications for students' experiences of education, shaping and constraining how students understand themselves and the opportunities, relationships and futures they see as being open to them" (Youdell, 2011; pp. 8–9). Teacher judgements about 'who' students are thus not only informs their own practice, but informs and becomes part of students' 'self-history', informing their sense of who they were. This in turn contributes to, rather than merely describing, students' sense of who they are now, and also their possibilities of becoming into the future (Dall'Alba, 2009).

6. Conclusion

We have deployed Bakhtinian perspectives in this paper to open up ways of understanding how students' iPad use across different physical and virtual spaces enables them to become 'different kinds of students' in relation and response to the device in particular social contexts. However, we suggest that learner identity is also fluid. Explicit attention to the ontological makes visible the shifts and transformations of learner identity in response to the iPad's mediating influence and provides a more holistic picture of contemporary learners. Deploying Bakhtin's dialogical view of selfhood ('I-for-myself', 'I-for-the-other' and 'the-other-for-me') reveals Phoebe's fluid self that stretches across lifeworlds (Habermas et al., 1985) at and beyond school. We see various voices – family ideologies, home iPad use, affective engagement with other hardware and digital media such as e-books – dynamically interacting, shaping and being shaped by one another in the struggle of Phoebe's becoming.

The methodologies that follow from Bakhtin's theorising provide a way of addressing the fluidity of digitally mediated selves and contexts. Bakhtin's writing resists systematisation (Holquist, 2002) and is designed to open up rather than authoritatively close down debate (Cresswell, 2010) thus lending itself to a reflexive interrogation that explicitly acknowledges the multidimensionality and indeterminateness of educational phenomena. The concept of 'ideological becoming' (Bakhtin & Medvedev, 1978) supports examination of the iPad as a cultural tool in the mediating environment of the classroom 'contact zone' (Bakhtin, 1981) as students develop their own ideologies. A Bakhtinian view of identity as inherently dialogic makes visible how students take up and reject particular selves in the fluid movement between lifeworlds at school and beyond.

Contemporary learners are frequently depicted with the same broad brush strokes—intuitive 'digital natives' with generation-specific learning needs and characteristics. Despite more recent critical scrutiny, this stance has arguably contributed to a broader scholarly preoccupation with learning design at the expense of learning theory. We suggest that a broader view of learning as inseparably epistemological and ontological can redress this imbalance and contribute to much-needed theoretical inquiry. By taking inquiry beyond the cognitive and social aspects of learning, digitally-mediated learning is conceived as shifting fluidly across not only physical and virtual contexts, but across the academic and non-academic. A Bakhtinian approach to learners as whole people asks not only how iPad-using students use the device to develop knowledge and skills, but also how this interacts with the kinds of students they see themselves and others becoming.

Finally, our reflexive methodology acknowledges that research itself should open up questions rather than seek definitive answers (Alvesson & Skoldberg, 2000). We are interested in exploring the possibilities of Bakhtin's ideas in education research, and desire to engage explicitly with the ontology of human learning. This makes the identity work in Phoebe's talk particularly visible to us, but there are many ways of understanding Phoebe's talk. It violates both our reflexive approach and the spirit of Bakhtin's work to construct this paper as presenting an authoritative and singular truth. Our contribution is an invitation to dialogue, not a truth claim that demands acceptance.

The rapid technological changes of the past few decades certainly have consequences for learners, practitioners and researchers. However, a different conceptual approach is needed – one that questions a view of today's learners as generationally uniform and seeks a more holistic and integrated understanding of contemporary learners and learning contexts. We suggest that Bakhtinian perspectives contribute to this by asking not only *what* learners come to know and *how* technology can help them come to know it, but *who these learners are and are becoming* in relation to the technology that is so ubiquitous in their lives, both at and beyond school.

Acknowledgements

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