

# Who Controls Whom? History and Educational Technologies

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Considering the lack of research on the historicisation of educational technologies, the current study attempts to fill this void. To do so, the following research question is posed: To what extent have educational technologies and local histories controlled one another? Data for this question came from a naturalistic enquiry into a university in the Saudi Arabian public sector. Having analysed documents, interviews, and observations by means of the grounded theory technique, two key themes emerged: *local histories controlling educational technologies* and *educational technologies controlling local histories*. The consideration of both themes brought forth a theoretical proposition — that there are political dynamics between educational technologies and micro histories, with one continuously directing and driving the other. The recommendation is therefore that policymakers, scholars, and commentators should be more cognisant of the political tensions between local histories and educational technologies.

KEYWORDS education, technology, history, culture, politics, Saudi, Arab

## Introduction

Thus far, investigations into the relationship between educational technologies and local histories have been limited. Hence, there is a need for a ‘historicisation’ of the field of educational technologies, which means applying a historical analysis to this field. Although the historicisation of technologies has been discussed in other academic fields, as the subsequent section will demonstrate, it appears to have attracted little attention from the international academic community of *educational technologies* scholars. Considering these limitations, the study takes the initiative and looks at the historicisation of educational technologies. The aim of this research is therefore to explore the connection between local histories and educational technologies.

It addresses the research question: To what extent have educational technologies and local histories controlled one another? A naturalistic enquiry into a Saudi university in the public sector has been conducted to address this question, analysing documents, interviews, and observations by means of the grounded theory technique.

The introductory section of this article outlines the key points of the study and the overall structure of the article. The following section moves on to a literature review, which establishes a broad-spectrum theoretical foundation for the research. The article then covers the methods of data collection and analysis used in the study. It then presents both the findings and discussions in relation to the emergent themes from the data analysis. The concluding section sheds light on the theory grounded in these two emerging themes and puts forward recommendations for researchers, questioners, and commentators. By the end of this article, the relationship between educational technologies and small-scale histories will have been fleshed out.

## Literature review

According to Dear & Wolch (1989), ‘social reproduction’ perpetuates and sustains certain social relations. Social reproduction comes about when individuals are unable to transcend their own local circumstances, be they personal, societal, cultural, economic, or political, and thus perpetuate their local customs and mores. It is theorised that social change takes place when the reproductive cycle is interrupted. Such discontinuities are likely to occur when social habits and systems overcome the strictures of the ‘time-space prison’ (Dear & Wolch, 1989: 8). Human agents and political groups strive to sustain and/or improve their social status; they struggle to legitimise their power bases, seeking maintained or improved positions. They might do this by looking outside their local circumstances, through independent innovation, or by incorporating past innovations into their present local circumstances. In this respect, ‘the past causes the present, and so the future’ (Stearns, 1998: 2). In other words, ‘who controls the past controls the future’ (Orwell, 1949: 32). Echoing such perspectives, it could be said that ‘history is past politics, and politics is present history’ (a saying attributed to Freeman, 1883–1955, cited in Heater, 1972: 56).

Nevertheless, scholars often cite the primary cause of ‘status crisis’ as a disappointment in the enhancement, or diminishment, of social status (Dear & Wolch, 1989: 9). Some analysts and commentators, as reported by Graça (2010), hold the belief that technology has turned out to be a key factor in status crises, with its increasingly progressive ability to develop freely from political power, not only establishing its own history but dominating human history and undermining local histories. This belief has encouraged some scholars to wonder if ‘technology drives history’ (Smith, 1994). However, technology-driven history is an old and perhaps *passé* means of analysing the history of technology and society. Technological change, as Feenberg (2003) explains, has been described as rational and simplified: following a linear trajectory towards progress. Such a view is fundamentally teleological because it assumes that past innovation inevitably has led to modern circumstances. Modern postcolonial authors have enforced such a view: technology, as stated by Smith (1994), is planted in local cultures with the intention of freeing and liberalising humans and depoliticising their cultural constraints. According to Al Shae (2007), human societies

should passively accept technology if it is planted in an appropriate environment in which it can catalyse progress and social betterment. Kast & Rosenzweig (1979) theorise that such an approach to technological implementation will dominate social discourse, leading to rational and effective social interactions or, at least, to the illusion of such progress. Whether or not one subscribes to the determinist view of technology's impact upon society and history, one might nevertheless posit that the influence of technology on local culture is a *fait accompli*, that is, technologies will arrive 'by invitation or invasion' (Al Lily, 2013). If this is true, technologies which have been developed for one society might incur catastrophic consequences in the context of another. As Sismondo (2010) notes, technologies may force societies to adapt to preconceived norms which are indigenous to the societies that developed them but alien to other social milieus. Thus, we might pessimistically conclude that the arrival of foreign technologies will limit local traditions, diminish local cultures, and obviate local histories.

Politics also has the power to disturb the positive intentions of technology. One can argue against what was stated in the previous paragraphs about the increasing detachment of technology from political control. Bearing in mind recent concerns (such as internet censorship in some countries and data collection by agencies), it could be said that technology has intensified, rather than weakened, political control. Selwyn (2011) notes that contextual features, such as local political intentions, may impede the innate constructive effect of technology. This applies to both the implementation and construction of technologies; after all, the political agendas of designers may have negative ramifications in societies which utilise those technologies. In contrast to 'technology-driven-history' scholars, other theorists believe that the development of technologies is socially negotiable: a process of negotiation which leads to the constitution of diverse technological tendencies (Williams & Edge, 1996a, 1996b). Such 'society-shaped-history' scholars have examined the interplay between social groups and their technologies. This school of thought views these groups as active players in the development of technologies and as negotiating players in the implementation of such technologies (Bijker et al., 1987).

Corfield (2008: n.p.) believes that 'all people and peoples are living histories', pointing out that communities speak languages passed on to them from the past, live in complex cultures not established on the spur of the moment, and implement technologies not invented by themselves. She thus recommends comprehending the connections between the past and the present as a means of grasping the state of humanity. Considering that all people and peoples are living histories, Corfield stresses the importance of the long-unfolding human drama in which all participate. Yet this belief on Corfield's part in historical continuity seems to go against what L.P. Hartley (1953: 3) once famously indicated: 'the past is a foreign country; they do things differently there'. However, according to Corfield's (2008) belief in historical continuity, the past is not a foreign country but rather is our own country too, just an early version of us. In other words, the past is the country of the present, although it is an early version of the present. Following this argument, there can be said to be politically influential connections between early and later histories, between early and later technologies, and, more relevantly, between early histories and later technologies and between earlier technologies and later histories.

To sum up then, there is clearly deep confusion within the fields of history and technology over who controls whom, whether technology controls history, history controls technology, or whether they control one another. This theoretical argument is brought into the field of educational technologies through the current article, which interrogates the extent to which educational technologies and local histories have controlled one another.

## Methodology

The current study utilised the notion of action research whereby an employee examines their own workplace in collaboration with colleagues. This study was thus undertaken as part of the first author's activity as a member of King Faisal University. It thus reflects his concerns and attempts to develop broader research into educational technologies within a working university. This model follows Herr & Anderson's (2005) call for a more pluralistic attempt among researchers and faculty members to challenge their own university settings. To broaden this project, the first author invited an outside academic from another field to act as a second author; however, rather than taking a mere supporting role, instead he was there to cause trouble: to grill the data and conclusions produced by the first author. Thus, the article was conceived as an analytical, interpretative, and discussive 'battleground' between the first and second authors. A particular piquancy is given by their quite different ideological circumstances: the first author is Saudi Arabian, educated mainly within the field of educational technologies, and from a Muslim background, while the second author is Mexican-American, educated mainly within the field of history, and from a Christian background. The first author is concerned with technology (and thus with the future — if we are to echo the common belief that technology is automatically concerned with the future), whereas the second author focuses on history (and thus with the past — if we are to follow the other common belief that history is automatically concerned with the past). As two authors were involved in this process, one might therefore wonder how 'inter-rater reliability' (the degree of agreement among contributors) was established. The article, however, was keen to expose the reader to conflicting views, and hence, when one author proposed views conflicting with the views of the other author, the conflicting views were both acknowledged and written in the article. In fact, each author encouraged the other author to argue against his own proposed views for the sake of argument, thereby offering the reader a rich variety of debates over issues or events.

The locale of Saudi academia is fertile ground for such research. As reported by Davis (2013), cultural anthropology must illustrate world cultures as though they are large living 'museums' in which an individual society is symbolic of local cultural modes. Anthropologists and sociologists are advised not only to focus on well-known cultures but also on those 'other' locales about which the international academic community knows little. Given that knowledge among the international academic community of educational technologists on the social and academic context of Saudi Arabia is very scanty indeed, this enquiry thus attempts to fill a gap in the global study of education, technology, and academic history.

This ‘naturalistic enquiry’ (Lincoln & Guba, 1985) was conducted between 2012 and 2013. It follows recommendations by Selwyn (2012) to read the literature of outside fields and foreign networks. Selwyn encourages researchers to attend outside academic events, involve themselves with other networks, and collaborate with members of outside academic communities. In doing so, the authors have combined history, education, and technology studies to present a historisation of educational technology. This conceptual field has yet to constitute a major component of contemporary scholarship. Thus, in doing so the authors aim to ‘introduce alternative conceptual frameworks and experience from subject disciplines not usually featured in [the academic journals of educational technologies]’ (as promoted by the *Learning Media and Technology* journal in its *Key Thinkers and Theoretical Traditions* special issue description, 2012: 2).

