Empirical Data and Emerging Power Critiques: Lessons Learned

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Abstract: This paper evidences the importance of maintaining a dynamic interpretive stance in e-learning research. In particular, it shows how a rigorous methodology, tailored to the research question, overlooked the importance of power and knowledge in technology acceptance research for education. It was perhaps the affordance of the mixed methods design, explained in this paper, which allowed for a blind spot to come to the surface, and prompt a renegotiation of the data. Empirical studies on the use of technology in education don't always take the pervasiveness of power dynamics into account. Yet this study shows how direct and effective they are in a teacher's decision to use or not use a technology. Using Michel Foucault's theory as an analytical tool, the findings from an original empirical study are re-examined. The analysis offers a new understanding of the critical manifestations of a performance culture in UK schooling, which goes hand in hand with a culture of observation and accountability. This is further underlined by the authority of time pressures. Both of these go at the cost of pedagogical considerations, which is arguably the primary concern of educators. That is where a power critique shows it value, but also its necessity. It traces the breaking points of the system; the moment where it undermines the rationality which it uses as its own justification. We correctly motivate our research choices through methodological paradigms and domain loyalties, but including a power critique suggests a new imperative for e-learning research. It offers the possibility to question normalised forces and better understand technology acceptance in education. We need to consider this critical position in any research design to continue challenging our theorising about e-learning.

Keywords: technology acceptance, power, culture, Foucault, Ofsted

1. Introduction

Any research design should of course be tailored to a specific research question. While accepting this fundamental guideline, the specific motivation for this paper is twofold. Firstly, it wants to draw attention to the influence of domain choices in creating blind spots between research objectives and relevant findings. Secondly, it wants to encourage a more dynamic stance in e-learning research. Certain types of (empirical) research will bring about certain results. But sometimes new insights emerge from the data itself, even when this was not originally anticipated. This creates an interesting dialogue between the researcher and the data. It emphasises the importance of maintaining a dynamic interpretive stance – in qualitative as well as quantitative approaches. Or, what Paul Willis (1980) called the vital element of 'surprise' in research. As this paper will show, this is something to consider specifically in e-learning research, when we align the design to our research questions.

In the study presented here, the aim of research was to discover cultural influences on the use and acceptance of a particular technology for education. Here, culture is interpreted as 'processes of meaning-making' (Spillman, 2002). Or, in other words, what the technology means to somebody depends on the interpretive framework they bring to the moment (Spiro, 1987:163). In turn, this will inform their acceptance behaviour. The research question zoomed in on that interpretive process, but it disregarded an important element: if we accept culture as a 'way of living' (Baetens, 2005:2), then of course power would be an inextricable part of that. The study was naïve at the outset, regarding the pervasive 'always already there' of power relations. They emerged, spontaneously and undeniably, through the data. Therefore, it was necessary to re-examine the findings through a theory or framework of power.

The concepts of power and knowledge, as theorised by Michel Foucault, will be used as analytical lens in this paper. This is not uncommon in education research, though not free of misuse either. The latter is for example due to the reduction of power to a particular authority, or the detachment of power and knowledge (Ball, 2013:19). This, of course, next to the fact that Foucault has often been read in different ways, and his writings seem to provoke the ambiguities almost purposefully. His resistance to a single understanding of his work typifies his refusal to accept inscriptions. And therefore, it continues to push the readers of his work to voice new questions again and again, never to assume or accept anything as 'normal'. Without this, we would forget that our set of practices are only considered normal because they have been so deeply engrained and institutionalised. Without the guard of a critique at this point, education becomes self-limiting. Particularly in

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e-learning research, Foucault's lens has not been given much attention (Hope, 2015) despite clear affordances to the depth of our findings. This shows how other research communities or filters can still add to the growth of knowledge in the domain of e-learning research.

'A critique' is one of those intangible constructs with a myriad of definitions, not just within Foucault's work. He questioned the meaning of the word extensively himself (Butler, 2001). In any case, the purpose is certainly not to impose a normative point of view. We have to consider that a certain bias is immediately clear when we pursue technology 'acceptance' studies. This potential pitfall in utopianism is not uncommon when culture and technology studies meet (Baetens, 2000:156). As said above, the analysis presented here is an exercise in trying to push beyond what is accepted and normal. Perhaps there we can find some of the fundamental building blocks of culture. A submerged place where 'normal' hides its roots. It is an exercise in unearthing what's beneath the surface of the ordered and established ways. A culturally relativist analysis, in that it seeks to understand the power dynamics of the prevailing educational praxis without passing judgement or suggesting the 'right' or 'wrong' behaviour. In this sense, a critique is an intense scrutiny, which hopes to raise a few questions about the standardised practices in education. It is a case of adoping a never-relenting critical stance in research, following what Foucault said: "everything is dangerous" (1983:256).