The data were analysed along the lines of the grounded theory method, following the process suggested by Glaser & Strauss (1967): Data → Code → Category → Theme → Theory. King Faisal University and its academic protocols and outputs were analysed over the course of one year. Unstructured observations were carried out along with individual unstructured interviews of 17 Saudi academics, three academic managers, and 36 students. To enhance variation, a kind of snowball sampling was chosen for interviewing, following advice given by existing participants to identify people who might give different answers to the interview questions. After conducting the interview with these 36 students, the first author invited three of them — who had conflicting views and appeared to be argumentative — for an additional hour-long, unstructured, focus-group discussion.

Once these data were collected, the authors repeatedly perused them to find ‘natural analytical divisions’ (Holliday, 2005: 105), while constantly bearing the research question in mind. Once these natural analytical divisions had been identified, the authors drew up broader categories in the form of codes. These, in turn, formed themes. From this approach, data sets ‘are taken as a whole and then organised according to themes, but the themes themselves are partly emergent and partly influenced by [the research question] that the researcher brought to the research’ (Holliday, 2005: 108). That said, the themes were also influenced by the diametrically opposing positions relating to technology and history. Such themes ultimately constituted the final theoretical proposition. The entire thematic process was therefore iterative, as the authors repeatedly stepped back and forth in their analysis in order to make better sense of the whole structure (Denscombe, 2007). Again, as suggested by Selwyn (2010), a questioning perspective was used to interpret and discuss the data, codes, and themes. This was done in order to lead the Saudi community of educational technologists outside their familiar territory: to exhume past issues, to question old assumptions and myths, and forge a different vantage point. Ultimately, the questioning perspective acts as a disobedient ‘player in the drama of policy making’ (Weiss, 1991: 308) and calls into question ‘the interests of institutional social science’ (Weiss, 1991: 308). The data were deliberately analysed manually, considering the conviction of the two authors that manual analysis of raw data can help the researcher to be more engaged with the data. The first author developed the first draft of Figure 1, which shows the data after sorting. He then invited the second author to ‘grill’ it. The second author ‘sifted through’, then returned the data to the first author to produce the themes.

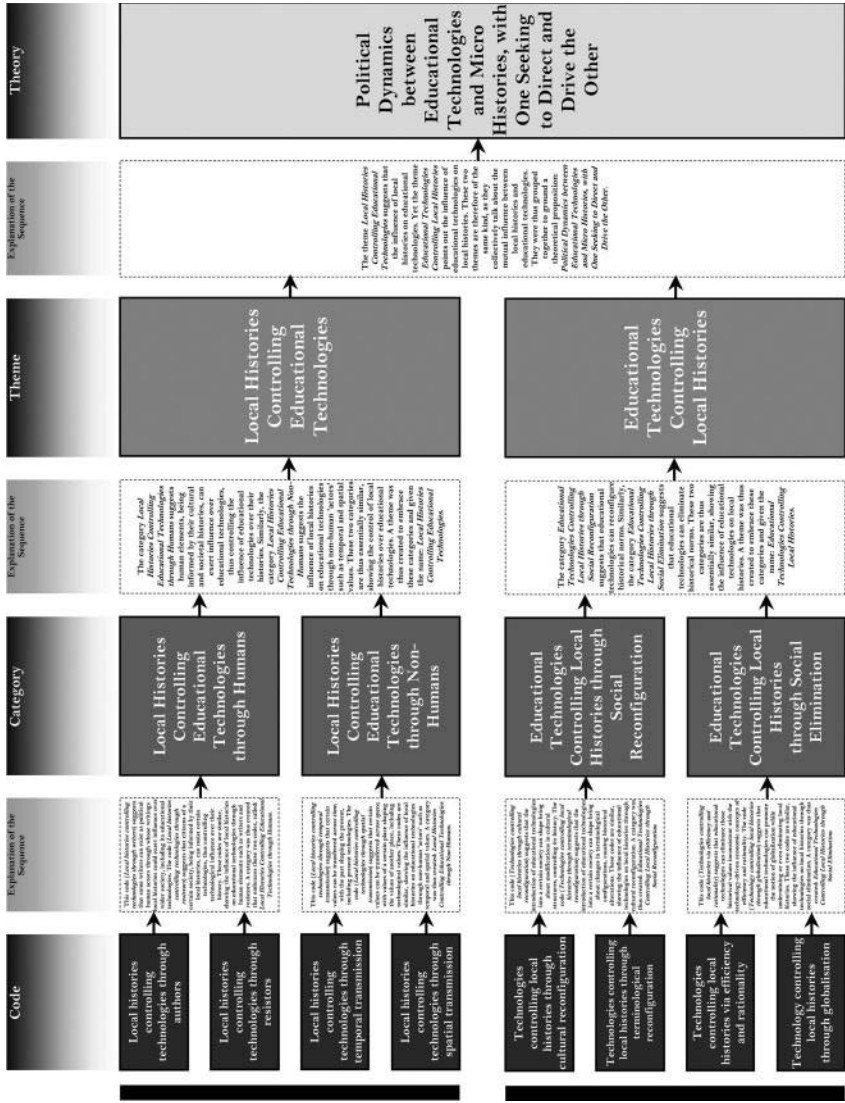


FIGURE 1 The data after being sorted using the grounded theory approach (N.B. the unreadable text in the figure will be enlarged and made readable later when discussing the findings).

## Analysis and discussion of findings

### **Introduction**

Engagement with the collected data singled out two key themes: *local histories controlling educational technologies* and *educational technologies controlling local histories*. What follows unpacks these themes, showing how they were generated from the various categories.

### **Local histories controlling educational technologies (theme)**

The first theme emerging from the data analysis pertains to controls exerted by local histories over educational technologies. Figure 2 shows that this theme resulted from two main categories: *local histories controlling educational technologies through humans* and *local histories controlling educational technologies through non-humans*.

### **Local histories controlling educational technologies through humans (category)**

This category suggests that human elements, being informed by their cultural and societal histories, can exercise influence over educational technologies. It covers a variety of related codes. For reasons of space and to accomplish deeper interpretation and discussion, two main codes, as shown in Figure 3, were chosen for the current article: *local histories controlling technologies through authors* and *local histories controlling technologies through resisters*.

**Local histories controlling technologies through authors (code).** Having sifted through the collected data repeatedly, it became increasingly obvious that some authors could exist as ‘politicising actors’ whose writings on local histories could be exploited to shape wider society, including its educational technologies. Having analysed a number of publications on Saudi education, it appears that many such texts could be criticised for being politicised by or through their authors and publishers. The following example illustrates this politicisation. The first pages of many such publications show full-page photos of some authority figures. Likewise, these publications were written by researchers working for the Saudi Ministry of Higher Education or for the Saudi Ministry of Education (see also Weiss, 1991). Many such texts were sponsored, published, and/or publicised by the Saudi Ministry of Culture and Information, the Saudi Ministry of Higher Education, or the Saudi Ministry of Education. Moreover, the copyright of some such publications is actually held by these ministries, and therefore such texts have been reprinted and distributed throughout society, often for free. Some such publications tend to highlight only positive aspects, hiding certain negative components, undermining major (yet politically disliked) issues, and/or showing apparently biased and shallow political analysis. Many begin with the religious sentence: *In the name of God, the Most Gracious, the Most Merciful*, thus going against the secularised nature of ‘Western’ academic publications and scholarship. Bearing such examples in mind, one could theorise that authors can exist as politicising human actors whose commentary and record of events could be exploited to exert influence over wider social activity, including its technological activity. This is especially true of historians and journalists whose commentaries become the basis of present political discourse. Hence, there is a need for ‘counter-authors’, whose main task is to go back to the past and unearth the

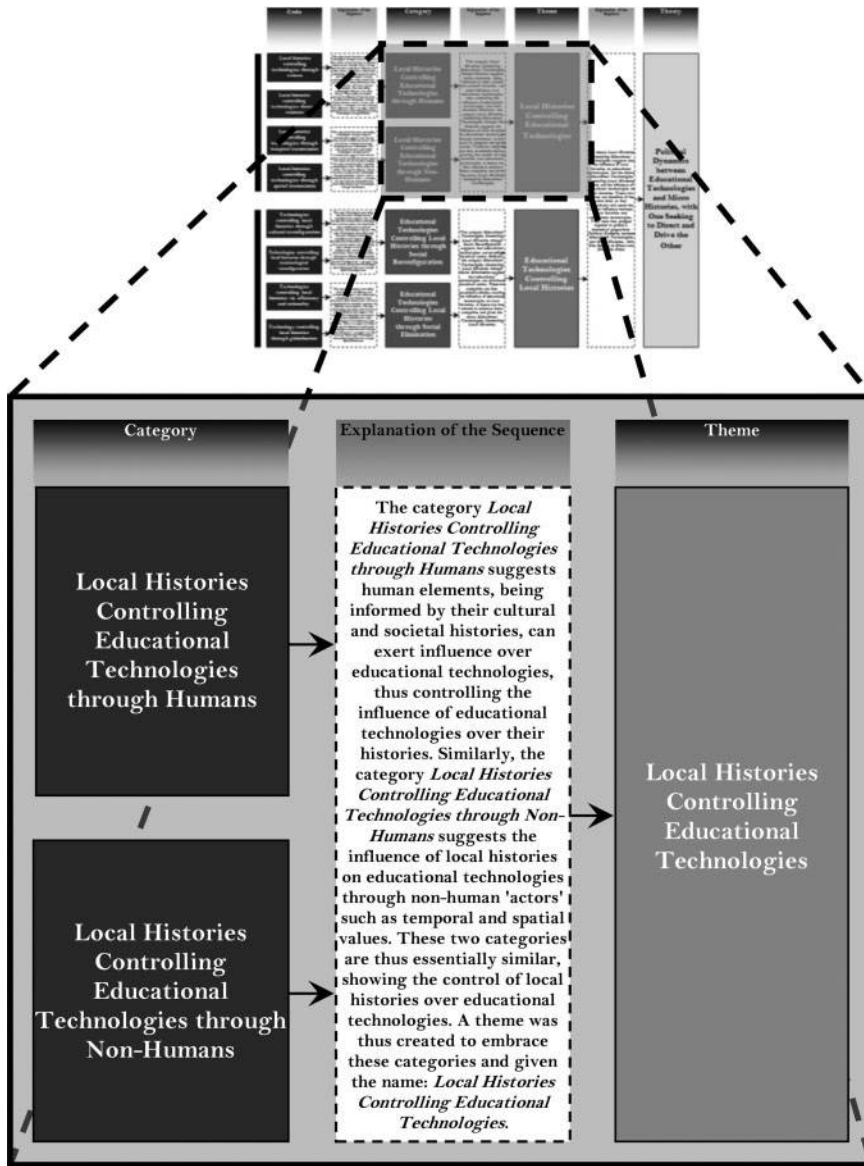


FIGURE 2 Local histories controlling educational technologies (theme).

politicised aspects of past publications on Saudi histories. In doing so, these 'counter-authors' might simply re-examine past events to unearth more accurate descriptions of history, or they might challenge those past historiographic trends that influenced and politicised the keeping of history. However, the challenge is that many contemporary Saudi academic authors appear to lack the critically reflective ability to identify the politicised aspects of educational technologies. One might wonder why such authors lack this ability. Is it because these writers are intellectually unable to achieve this task and are politically illiterate? Or is it because they focus solely on the educational and



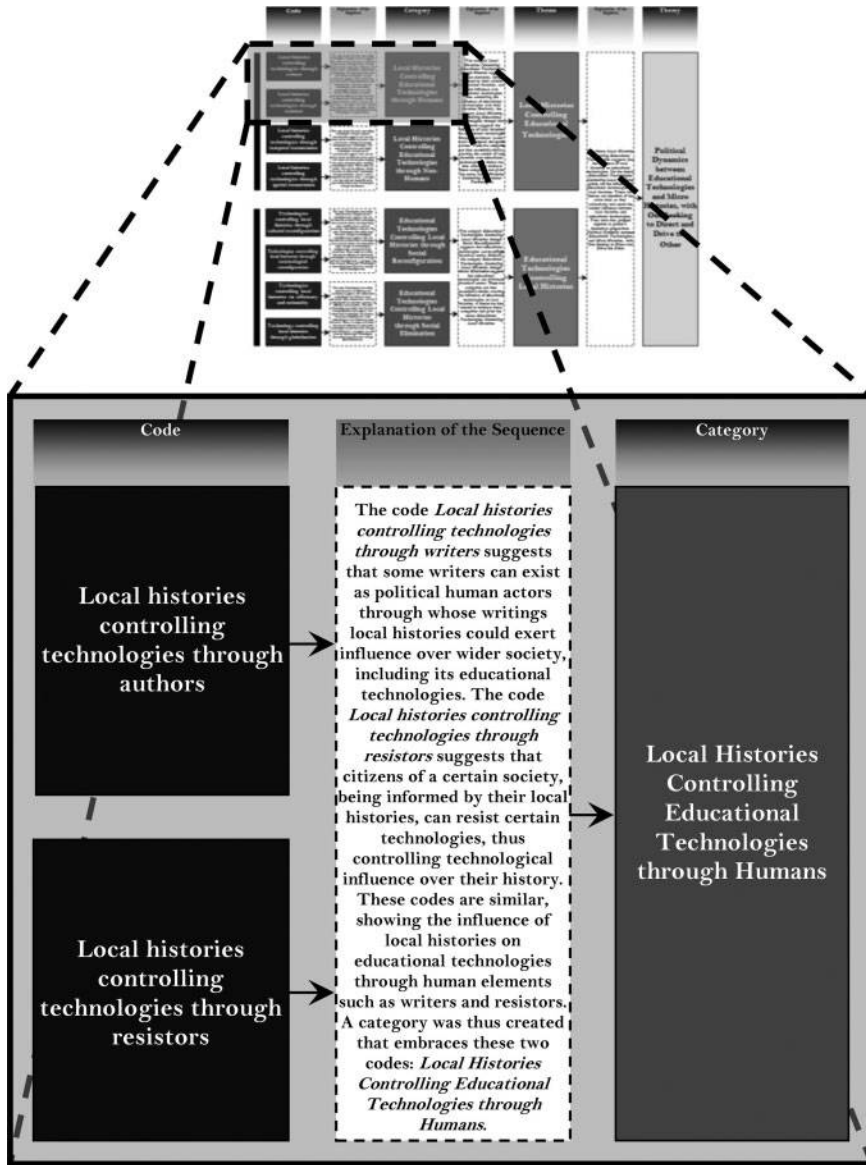


FIGURE 3 Local histories controlling educational technologies through humans (category).

technological aspects of educational technologies and therefore treat the political aspects of educational technologies as outside their expertise, their comfort zone, and/or their area of interest? Alternatively, perhaps it is because they are only quantitative researchers who have not had the chance to go deeply into social phenomena. Or maybe they are frightened of politics and do not want to get into trouble with the authorities and society?

On the other hand, one might call this line of enquiry into question. Scholars might argue that such questions are fruitless because all social and academic groups

are politicised to varying degrees. Similarly, it would be naive to assume that a more savvy group of modern researchers could better ‘de-politicise’ the past. ‘Counter-authors’ often do just that: pen converse narratives as a means of toppling one hegemonic discourse in favour of another. If modern Saudi academics are reluctant to re-address the history of educational technologies because of a political agenda, we can likewise state that a counter-analysis would be equally politicised. If completed by an outsider to the Saudi locale, such a counter-analysis might very well reflect foreign attitudes and agendas which run contrary to the contemporary aim of Saudi academia (i.e. to build a globally competitive academic climate while still maintaining Saudi Arabia’s non-secular identity).

***Local histories controlling technologies through resisters (code).*** What was noticeable from the analysis of the data was that citizens of a certain society, being informed by their local histories, can resist certain educational technologies, thereby controlling technological influence over their cultural history. It seems from the raw data that, in Saudi Arabia, some educational technologies apparently have been constructed so as to sustain certain cultural values. Over time various technological, educational, political, and economic factors have neglected these technologies. Yet the call to discard these technologies has been countered with societal resistance, buttressed by a belief that these technologies are designed fundamentally to help with the sustainment of cultural values and therefore must not be discarded. Further analysis of the data suggested that, although such resistance has appeared to have been informed by the determination of cultural protection, it has actually been motivated by self-protection wherein individuals feel concerned that discarding these technologies would make them lose personal advantages.

Consider the following examples. The university has two, physically separate, male-only and female-only campuses, with people of one gender (be they students, staff, or support staff) not allowed to access the campus of the other gender. However, due to the lack of female academics, men have been allowed to teach women from outside the female-only campus via a videoconferencing system. This technological solution has proved to be educationally ineffective, and hence it has been suggested by some part of the authorities that this technology should be discarded and male teachers should physically teach on the female campus. In response, some teachers have rejected this suggestion, pretending that the reason for their rejection was its inconsistency with cultural values, although the actual reason was that lecturing to the female campus via a videoconferencing system enables them to move from the male to the female campus by electronic means, thus freeing them from the need to expose themselves to the harsh Saudi weather. A further example is that there was reported to have been firm and even violent social resistance to the education of Saudi women, not necessarily because of religious considerations but because the education of female citizens is seen by some of their male counterparts to make women sophisticated and therefore ‘politically dangerous’ (in the words of an interviewee; see also Al Washmi, 2009).

Thus, it could be said that a key dynamic in social life is, as researchers on human geography also believe (see Dear & Wolch, 1989), the natural human tendency to struggle for security and status and to protect those gains that have already

been achieved. Moreover, such a human tendency towards self-protection is projected onto those institutions with which humans identify. This can amount to a joint survival strategy, as ‘employment will last only as long as the firm is successful’ (Dear & Wolch, 1989: 8). As also reported by interviewees, some Saudi citizens have firmly protected the Saudi national culture not for the sake of the culture itself but rather because sustainment of this culture can consequently help them to achieve certain personal gains. Anyone having a closer look at the history of Saudi Arabia can clearly see that religion, womankind, and technology have been exploited to attain certain political advantages and reward vested interests. This sheds light on the drama and political games at work in Saudi Arabia, with personal and thus political interests shaping wider society, including its higher education activity and its educational technologies.