The methodological choices of the original study will be explained in the next section, with a specific focus on its domain loyalties. This will show, in a nutshell, how the traditional choices in the research design were well-justified, and yet the findings prompted the discovery of a blind spot. Using the concepts of power and knowledge to re-examine the findings, the paper then shows how another research community can aid the growth of knowledge in e-learning research. All participant quotes, which illustrate the analysis, are drawn directly from the data of the original study. In other words, this paper represents a dialogical mode of enquiry between a researcher who initially disregarded an important element of analysis, with naturally emerging insights in the research data.

2. The Original Study and Its Approach

The original study developed as an interdisciplinary endeavour, which shows how different research communities (linked with different methodological paradigms) can bring added value to e-learning research. The basic question was why someone would use a particular technology, or not. This question is shared by a large body of work collectively called 'technology acceptance studies'. Many of these studies stem from business and engineering domains, which naturally have a commercial or design interest at heart. They typically adopt a quantitative approach in data gathering, analysis and report, as several meta-analyses have shown (Legris et al., 2003; Ma & Liu, 2004; King & He, 2006; Schepers & Wetzel, 2007; …). In fact, the culture of quantitative research is so deeply engrained in technology acceptance studies that qualitative research elements are sometimes misapplied (Lee & Lehto, 2010:198), or approached with a certain disdain (Ma & Liu, 2004:62). So most often, the approach materialises in a questionnaire, with an underlying mathematical model, and subsequent statistical analysis.

Much of the strength of this sort of research lies in the possibility of large-scale generalisations, which are seemingly objective. The potential downfall of the data which a questionnaire will produce, is mostly the caged nature of the findings. Like a student completing a multiple choice test, a participant will have no room for negotiation. Perhaps even more alarming is the fact that many of these studies do not begin their investigation directly in the context. Rather, they build on prior theory and literature, which has built on prior theory and literature, and so on (Benbasat & Barki, 2007). This clearly creates a self-limiting tool in exploratory research. As Paul Willis (1980) said: "a theory can only, ultimately, demonstrate its own assumptions." (1980:77). So it is perhaps unsurprising that the increased number of technology acceptance models and factors have not improved predictive potential (Legris et al, 2003:202). Such variance-based research where factors are drawn from existing literature with imposed definitions give little attention to the contextual 'why' of things (Maxwell, 2004). In fact, where contradictions occur, this is often seen as a failure of research effectiveness; while for a Cultural Studies researcher, the discovery of a tension point may be of great value. It perhaps shows a shifting dynamic, a locus of power, a re-orientation, …

Not only is the participant locked into the pre-existing answer options, each of these also have pre-imposed definitions which are sometimes left implicit. For example, many studies describe the effect of 'perceived usefulness' on the acceptance of technology, rather than investigating what actually makes a system useful to

an individual in a particular context (Benbasat & Barki, 2007). That sort of question is the core business of Cultural Studies. It wants to understand how social interactions and mediating environments together create a dynamic exchange of meaning. This foundation, together with its historical developments in anthropology and semiotics, bring about a strong preference for qualitative methods (Deacon, 2008). However, critical awareness of this stance shows the field of cultural research is determined by the filters of culture itself. The disengagement with statistics is connected to the emphasis on the subjective, particular dimension of a human's configuration of life. Despite well-known pros and cons, there is certainly a case to make for a greater exploration of quantitative possibility. Culture is shared by people. In fact, their meaning-making depends on a successfully shared framework. Therefore, it is a reasonable assumption that there will be generalisable trends across a population – to put it in statistical terms.

This radical opposition between the empirical preferences of the two domains involved, explained here in a nutshell, was of course a challenge. It motivated a mixed methods approach (through the above, but also additional considerations which do not fit in the scope or purpose of this paper). It is perhaps thanks to this methodology that an emerging insight was produced.