Few historical comparisons can be made which will help us to predict how this political game will play out in Saudi Arabia. Traditionally, the story of women in Western education has been one of finding a place as students and then instructors in co-educational systems. Yet Saudi education remains strictly segregated along gender lines, despite increasing female attendance in higher education. For comparison, one might look to the history of racial segregation in South Africa or the US, wherein attempts to implement ‘separate development’ or ‘separate but equal’ systems divided education along racial lines. In some instances, white teachers and professors were infrequently allowed to educate black students but the alternative situation (black teachers and white students) was rarely, if ever, implemented. Even so, unlike the Saudi case, technology does not seem to have played an integral role in either enforcing or undermining past methods of racial segregation; rather, technology has come to signify elite status with technologically better-equipped ‘white’ schools standing in contrast to their segregated counterparts.

Moreover, one might undermine the myth that technology leads to social progress with reference to the view that technology could easily be used to ensure gender segregation as much as it subverts it. Historically, gender and racial equality require the entire system of education to be reformed, with full participation occurring among both students and teachers. This process only begins with complete desegregation, not piecemeal forays into new ‘gender-neutral’ technologies.

### **Local histories controlling educational technologies through non-humans (category)**

This category shifts attention to the influence exerted by local histories over educational technologies through such non-human ‘actors’ as temporal and spatial elements. It springs from an assortment of similar codes. However, to aid interpretation and discussion more clearly, two key codes, as shown in Figure 4, were selected for the present article. The first code is *local histories controlling technologies through temporal transmission* and the other is *local histories controlling technologies through spatial transmission*.

***Local histories controlling technologies through temporal transmission (code)***. The data analysis found signs of values being transferred *across time*, with the past shaping the present, including present technologies. The following unpacks this code. Some of the interviewees confirmed that Saudi society, like any other

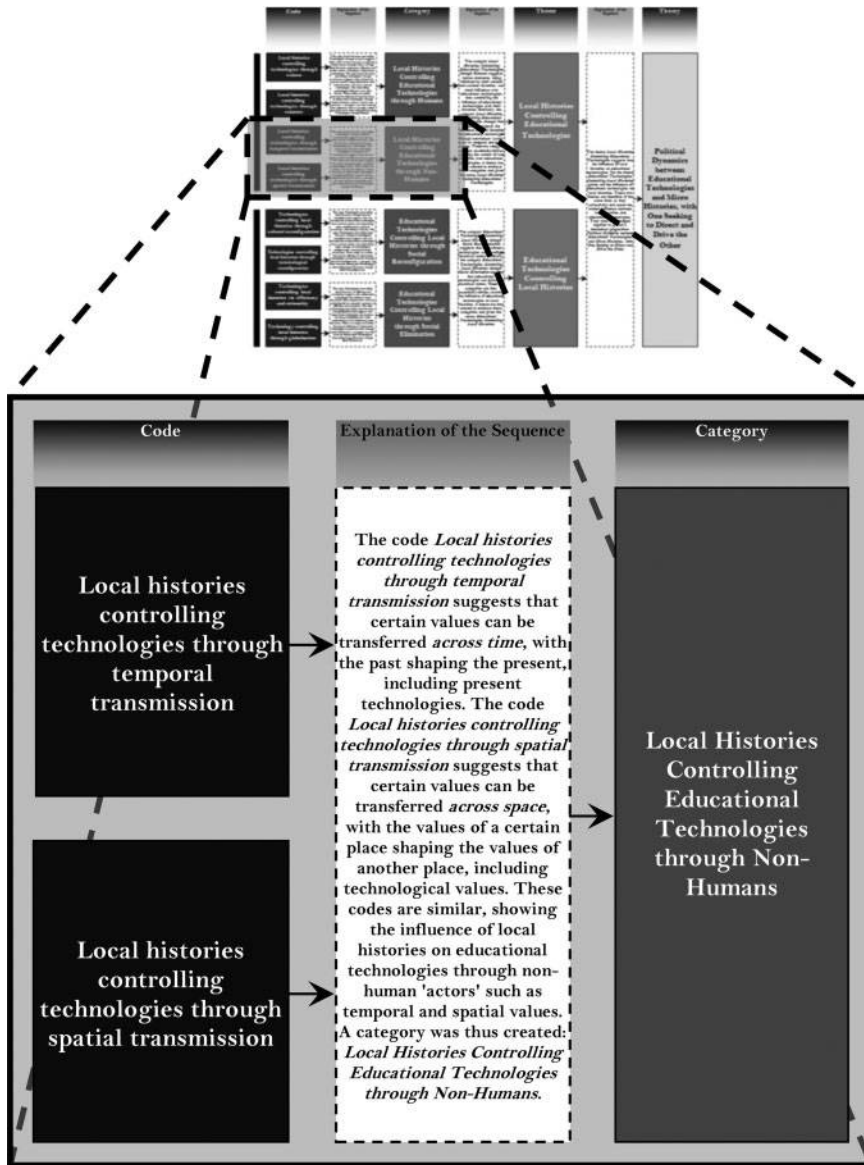


FIGURE 4 Local histories controlling educational technologies through non-humans (category).

human society (Black & MacRaild, 2000), seems to remain, at least to a degree, respectful and reverential of its past and history, despite the political power of technological advancement and rationalisation. It seems politically immature if one views local histories as merely a stock of facts and figures or as a collection of narratives. Notwithstanding the influential authority of technological progress, Saudi Arabian society, being informed by its historical Arabic and Islamic ideologies, still essentially directs and shapes educational technologies because

Saudi culture is religion and history-oriented. In the Saudi Arabian Constitution (Al Saud, 1993: 2), Article 1 of Chapter 1 (General Principles) states: ‘the Kingdom of Saudi Arabia is a sovereign Arab Islamic State. Its religion is Islam. Its constitution is Almighty God’s Book, *The Holy Qur’an*, and the Traditions of the Prophet (peace be upon him). Arabic is the language of the Kingdom. The City of Riyadh is the capital’. Likewise, in the Saudi Council of Higher Education and Universities System (2007), Article 1 states: ‘universities are scholarly and cultural institutions working in line with Islamic law’. Thus, Saudi Arabian social activity, including its higher education activity, is officially (and indeed unofficially) informed to a large extent by the past, even to such an extent that it is criticised for remaining ‘medieval’ (Al-Ahmed, 2010). Current Saudi Arabian higher education activity, including its educational technologies, has apparently been politicised in such a way as to be in line with Arabic and Islamic values, i.e. with the ideologies of past generations. Thus, it could be assumed that societal histories can turn, or be turned, into active elements, existing as political ‘actors’ that exert influence over contemporary activities — including of course technological activity. In other words, it can be said that educational technologies are, or at least could be, a tool for politicians’ use. Stearns (1998), for example, supports this observation, reporting that the most common justification for the place of history in school curricula is that the study of history is essential for good citizenship, the promotion of national identity, and fidelity to one’s country.

It is no surprise that education and history have become domains of particular interest to the official and religious authorities if we compare the Saudi case to other systems of education. In Europe and the Americas, the schoolroom, like the battlefield, has been the central site of nationalist victory. Moreover, we should not assume that Saudi academia is the complete inverse of Western academia. Political actors and ideological movements have influenced Western academia in the past and, to some extent, they continue to do so. Although Western universities may or may not be independent of official control, few are self-sufficient without the aid of donating bodies and corporations, many of which have their own interests and agendas. Social interest groups or ideological movements traditionally have influenced Western universities or have sprung from them, just as Islamic ideological movements are continuously influencing Saudi academics to avoid secular and ‘Westernised’ customs. On the other hand, technology has not been overtly controlled or directed by authorities in the West as it has in Saudi Arabia and other South-Asian countries. To take an external example, the short-lived Ministry of Technology during the Labour government of the 1960s testifies to the failure of the British government to officially patronise advances in technology. Compare this to the current Ministries of Communication and Information Technology in India, Egypt, Afghanistan, and various ‘developing’ countries.

Nevertheless, the common viewpoint that Saudi Arabia is ‘medieval’ in its approach to education and technology is not without basis if we consider the stages that Western education and technology have been through. Western universities moved from centres of religious instruction towards secular education during the Renaissance and Enlightenment and technologies became more integral to instruction and society, often without political support. With this in mind, one

might judge the Saudi system as backward because it maintains official and religious control over instruction while universities and corporate entities do not privately influence educational technology to the degree that they have in the West. However, such a viewpoint implies that Saudi education eventually will move towards the Western model or serious advances in education or technology will not appear unless the Saudi authorities submit to the Western model. A historian would likely argue against this notion because, historically, organisational advances do not necessarily correlate to advances in instruction or technology.

***Local histories controlling technologies through spatial transmission (code).***

This code shows how certain elements can be transferred across space, with the values of one particular locale influencing the values of another, including technological values. What follows explains this code.

Saudi Arabia has faced an economic challenge in the form of a scarcity of native academics, which has been attributed to the short history of the education system in the country. To overcome this challenge, the country has had to import and employ foreign academics, including educational technologists. Some such non-Saudi educational technologists have brought their own ideas and publications, which are informed by non-Saudi societal histories, to Saudi Arabia. These publications have thus ‘invaded’ (in the words of an interviewee) the Saudi context, influencing its own national and local policies concerning educational technologies. Findings that are informed by research on a particular societal history should not be allowed to be merely transferred and applied to another social context; such a transferral is likely to result in these findings shaping the technological, organisational, cultural, economic, and political patterns of the ‘transferred-to’ context in an unjustifiable way, given the historical differences between the context from which the findings have been transferred and the context to which the findings are transferred. That said, it must be acknowledged that some of those publications produced by non-Saudis and brought to Saudi Arabia have been written so as to be context-free and generic. Yet context-free publications on educational technologies present another essential problem, given the belief that educational technologies are fundamentally ‘social through and through’ (Feenberg, 2003: 75) in that they do not exist in a vacuum but rather are essentially informed by a particular social context. The university under study, like some other Saudi universities, is now benchmarking itself against an American university, transferring many syllabi (including educational technologies) from a foreign country to Saudi Arabia. These syllabi must be either American-oriented or context-free, which in either case remains problematic because America is a culture of its own just as much as Saudi Arabian culture, and because there is no such thing as completely context-free syllabi on educational technologies considering the documented continual feedback between societies and educational technologies (see Agalianos, 1996; Angus, 1993; Dubos, 1970; Graça, 2010). The anticipation here is that the history of Saudi Arabia and the history of America eventually will collide, given that Saudi culture is apparently politically sheltered whereas America is seemingly ‘internationally influential and globally intervening’ (in the words of an interviewee).

Let us step back, however, and dispute this prediction. A historian might argue that the benchmarking of Saudi educational technologies against the West is indeed problematic, but nothing new. In fact, the importation of knowledge can indeed occur without major cultural clashes. When one considers the history of education in the US and its history in Saudi Arabia, certain similarities emerge. Despite the numerous cultural dissimilarities, both are relative newcomers to the field of higher education. In the past, clerical education dominated higher education in the US just as it still does in Saudi Arabia today. American centres of higher learning, such as Harvard and Princeton, were dedicated to the training of the Protestant religious clergy. American universities moved away from this model in the late eighteenth and nineteenth centuries as educators who had trained in Western Europe imported texts and foreign systems of education. Eventually, secular American universities became competitive with their European counterparts. The best-known example of this was Johns Hopkins University, which was founded in 1876 based almost entirely on German secular models of education, especially in the sciences. Despite separate socio-political contexts, German-educated academics successfully used Johns Hopkins to import their favoured methods of instruction to the US. This included an emphasis upon medical clinical training, laboratory chemistry, and scientific technology.

Nevertheless, one might argue that cultural divides will prohibit a similar scenario from occurring today in Saudi Arabia. The US was, after all, culturally similar to its European counterparts. However, like the nineteenth-century American universities, modern Saudi Arabian universities have benefited from a surge in philanthropy and investment capital. Whereas ‘robber barons’ primarily supported nineteenth-century American universities, modern Saudi elites and oil magnates may very well succeed in importing knowledge from abroad despite cultural divides. The pride of philanthropically supporting a ‘modernised’ prestigious university in Saudi Arabia may overcome cultural barriers so long as Saudi religious doctrines are not threatened. The political drama, however, is expected to come into play when the new ideology of modernised Saudi higher education clashes with the traditional religion-oriented ideology of wider Saudi society. Although, in the West, higher education has been an agent of social change (cf. Corbyn, 2009), this might not be the case in Saudi Arabia where culture is politically sheltered and religious authorities maintain power over higher education.

### ***Educational technologies controlling local histories (theme)***

The second theme emerging from the data analysis pertains to the influence of educational technologies over local histories. Figure 5 shows that this theme stemmed from two parallel categories: *educational technologies controlling local histories through social reconfiguration* and *educational technologies controlling local histories through social elimination*.

### **Educational technologies controlling local histories through social reconfiguration (category)**

This category speaks of some control exerted by educational technologies over local histories by means of societal reconfiguration. Figure 6 shows that this category emerged

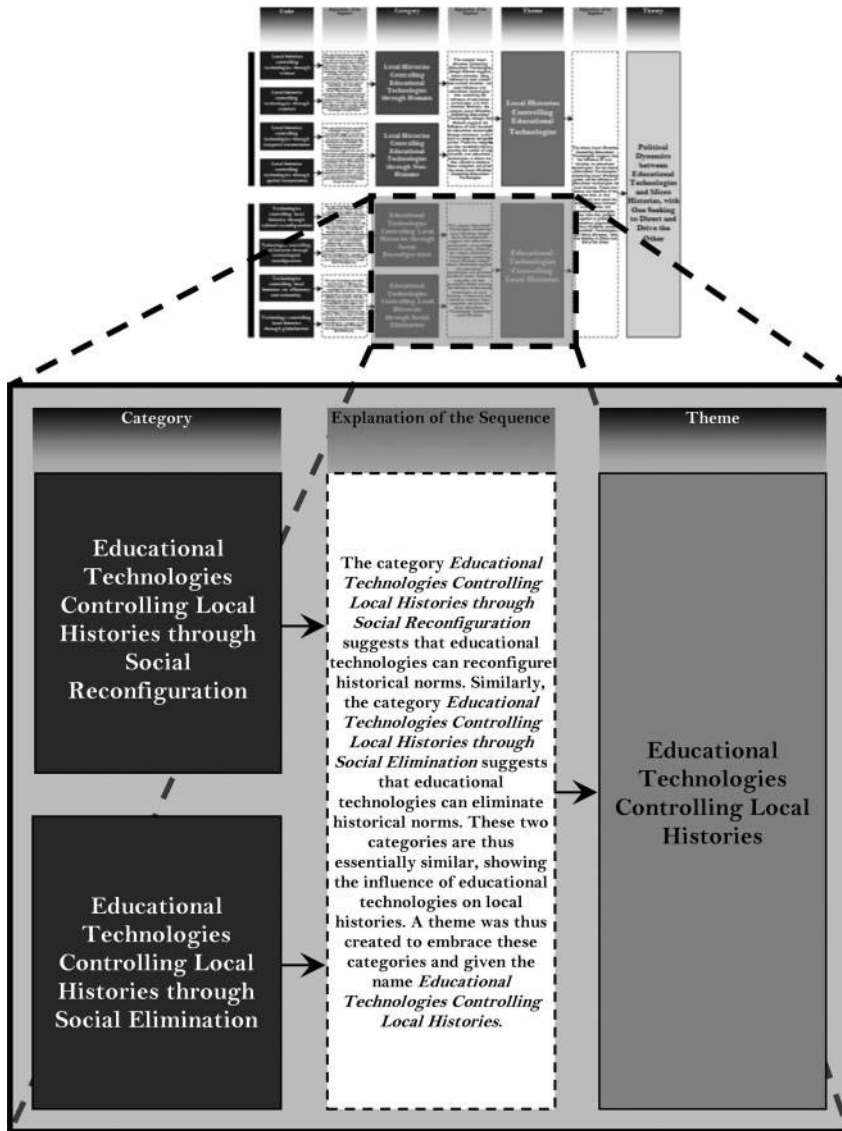


FIGURE 5 Educational technologies controlling local histories (theme).

from two parallel codes: *educational technologies controlling local histories through cultural reconfiguration* and *educational technologies controlling local histories through terminological reconfiguration*. These two codes are discussed in turn below.

***Educational technologies controlling local histories through cultural reconfiguration (code)***. Analysis of the data shows that university faculties, like any other department in the workplace, exist as a ‘theatre’ with a ‘frontstage’ (i.e. professional life) and ‘backstage’ (i.e. private life) (see also Goffman, 1959). Yet the introduction of technologies into academia (or any occupation) could build