In the initial phase of the study, interview data was triangulated with document analysis. Specifically, news headlines from TES magazine (Times Educational Supplement) during the year of this research phase were collected and used as a set of data on its own, and then cross-referenced with interview data. TES is a weekly print magazine with nearly 400,000 readers per week, and many teachers play an active role in its production. It formed a good general signpost for what was at play in the target culture. This overall approach was straightforward and effective in the aim to discover and understand teacher motivations, as inspired through a larger cultural framework. In-depth interviews with eleven teacher-participants in three different schools (selected through maximum variation sampling) provided the needed direct negotiation of meaning with the target culture. The findings from this initial exploratory phase were extrapolated to a larger national sample for quantitative analysis (with 435 participants across England). The data was analysed through descriptive statistics, Chi Square and linear regression. The results were then brought back to the target culture in a final, confirmatory phase, or a 'member check' in the form of a focus group (Saukko, 2003:18). Both the first and last phase were therefore qualitative, and analysed through thematic coding – using Michael Q. Patton's guidelines and a model called QUAGOL. The methodological choices, including considerations for reliability and validity in the different phases, were in a sense traditional and easily justified.

The participant group in this research were MFL teachers (Modern Foreign Languages) in England's secondary education. Zooming in on the use of a particular technology, the study investigated what made teachers use their language lab. A first, very strong factor which came forward immediately was 'performance'. In short, behaviour which positively impacts on job-related performance, is favoured. Teachers revealed they would avoid the lab during Ofsted inspections, for example, because they felt it would reflect badly on the quality of the lesson. Through the background provided by TES, it was found the exam culture also played a part here. There's a positive correlation between the perception of higher exam scores by using a particular technology, and the use of that technology. The statistical analysis and focus group confirmed how strong this factor was. Another dominant factor was 'time'. Basically, technology which takes up a lot of time (to set up, learn, troubleshoot, etc.) will be less favoured. In every phase of the research, this factor was extremely influential. One hypothesised variable did not occur: pedagogy. This is an aspect of any education system which is largely culturally determined. In relation to the use of technology in the classroom, it has been described as a potential cultural barrier (Ertmer & Ottenbreit-Leftwich, 2010). However, it did not emerge as a salient factor at all. Moreover, teachers intimated during both qualitative phases of research that they would use a particular technology even though they didn't believe it would make a difference to pen-and-paper teaching. It was taken forward for quantitative analysis, but this phase also did not discover a significant linear relationship, without any problems in the assumption, validity or reliability checks. It was perhaps this finding which highlighted a potential blind spot, and prompted a new analytical dialogue.

The study specifically did not set out to form a power critique, only to investigate the meanings in the teacher's interpretive framework. But in doing so, it critically ignored a key purpose of Cultural Studies as we know it today. Certainly there is still the key focus on the dynamics of meaning, but Marxist ideas replenished attention to power relations (for example in the ideology critiques by Louis Althusser, or thoughts on hegemony by Antonio Gramsci, or the idea of the cultural industry by Theodor Adorno and Max Horkheimer) (During, 2007:21). Today, Cultural Studies often distinguishes itself from other domains by this

tendency to provide power critiques in their analyses (Turner, 2003:5). When culture and technology studies meet, it often ignores this dimension (Baetens, 2005:10). Despite the insistence not to pursue such a power critique and instead focus on the search for meaning, power emerged from the data in an undeniable and pervasive form. It served as a reminder, and a lesson learned, that its influence should not be underestimated or forgotten for educational research. Taking the findings in this study as an example: it is not enough to know that time-consuming technologies are likely to be avoided. It doesn't give us any real understanding of the educational context. We might as well say that technologies which are blue are likely to be avoided, or those that require installation, or that have too many sound effects, or not enough. It is a consideration for an isolated trait – precisely what Ruth Benedict (1934) criticised in *Patterns of Culture*. Why does time matter? What makes it an influential factor on behaviour? This requires a more holistic analysis of the educational context, and a theory of power provides the framework for exactly that.

3. Foucault's Power and Knowledge

Foucault's relevance to education studies is much wider than the focus on the concepts of power and knowledge. His examples are equally eclectic, and his style of writing often a touch lyrical. We can assume he would be resistant to a comprehensive account of his work – and this paragraph will only touch the very tip of the iceberg. As he points out, the aim of his own *Archeology of Knowledge* was "to map it in a dispersion that no pre-established horizon would embrace" (1972:202). On this book, he poetically comments: "It rejects its identity, without previously stating: I am neither this nor that" (1972:17). This is illustrative for the entirety of his work. His studies of discipline, punishment, sexuality, and so on, provide not only in depth subject matter for learning and discussion, but also complex analytical tools for wider issues. But Andrew Hope (2015) has pointed out that Foucault's work has been neglected in educational technology scholarship.