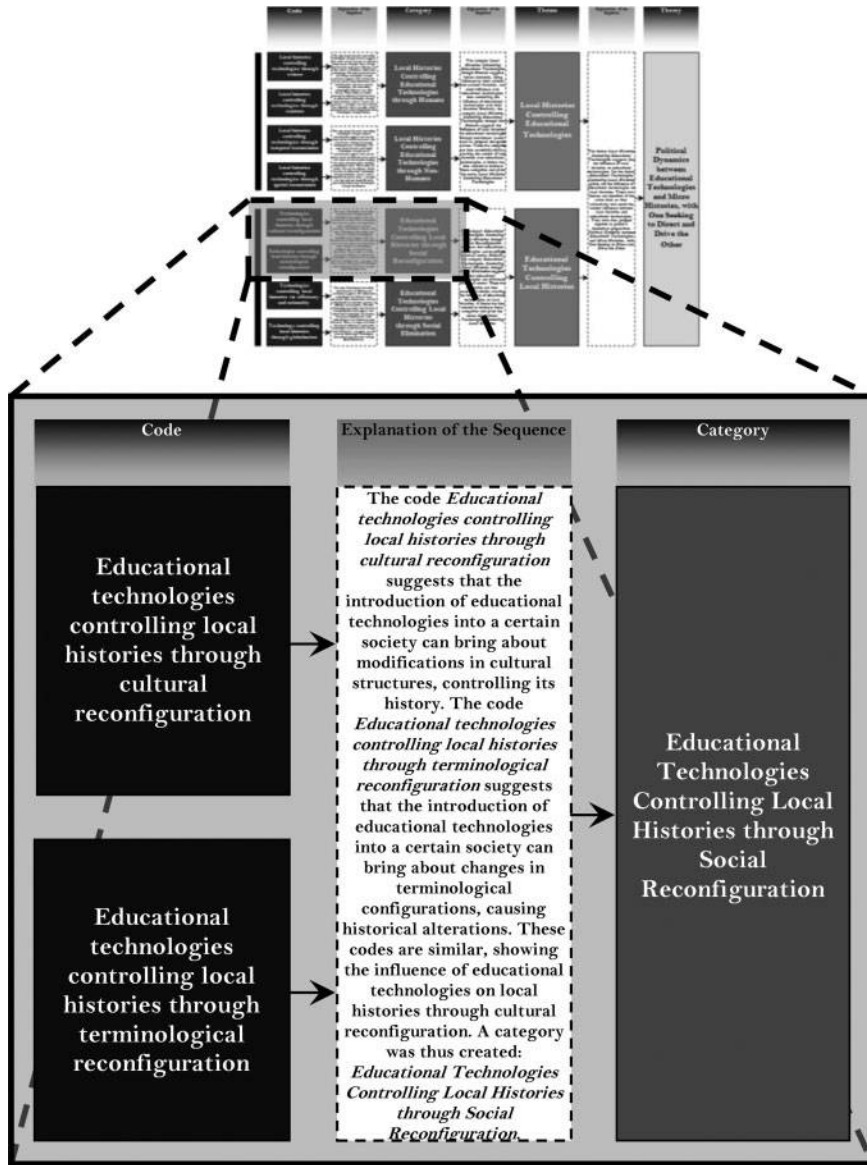


FIGURE 6 Educational technologies controlling local histories through social reconfiguration (category).

a bridge between professional and private lives, enabling these two lives to exist simultaneously, thereby undermining the historical ‘boundary’ between them and destabilising the political balance between them. Various examples can be cited from the data in this respect. One example is that some faculty members used their work computers to check their personal email, Twitter, and Facebook accounts. Moreover, some students reportedly contacted their teacher’s private mobile phone outside office hours, whether in the morning, the afternoon, or even at night.

Yet, as noticed during the data analysis, interviewees were ambivalent about the elimination of the border line between their private and professional lives. To begin with, in terms of satisfaction, some faculty members reported that they needed to stay in touch with their family members during working hours, and hence they praised technologies for establishing contact between their private and professional lives. Likewise, some students were happy that they could now reach their teachers via their private mobile at any time. However, in terms of dissatisfaction, some teachers complained that the ability of students to contact them on their mobile phone at any time made them feel like they were ‘at work’ all the time and meant their whole life seemed to be conducted inside ‘office hours’. What could be seen here is that digital technologies have reconfigured, or have been used to reconfigure, the historical separation between professional and private lives, thus shaping the configuration of personal history.

To problematise this view of the influence of technology, one could argue that academia has, historically, erected fewer divides between students and faculty members. Traditionally, instructors in both the West and the Arab world were not as divided as they are today; rather, students often lived with their professors, shared meals, and, in some cases, became a part of their instructor’s household. In essence, students in higher education were in an apprenticeship to their professor ‘masters’ and, through this relationship, a student could learn to emulate their master’s lifestyle and personal traits. This was especially important in the case of religious tutelage in both the East and the West. However, this close relationship changed in the modern era as faculties enforced a strict divide between professors and students by allowing the former to operate in their own offices and the latter to have dormitories and private accommodation. In this way, technologies such as email have simply returned the student–instructor relationship to its origins, although the physical distance between the two remains enforced.

***Educational technologies controlling local histories through terminological reconfiguration (code).*** In keeping with this code, the introduction of educational technologies into a certain society could bring about changes in terminological configurations, causing historical alterations in regard to the terminology used by a particular society. The following narrative illustrates this point.

In the university under study, there is an academic department called the *Department of Educational Technologies*. In a meeting of this department, some members suggested that the name of the department, which pluralises technologies, needed to be changed to the *Department of Educational Technology*, making technology a singular thing and thus an uncountable phenomenon. With reference to the technique of political discourse analysis, such a view appears to be informed by the deterministic approach to technology, rejecting the categorisation of educational technologies as things or possessions that are made locally or for micro purposes. Instead, this notion codifies technologies as a free entity flowing and running throughout the world, being detached from specific territories and local histories and furthermore aiming at the homogenisation of these territories for the benefit of progress, efficiency, and rationality. This view appears to promote the

belief that there are no such entities as Saudi technologies, American technologies, or any country-specific technologies and that no such elements as educational technologies, medical technologies, or any subject-specific technologies exist. Instead, there is only one single exclusive technology destined 'to dominate every field of human activity and [to achieve] efficiency and rationality in all human endeavours' (Kast & Rosenzweig, 1979: 176). Various criticisms can be levelled at this view but ultimately it places undue emphasis on generic technologies that exist at the international level, while undermining local technologies (and therefore their history) that exist at a national or even micro level. Another criticism is that, while this view appears to stress the domination of generic technologies, it seems to undermine the political capability of local actors to shape generic technologies for regional and even personal interests. The importance of local over universal technologies is integral to the history of technology. From a technology-directed society perspective, the development of a technology in one locale and not another signifies a unique relationship between society and technology in that particular region. Similarly, the development of local technologies and *ad hoc* innovations serves as key anthropological evidence in studying ethnographic differences. For our purposes, local technologies or the absence of seemingly global technologies serve as primary sources for the study of gender, class, religion, and education in the Saudi locale. Thus, in the earlier example of videoconference channels between the campuses, local political conditions have gendered a globalised technology. Local players have adapted video instruction to suit gender lines and strengthen the male-dominated system of Saudi academia.

The above-mentioned controversial arguments lie between the historical notions of technological determinism and social constructivism (see Bijker et al., 1987). If one is to follow social constructivism, it might be assumed that dominant social groups in Saudi Arabia (primarily educational administrators and their sponsors in the present case) will continue current trends towards technology use unless technology proves unprofitable or counter to the needs of the current Saudi educational system. A simple rise in cost (perhaps due to the shortage of income generated by a future oil crisis) may sway these groups to abandon their investment in technology in favour of cheaper and more traditional methods of paper-based education. However, these dominant social forces can be said to be often reluctant to invest in new technologies even in times of prosperity owing to social and religious concerns. Nevertheless, new technologies may very well continue to be in demand among minority social groups such as students and women so long as they themselves can afford to use them. Therefore, if we follow the social construction of technology theory we could predict that an economic downturn might enhance the disparity between Saudi administrators and Saudi students: the former could abandon their investment in educational technology while the latter continue to recognise its benefits.

On the other hand, social constructivism may be interpreted in a myriad of ways. Its purpose is best suited to assist in the history and sociology of technology rather than in the prediction of future uses of technology. A technological determinist might also argue that educational technologies will themselves advance social discourse towards a more accepting approach to technological investment.

Such a view might posit that new technologies will allow educators to implement a more efficient and globalised ‘resource pooling’ system of education. If technology does this, one might argue that Saudi administrators will accept new technologies and investments precisely because they offer solutions during times of economic crisis.

### **Educational technologies controlling local histories through social elimination (category)**

Whereas the preceding category demonstrated that educational technologies could reconfigure historical norms, the current category will show that educational technologies can go further, not only reconfiguring but eliminating historical norms. This category therefore sheds light on some control exercised by educational technologies over local histories through social elimination. As shown in Figure 7, this category stems from two analogous key codes: *educational technologies controlling local histories through efficiency and rationality* and *educational technologies controlling local histories through globalisation*. The two codes are unpacked below.

### ***Educational technologies controlling local histories through efficiency and rationality (code)***

There are indications in the data that educational technologies can eliminate those historical values that are inconsistent with the technology-driven concepts of efficiency and rationality. Some interviewees believed that technology-driven changes serve, or at least should serve, efficiency and rationality gains alone, following a linear internal logic and hence leading society towards progress. An academic interviewee asserted that: ‘technological change is always progress, and we must be with progress’. Such perceptions often place agency with the technocrats and administrators, those professions most associated with the technology-driven concepts of efficiency and rationality. The concern thus is that the history of educational technologies becomes informed and directed merely by top people (i.e. scientists and the like), thereby reactivating the old historical problem of a ‘top-down history’. Hence, there is the need for a modern approach to the way in which the history of educational technologies is constituted and recorded. Echoing such an approach, emphasis should be put on the history of the masses over the elite (Black, 1955). The concept of ‘top people’s history’ should co-exist along with a concept such as ‘the history of the masses’ or ‘the history of ordinary people’. Such new concepts could be assumed to help broaden the boundaries of the field of educational technologies, opening up fresh academic locales of research and shedding light on the experiences of those whose existence can be undermined, ignored, taken for granted, mentioned in passing, or even ‘lost’ within mainstream technological progress.