This analysis will focus on the concepts of power and knowledge. Both concepts go hand in hand. There is no knowledge that does not serve power; nor any power that is effective without knowledge (Foucault, 1991:27). What are those elements of knowledge that shape a teacher's decisions on using technology in the classroom? That influence is where the 'microphysics of power' present themselves, according to Foucault. In that sense, this paper does not focus on a major force in the sense of 'the power of the state', or a downward operation of control. Every individual or institution plays a role in the invisible force that influences our behaviour. For e-learning, everyday decisions a teacher makes with regards to technology are inextricably linked to the web of power and knowledge which surrounds him, and which he actively creates and recreates himself. In that sense, power is not repressive – it is productive. In all social action, we enact and reaffirm, because we all share and (re)produce that base in knowledge. So it is often the minor processes, such as everyday individual choices, which are particularly revealing of this force.

Of course, that is not to say that government and politics do not play a role. But they are not the sole possessor of power. They are only one of many in the invisible force over which nobody can claim ownership. There may be a disciplinary authority, which institutionalises knowledge, and therefore power. But the unspoken authority of that power and knowledge lives in a social body, not just the one institution, government, or law.

There are several mechanisms of power, such as hierachical observation, normalising judgement, and the examination. All of these have surveillance at their core. The judgement (or normalising gaze, to emphasize observation) is a discretionary force, which evaluates decisions and behaviours either positively or negatively depending on the framework of standards. Closely related, the examination is a "highly ritualized [...] ceremony of power" (Foucault, 1991:184). It is a distinct and organised judgement which qualifies, categorises, and justifies intervention or punishment. Its relevance to education is pertinent. Hierarchical observation too, not just in literal school hierarchy where one party will monitor another. Physical learning spaces and school buildings have been designed to keep that 'watchful eye' going at all times (Foucault, 1991:172). It is "at the heart of the practice of teaching, not as an additional or adjacent part, but as a mechanism that is inherent to it and which increases its efficiency" (Foucault, 1991:176).

Some have remarked that most education studies have used Foucault to emphasise the impossibility of attaining freedom from power relations (Ball, 2013:146). That is not the case here; even though a power critique is not necessarily synonymous to a call for overthrowing those powers anyway – that is not exactly what Michel Foucault proposed either. However, it does imply a resistance to an unquestioning acceptance of

what the powers dictate. As researchers of education and e-learning, we perhaps have that duty in all of our projects more than any other stakeholder. It is impossible to negate the effect of power dynamics in research, and unwise to ignore their existence. An awareness of their presence, however, might actually transform itself into a brilliant new angle of analysis. This study is one instance of a thoughtful research design, which nonetheless revealed a blind spot prompting a renegotiation of the data. It underlines the importance of maintaining a dynamic stance in e-learning research to further the growth of knowledge in the domain.

4. A Power Critique

Teachers are often considered to be the driving force of technological innovation and change in schools (Bruner, 1996; Fullan, 2001; ...), yet many have pointed out that their actual use of technology remains quite 'low level' (Cuban, Kirkpatrick & Peck, 2001; Ertmer & Ottenbreit-Leftwich, 2010:256). Previous studies often begin with the view that a teacher has considerable autonomy in making the choice of technology for their teaching, and how they will use it. The original study from which this analysis draws its data makes that mistake as well. Foucault pointed out that freedom and control are in fact closely related, when he discussed the liberalist economy (2004:68). As the panopticon dictates, there is "a state of conscious and permanent visibility that assures the automatic functioning of power. So to arrange things that the surveillance is permanent in its effect, even if it is discontinuous in its action; that the perfection of power should tend to render its actual exercise unnecessary; [….]" (Foucault, 1991:201). There is a philosophical question at the heart of this debate which is also deeply engrained in Cultural Studies. That is, to what extent a human being can really act out of his own independent, volitional behaviour, or to what extent he or she acts because of a certain 'programming'. Cultural anthropologist Ruth Benedict described in her book *Patterns of Culture* (1934) that we make our choices on a large, but pre-defined arc of possibilities. There is an underlying web of meaning which provides a framework to make those decisions. Certainly in Foucault's view, people will act less of their own accord than they perhaps think. That is the way of power, which can but does not always take the form of explicit authority as the 'panopticon' above illustrated. The data aimed to bring an answer to the question why teachers use technology – and it certainly did, but the pervasiveness of an invisible power on their decisions had gone entirely underestimated. It occurred naturally through documents, interviews and the final member check which the study incorporated.

Firstly, 'performance' was found to be a dominant theme. The stakes are high in education, and every teacher in the study was crucially aware of this. "We are burdened with the responsibility to perform, and if we do not we are in danger of being seen as irresponsible." (Ball, 2013:138). As a unified factor, it was statistically significant in the decision-making of teachers with regards to e-learning. It came forward through the initial qualitative phases in various topics; the most prominent being exam pressures. Paula, a French teacher in the North of England, said during the focus group: "I kind of quite long for the day where I where it doesn't come to external exams… cause it's just working towards tests." Andrew, who also teaches French in an all-girls school near Reading, agrees: "we've, we've come to the same conclusion recently here. That we're just trying to train students for the purpose of passing an exam". Similar sentiments have been noted for teachers of other subjects such as English and mathematics (Perryman et al, 2011).

In the UK, national examinations called GCSEs (General Certificate of Secondary Education) are administered to mark the end of compulsory education, typically around the age of sixteen. These are set, administered and assessed by independent awarding bodies, called exam boards. Students may go on for another two years of what is called 'sixth form' and then take exams called A-levels (prerequisites to enter higher education), and these are organised in the same manner. It is, of course, important for students to do well on these exams, but it matters on school level as well. Average results per school are published openly in national league tables, and that may increase their attractiveness as education providers. "Performativity then makes a crucial contribution to the rendition of teaching and learning into calculabilities, it generates market information for choosers […]" (Ball, 2013:141). By categorising, organising, dividing and imposing a hierarchy, knowledge is created (Foucault, 1991:159). Student's progress is endlessly parsed in 'objective' competencies, which also allows to determine which teacher is doing well in their job, and which schools are the top performers. "The learner is made visible, but power is rendered invisible, and the learners sees only the tasks and the tests which they must undertake." (Ball, 2013:49). Thanks to the exam results and league tables, it is possible for power to assert "the possibility of a detailed control and a regular intervention (of differentiation, correction, punishment, elimination)" (Foucault, 1991:160). For example, during the 2014 GSCEs, exam boards "told schools that GCSE results may be "volatile" and appealed to governors not to sack head teachers over

disappointing grades" (Paton, 2014). For the individual teacher, part of their job assessment is based on the exam results their students receive (the difference between their predicted grades and actual outcomes): "Here power produces reality as a domain of objects articulated in specific rituals of truth-measurement." (Ball, 2013:48). Needless to say, all this combined with the evidence-based approach to education mounts the pressure on the educators. Andrea, who teaches in the North of England, illustrates how power and knowledge in the system of education influence her everyday decision-making on using technology: "We incorporated into our end of unit testing a speaking test now in years 8 and 9 so that they're, so that they're not learning to speak for the first time at length at the GCSE. And the only way we managed to do that is the is by capturing them all on the language lab. […] I don't think it would be possible without the lab."

To ensure the highest educational standards, there are several measures in place. These commonly draw from both formal and informal observational data (O'Leary & Gewessler, 2014). Teachers often have visitors to their classroom; which can be colleagues, senior management, outside stakeholders, school governors, teacher trainees, students themselves… Regardless of the effectiveness of these observations, it does create a culture where a teacher feels watched and judged. This corresponds to Foucault's concept of hierarchical observation: "the student, teacher, and school are each subject to the gaze of the next, and all are subject to the gaze of the state" (Youdell, 2011:37). Of course, a positive observation grade is more desirable than a negative one. Therefore the aim is to multiply the signs assuring a good classroom environment, so the observer can decode the message as such. Hierachical observation provokes 'self-surveillance' as the observed, examined and judged 'individual' turns her/his attention on her/himself and acts in particular ways in order to make her/himself and others particular sorts of persons" (Youdell, 2011:37). To illustrate, one young Spanish teacher in a sixth form London college said: "People that come into my lessons and they sit there and I'm working through and maybe they're [the students are] making a lot of progress in my lesson with a textbook, you know? Loads. But the person that is sitting down there is gonna be like 'oh, really old-fashioned'. Not the kind of teaching we're looking for at the moment, that we're contemplating. So I could have a really brilliant powerpoint um and that resource in um I don't know… in a YouTube video, or whatever, you know like the person sitting there will say 'ah, good'" As anything in culture, the factor of performance is sustained by the symbolic realm of formal expressions to convey its message in the social world. One of those expressions, or signs, is the use of technology in a situation where successful message delivery is vital. It has not gone unnoticed in education, though it has not been subject to extensive systematic evaluation: in a study in the context of a laptop programme for teachers, for example, the researchers found that the way their participants integrated the technology was powerfully mediated by "what constituted 'good teaching' in the context of the institutional culture" (Windschitl & Sahl, 2002:165).