To question this perspective, one could argue that any history of the masses or ‘ordinary folk’ is elitist in its essence in that it solidifies ‘common’ people as a distinct and non-prestigious group and this terminology thus reinforces the implicit top-down approach and hierarchy integrated into the research domain and academic discourse. Such histories are written by the well educated and, typically, the well to do; therefore, they are inherently attempting to assess history from above. Recognising this is the first step towards understanding the difficulties in assessing

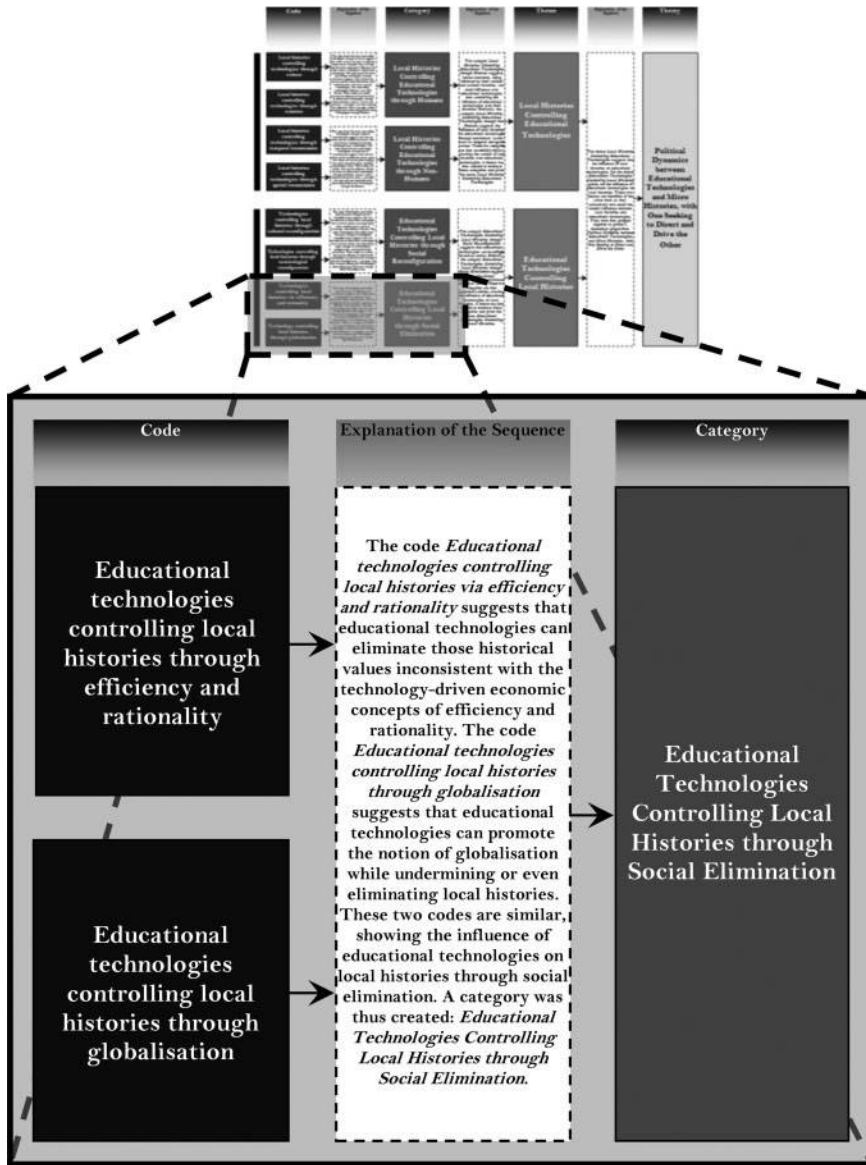


FIGURE 7 Educational technologies controlling local histories through social elimination (category).

this code. As researchers into the history and sociology of technology, we can easily assess the types of technology that non-academics and non-administrators utilise; however, we cannot understand how such disparate groups utilise their technologies for educational purposes without further quantitative and qualitative studies. As we have seen in other codes, non-academics and non-administrators may have access to technology or a desire to use technology despite economic concerns which dictate official and administrative initiatives.

***Educational technologies controlling local histories through globalisation (code)***. The data offer consistent evidence that educational technologies can promote the notion of globalisation while undermining or even eliminating local histories. Some interviewees showed concern that the concept of locality has apparently become undermined and even marginalised as a result of the strength of globalisation. This marginalisation of locality, one might argue, appears at least in Saudi Arabia not to have resulted in the vanishing of locality, instead it has placed locals in an ideologically conflicted situation. On the one hand, their local Saudi context remains politically powerful and imposes certain values on them, with locals thus being subconsciously unable to be independent of the local values with which they have been raised. On the other hand, the globalised context is also politically authoritative, imposing certain values upon them and requiring certain expectations to be met by them. However, the challenge is that the requirements of their Saudi local context are most likely not to be in line with the requirements of their globalised context; as a result, locals struggle, as was confirmed by some interviewees.

Al-Jarf, a Saudi researcher on educational technologies, has recently tested her own preconception that technology allows students to abandon their local identities and instead become ‘global citizens’ (2004: n.p.) Al-Jarf experimented with technologies that connected Saudi students with students from other countries but her experiment met with ‘total failure’ (Al-Jarf, 2007: 1) because her Saudi students were not accustomed to communicating with the opposite gender. Often their reluctance to participate was due to fear of reprisal from their parents and families. Al-Jarf recognised that such gender-linking interaction would be considered ‘unacceptable by many families’. To obviate risk, some female students ensured that their email address was kept anonymous or they registered under a male name. In other words, this experiment failed because the researcher, based on her own preconceptions about the power of technology, pushed her students into what she believed to be a ‘global context’, disregarding their cultural background and the social values with which the students had been raised.

As a result, we need to remember that locality (or ‘spatiality’, in the terminology of human geography) should be understood as a key issue which analysts and researchers should pay attention to, despite the increasing strength of globalisation and generic technologies. Issues of locality are ‘as crucial in our current societies as ever before’ (Simonsen & Barenholdt, 2004: 1). Local contexts essentially can exist as territories with political resistance to foreign political values. Thus, locality is actually territoriality. The investigation of as many local contexts (i.e. territories) as possible therefore can generate a rich account of political factors that can shape educational technologies in different social contexts. It could be understood that the beauty of technology use is not in the discovery of its generic patterns but in the realisation of its diversity. Such local diverse use experiences with technology can be exchanged through the national and international communities, thus enhancing intra-societal and inter-societal cultural exchange. Local miscellaneous experiences with technology use are not only informed by the user’s personal preference but also directed (consciously or unconsciously) by the cultural ideology with which one has been raised and the societal constraints within which one must function and

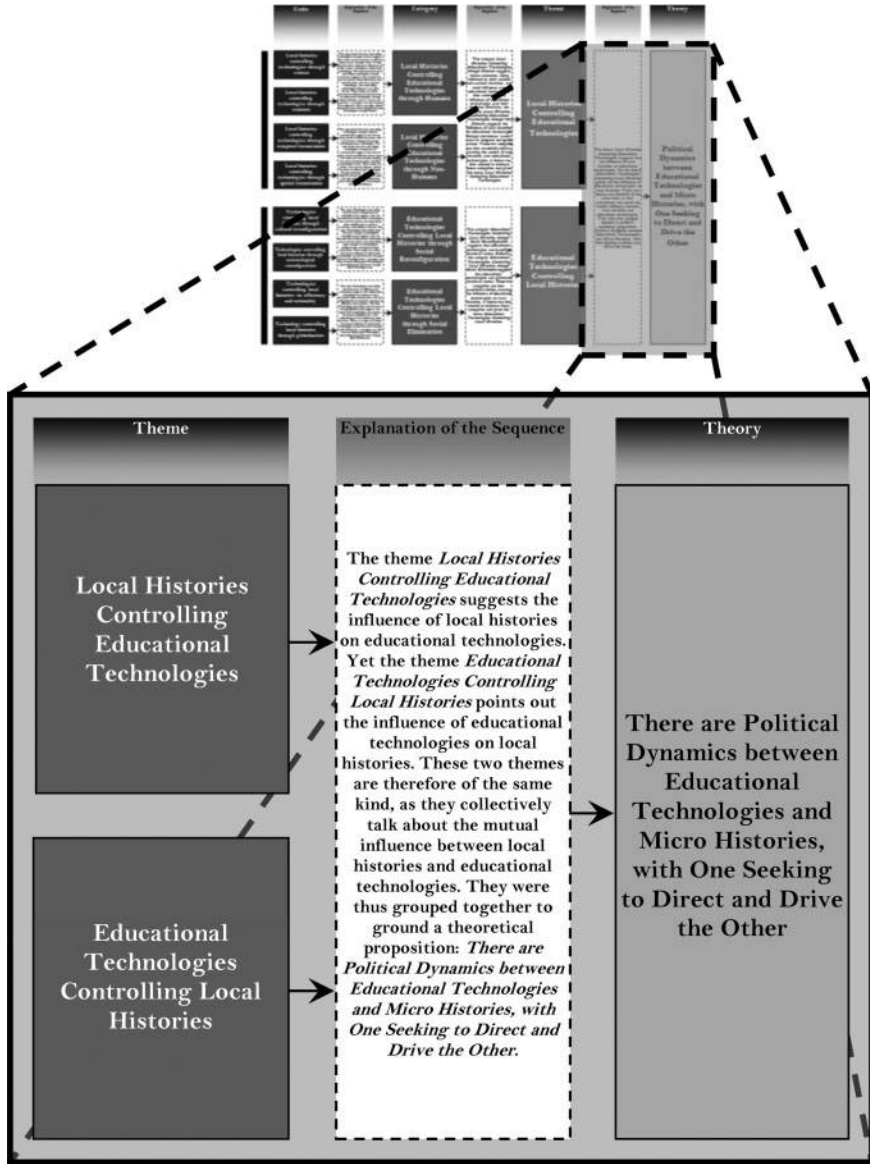


FIGURE 8 Political dynamics between educational technologies and micro histories (theory).

behave. If Foucault’s notion of governmentality is applied to the Saudi system of educational technologies, Saudis can be found to (again consciously or unconsciously) self-regulate their use of technologies to suit the demands of local cultural authorities. Thus, technology use is not independent of cultural baggage. Although it is tempting to view these diverse uses of technology as capable of skirting censorship and cultural divides, we must also be aware of locals’ own use of self-regulation.