A key player in that culture of observation and accountability is Ofsted, a recurrent theme in every phase of the research. To watch over educational standards, the government has created Ofsted as their inspection service, also called 'the government watchdog' (De Waal, 2008). Since 1992, inspectors have been sent to schools, but also to further education institutions, children and families services and early years childcare. Their reports are open access documents published online. Teachers are very aware that Ofsted is a mechanism of direct power and control (not to be confused with the interpretation of Ofsted as an agent of power in a Foucauldian sense). A young English teacher in a new academy in Kent said that "everything is directed by Ofsted, and it seems if Ofsted wants this then all schools need to shift to that."

In Ofsted's view, schools are categorised into four grades: 'outstanding' (the highest), 'good', 'requires improvement' or 'inadequate'. This is of course a case of 'normalising judgement' or 'normalising gaze': "a surveillance that makes it possible to qualify, to classify and to punish. It establishes over individuals a visibility through which one differentiates them and judges them." (Foucault, 1991:184). As punishment, a school may be placed in 'special measures' which means very frequent, short-notice inspection visits or further actions such as dismissal of senior staff, appointed replacements, or even closing the school. Schools, parents and unions often vent disagreement with Ofsted reports or the way inspections were held through media, open letters, blogs and forums. These complaints refer to intentional marking down (Le Duc, 2014), copy-pasting report fragments to other schools (Garner, 2012) and altogether working along a hidden agenda which is not in the best interest of education (Cartledge, 2014). It was forwarded as an explicit motivation not to explore more innovative ways of teaching with technology, and instead stick to 'box-ticking'. In the same academy in Kent, French teacher Edward commented: "I think what they need to do is get rid of Ofsted. For a start. Cause Ofsted were formed twenty years ago and it just seems that they're supposed to be monitoring

standards, but it doesn't seem that standards are improving. […] trying to tick boxes all the time cause somebody is coming round with a clipboard. There is always that pressure on you."

There is a tension point in what technology wants and what Ofsted seems to want. Technology comes with a demand of its own. It wants to be used. This partly results in a constant feeling that all participants share: that they are not using technology enough in their lessons, even when they were considered very keen and competent by their colleagues (who expressed this view in separate interviews). Those less willing to engage with technology continue with their teaching almost defiantly, and in their self-proclaimed rebellion, they again confirm the technological utopia. Quite often, the most frequent use of technology had reached a state of normality and was kind of overlooked by the participants. They did not seem to notice the pervasiveness of electronic keycards, the use of email communication, Powerpoint, fingerprint scanners in the cafeteria, … This creates a reliance on technology of which they are aware, but do not consider problematic. It's just how life is, they would say. "I mean, it is just a sign of the times. And I know if I haven't got my mobile phone, I start to feel a little bit edgy." This was Daisy, head of department in a modern, state-of-the-art school building. However, as an earlier quote showed as well, teachers feel it is important to be seen using technology, as it would be decoded as a sign of a good teaching: the performance factor. As Lucille, a French teacher in a busy London college commented: "I always used to feel, when they [Ofsted and internal observers] came in, if I didn't have anything up on the projector, if there was nothing up there, that I would be marked down, 'oh she hasn't prepared her lesson properly, she's got nothing on the screen, there's no Powerpoint, there's no…' I always used to feel like that."

Such is the power of technology, that it has gained a normalised position in society and schooling, while at the same time, its absence would be a poor performance indicator. However, all participants indicated that this does not mean technology should be used in an advanced way. The last quote illustrates this. To play it safe and stay on a basic level is a much preferred tactic, rather than risking potential failure. "I think... if they see that you're ... you're not competent and it doesn't work, they [the students] will get frustrated and then I will be frustrated as well." A German teacher in an all-girls boarding school in the English countryside confessed. If it has the potential to hinder performance, technology might be avoided altogether in favour of positive impressions. During the focus group, a teacher of Italian in an all-girls school in North London said that she believed her students made a lot of progress by being in the language lab. However, she would avoid using it for an Ofsted visit. She explained: "It's not a it's not a good activity in my view for Ofsted. They could make so many [emphasis] objections. […] There are many other ways of um of getting a good grade from Ofsted. Which is all for cast the experience as quickly as possible and carry on with our work. That's my, my approach. And what I do well with Ofsted is very… very classical ways just um so the with the um like um see them without the technology" (01:30:56) So although she believes Ofsted are looking at the student's progress, and she believes her students are improving by being in the lab, she would not conduct a lesson in the lab during an Ofsted inspection because this improvement is not apparent to the observer – it's not a convincing classroom performance. As a final plot twist, it should be noted that Ofsted reports never seem to include much specifically on the use of technology within the school, and informal conversations with Ofsted inspectors confirmed it is not something which they would pay much immediate attention to.

Next to the overarching theme of performance, there is also the authority of time. Time is in part a subjective phenomenon, with an analytical base in a person's psychology. For example, a person may experience an activity as of a short duration when they enjoy that particular activity a lot, which may be expressed as 'time flies'. However, time is also a cultural construct. For example, the Germans, French and Americans in present-day business contexts have different understandings of time (as explained in *Understanding Cultural Differences* (1990) by Edward T. Hall). The salience of this construct can hardly be overestimated. It has been noted before as a particular trait of English teachers to bring 'time' forward in such a strong manner, or rather the lack of it, in comparison to for example their French or German peers abroad (Pepin, 2000). In a profit-oriented society, time is money. In education, it is equally seen as a precious commodity: you can 'lose' it, 'spend' it, 'waste' it or 'gain' it. However, the waste relates to what could have been spent on learning. Andrew illustrates: "I think that is one of the dangers of technology, unless there is some kind of control over access, as well as being very useful, it enables students to gain a lot of time and increase performance and so on, it can also be sometimes lead to a lot of wasted time." The investment is not, as in the literal application of the financial metaphor, focused on activities to obtain more money, but activities which will ultimately boost exam results. Its relation to technology is straightforward. Technologies which are experienced as time-consuming because they require a lot of effort to use, to set up in class, to troubleshoot, and so on, are far less

likely to be adopted. Andrea, from the North of England, said: "I think we tried to set it [Google Docs] up but because it is very fragmented um… it is a lot of time to sort of set up your own Google um sort of shared drive… it takes quite a lot of time, we don't do it. So if it's set up by the school I mean, I can access as a parent, I can go in with parents access, data I can access you know um attendance, his attendance, his interim reports,…" This quote shows the influence of the cultural construct 'time', but also again how distribution and classification create knowledge, and that knowledge allows surveillance and normalising judgement – and how these dynamics influence technology acceptance.

There is a set linearity in education in every step of the way, focused on a goal at the end of the path. "The disciplinary methods reveal a linear time whose moments are integrated, one upon another, and which is orientated towards a terminal, stable point" (Foucault, 1991:160). That final exam, the end of term, the end of the school day, the school bell marking the end of a lesson, that moment where one lesson activity finishes and another begins, … The bell is unforgiving, marking each segment of the day exactly. Indeed, Foucault identified the timetable is a clear tool of control (1991:149). It's one of those signs which is decoded unequivocally in an educational context. Everyone understands this serial space of serial knowledges The clocks on the wall, the daily schedule arranged to the precision of minutes, the sanctions for arriving late,… Again these are materialisations of power of knowledge. Everyone understands; everyone follows its call – or subject themselves to potential disciplinary action otherwise. "Power is articulated directly onto time; it assures its control and guarantees its use." (Foucault, 1991:160). Even in schools which lack the materialisation of the sign such as a school bell, as was the case for one of the participant schools, the day still functions by the timeliness of its system. "If a teacher's watch is fast or slow, it can mess things up", as one of the French teachers in the study commented. Such is the pervasiveness of power, and its sneaky impact on our everyday behaviour.