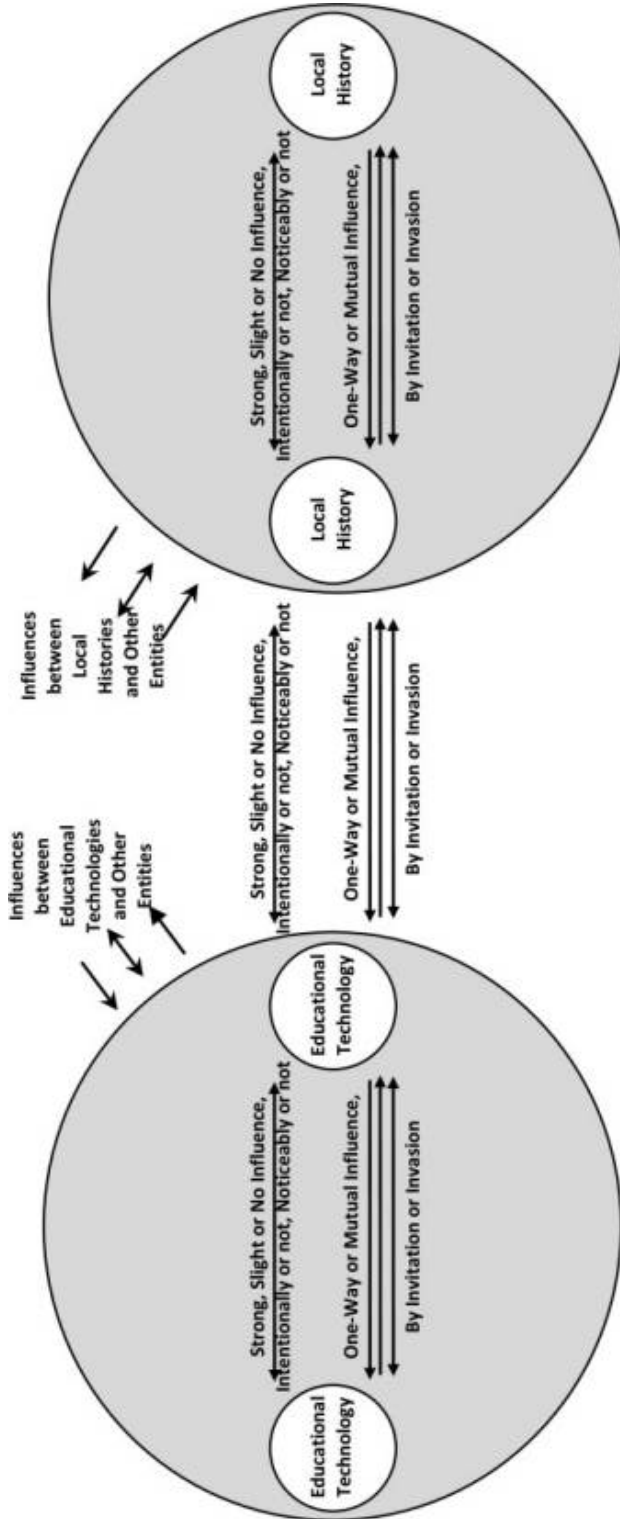


FIGURE 9 Illustration of the relationship between educational technologies and local histories.



## Conclusion

The current study has sought to offer a deliberately critical analysis of educational technologies. It has attempted to address the dearth of research on the historicisation of educational technologies, addressing the research question: To what extent have educational technologies and local histories shaped one another? Naturalistic enquiry into a Saudi university in the public sector has been conducted to address this question, with document analysis, interviews, and observations using the grounded theory technique. After engagement with the raw data, two themes emerged: *local histories controlling educational technologies* and *educational technologies controlling local histories*. Going beyond the either/or mentality, the two themes, as illustrated in Figure 8, can be combined together into a theoretical proposition: there are political dynamics between educational technologies and micro histories, with one seeking to direct the other.

Thus, we are led by the data analysis to believe in the existence of political tension between local histories and educational technologies. Such tension should therefore be revealed to students in the act of teaching them, so that they think about how their society has come to be (Stearns, 1998). Moreover, some hope is raised that such a political relationship between local histories and educational technologies will become the subject of more academic enquiry by researchers, questioners, and commentators. In other words, local histories and educational technologies should be exposed to more and deeper political investigation. One might direct the following criticisms to the study: Why should technology obviate local histories? After all, translations and adaptations constantly occur, and hybrid forms result. One might further contend that, although this article appears to reject technological determinism, it ultimately seems technologically determinist as it posits inevitable socio-political consequences to the act of technology transfer. In consideration of this criticism, it could be said that the article would benefit from consideration of the theories of thinkers such as Foucault or Habermas. Our discussion of technology and its importation could benefit from a wider discussion of other theoretical frameworks — most obviously Habermas' theories on emancipation, his discussions of technology as modifying the structures of labour, as well as recent literature on human resource management and 'technology transfer' (see, for example, Habermas, 1968). Considering the notion of technology transfer, it could be said that often there is not wholesale rejection or acceptance as implied but degrees of adaptation/imitation/interpretation. The term 'hybridisation' is often used to refer to this process, and factors such as cultural distance, adaptive or absorptive capacity of 'receiver', skills/motivation of 'sender', and roles played by expatriates, joint ventures, and consultants are often studied (see Stockhammer, 2012). Another possible theoretical framework is provided by neo-institutional theory, e.g. foreign subsidiaries may take up a technology or practice due to coercion from regulators or from normative isomorphism (e.g. taking MBA courses or joining professional associations; seeing the technology or practice as 'right'). Another possibility is 'imitative isomorphism' wherein organisations or societies may 'imitate' those seen to be more legitimate, credible, prestigious, or successful and attempt to 'import' their technologies/practices. Examples might include in historical times the Japanese/Russian imitation of Byzantine scripts,

religions, technologies, artistic traditions etc. (or even Western Europe's imitation of Arab numerals, algebra, legal concepts etc. in the times of the Crusades, or European appropriations of Chinese artistic and bureaucratic practices in the eighteenth century — e.g. porcelain, wallpaper, gardens, civil service examinations, and meritocratic recruitment). More recently, East Asian imitation of Western scientific/technological practices could be considered. Another concept to consider here is 'the domestication of technology', whereby generic technologies are transformed and institutionalised to fit within certain settings, with individuals, communities, and societies making sense of, giving meaning to, and achieving functions through the technologies produced and offered by the provider (see Caron & Caronia, 2001; Lally, 2002).

Having considered what has been said and following engagement with the research, a tentative diagram (see Figure 9) has been drawn in an attempt to combine various arguments. One is that local histories influence considerably or slightly, or fail to influence one another. Another argument is that educational technologies influence considerably or slightly, or fail to influence one another. Another argument is that educational technologies influence considerably or slightly, or fail to influence local histories and other entities, and vice versa. An additional argument is that all such influences can be argued to be happening by invitation or by invasion and to be one-way or mutual. Saudi universities recently have become keen to benchmark themselves against other universities in developed countries. In this respect, it could be straightforwardly said that local histories (here, the history of these Saudi universities) may choose (i.e. by invitation, not by invasion) to become influenced by technological practices that exist outside their historical zone.

It should be realised that subjecting the local history of Saudi society to political investigation remains problematic given that citizens are sensitive towards political enquiry and certain societal arrangements are politically sheltered and carefully protected. If any study is conducted on Saudi society from a political perspective, participants are more likely to withhold their consent if they are explicitly informed that the study takes a political approach. Their withdrawal might be because they are either worried about social and legal punishment or protective of their self-identified cultures. This thus represents a methodological challenge. Informing participants about the political aspects of a study risks their refusal to take part, whereas not informing them about the authors' intention leads to ethical problems. This is why studies viewing Saudi Arabian educational technologies through political and questioning lenses are narrow and limited. This has created a considerable gap in the literature of educational technologies in the Saudi Arabian context, but one that we hope may begin to be addressed in this article and our future research. Another limitation of the current study is that there is a lack of quotations from the interviewees. This happened for various reasons. The article takes a questioning and conceptual perspective and therefore gave priority to the questioning voice of the authors over the descriptive voice of the interviewees. Taking a questioning standpoint has encouraged the authors to highlight the key issues and therefore subjected them to detailed questioning, and this detailed questioning took priority given the confines and aims of this article.

That said, a forthcoming article aims to focus on the voices of the interviewees more than the voices of the authors. A final criticism which can be directed at the present article could be that it seldom submits recommendations for further research or that new research agendas are not outlined. This was a conscious decision. We intentionally avoided keeping recommendations at the forefront of our mind as, essentially, this article was designed to play devil's advocate and generate further questions and perspectives rather than immediate research solutions.

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