As already noted in the brief discussion of the original study, pedagogical considerations did not appear in the forefront. Decision around using or not using a particular technology were not always inspired by meaning-making around its pedagogical value. In fact, it was sometimes explicitly disregarded in favour of the performance factor. In view of the surveillance mechanisms of power, Perryman (2009:622) has called this 'fabricating the stage'. Therefore, an alarming result is that the decision to use or not use a technology is more likely to be guided by a perception of what the classroom visitor wants to see, or time pressures, rather than instructional theory (a finding which was also made by, for example, Windschitl & Sahl, 2002). This final quote, by Paula, sums it up: "I also I do think that there is a lot of teachers not interested in their subject it's all it's all because the things said before, performance-related pay and Ofsted criteria, getting your kids through exam results, it's actually a very personal thing for a lot of and we've forgotten, I've I've personally um that's probably why the job frustrates me an awful lot at the minute because I would love to do… and I do do what I do best but I know that my if my headteacher can come in any time but I will not get an outstanding, because I'm a bit daring I do things in a bit of a different way you know so many kids may go off task because it's the sort of kids I teach you know um a very sort of low ability, from deprived areas and that's what they all do but I … but I know they that they know that I teach them." This shows an individual's knowledge that the normalising gaze will not appreciate that she teaches 'a bit different', despite her belief that this would be beneficial for her students. Power, in her words, materialises through her salary, Ofsted reports, the pressure of linear time, and internal observations, all with potential disciplinary action as a result of not fitting in line. They directly affect her engagement with innovative e-learning practices, by inspiring avoidance. In her words, we also find the traces of resistance, which always go hand in hand with the forceful relationships of power (Ball, 2013:32).

The strong observation culture, which includes Ofsted but also the league tables, in-lesson observations, student expectations, and so on, pervades the culture of education in England's secondary schools. Somewhat alarmingly, it affects the decisions teachers make as to whether or not (and which) technology to use in the classroom. It warms teachers to the idea of using ICT if they believe the observer will want to see it used (or avoid its use if otherwise) and this knowledge overrides pedagogical beliefs. Interestingly, similar observations on the lack of pedagogical reflection have been made for teachers in England prior to this study. In an international study on social support structures, it was found that: "English teachers had the social network and support structures within their schools and, compared with their German and French colleagues, they spent more time in schools. But the culture in English schools appeared to be that within those structures teachers did not use that time to reflect on their pedagogy […]" (Pepin, 2000:9). There are other, more pressing considerations which influence their practices. That is the objective of a critique: not only "to isolate

and identify the peculiar nexus of power and knowledge that gives rise to the field of intelligible things, but also to track the way in which that field meets its breaking point, the moments of its discontinuities, the sites where it fails to constitute the intelligibility for which it stands." (Butler, 2001).

5. Conclusion

To summarise, this paper hopes to demonstrate the importance of remaining open to emerging insights – even when the research design was well-suited to the research question. Good research is rigorous, but does not reject being flexible and dynamic on the same account. The example provided here also serves as a reminder for e-learning research that even when a power critique is not the aim of a study, it will still influence the context, and therefore also the findings. It offers a research technique which profoundly challenges our theorising of technology acceptance in education. In this case, a different research community had clear added value for the growth of knowledge in e-learning research. More importantly, overlooking the power relations is disadvantageous to education altogether. Without questioning the normalised boundaries, we allow ourselves to get stuck rather than evolve. As this paper showed, it would be wrong to ignore the pervasive impact of a culture of accountability, observation and time efficiency, which directly affects e-learning practices. This culture, which has been put in place to ensure high quality provisions in educational institutions, has clear negative effects on the quality which it aims to protect. For example, the results show that some classroom decisions (such as the use of a particular technology) are not made on the basis of pedagogical value considerations, but on the basis of what the classroom observer may want to see. That is how knowledge, and power, affect our everyday practices in a direct and pervasive way. This could not be discovered without the correct negotiation of the research with and within different domains.

Power critiques are vital to understand our own position and possible alternatives, refusing to accept things as 'normal' and keeping the horizon of possibility firmly open. This also goes for e-learning research. It is at play in the choices we make in our research method. It is even linguistically present when we undertake technology 'acceptance' studies. Therefore, although this analysis has been entirely anti-normative, it will end with the cautionary suggestion that technology in education must not fall into the trap of utopianism, but neither can it become a case of keeping up appearances. Every e-learning research will have the opportunity to question those frameworks, and look beyond what has been presented as 'normal' data, with the ambition of not letting the dynamics of power affect us unawares. For any research question, our methodological choices need to allow a dynamic interpretive stance, even in a well-justified, traditional research design.

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