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Article information:

To cite this document:

Leeds Beverly, (2014), "Temporal experiences of e-learning by distance learners", Education + Training, Vol. 56 Iss 2/3 pp. 179 - 189

Permanent link to this document:

<http://dx.doi.org/10.1108/ET-11-2012-0114>

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Temporal experiences of e-learning by distance learners

Experiences
of e-learning

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Abstract

Purpose – The purpose of this paper is to explore experiences of e-learners in relation to their time preferences, and to examine how technology changes temporal culture in e-learning.

Design/methodology/approach – A pilot study using multiple methods of data collection to provide a rich picture of the experience of e-learners in relation to temporal flexibility. Taking a narrative approach it analysed data from a survey, time tracking data as well as data from online discussion boards, learners' assignments and short telephone interviews.

Findings – The study found e-learners may experience temporal culture shock when starting to study online for the first time. It highlights the need to explore an individual's time preference and to consider the temporal culture of the e-learning programme.

Research limitations/implications – It highlights that the issue of time is still missing from educational studies and suggests that temporal aspects are included in e-learning research studies. This is a small exploratory study but it indicates the need for further research to explore the potential for temporal culture shock and influence of e-learner time preferences.

Practical implications – Designing an e-learning environment for learners needs to consider learner time preferences to ensure that temporal flexibility is a realised benefit, not a barrier to learning. The temporal culture of the online learning environment also needs to be made explicit so that learner expectations can be managed.

Originality/value – It contributes to the literature on e-learning in the higher education context by providing a temporal lens to explore learner experiences. It is of value to educationalists and learning technologists designing, delivering or evaluating e-learning programmes. Online learners may also benefit from its findings.

Keywords Higher education, E-learning, Online learning, Distance learning, Temporal, Temporal culture, Time preferences, Polychronic

Paper type Research paper

Received 12 November 2012

Revised 31 May 2013

Accepted 11 June 2013

Introduction

The introduction of technology enhanced learning alters the use of both teachers' and learners' time (Laurillard, 2007) and yet the role of time is rarely highlighted in educational research into e-learning (Thorpe, 2006). This is surprising given that the literature concerning the use of technology in e-learning is replete with references to time in the form of synchronous and asynchronous interaction. Where time is discussed it is often in the form of time management (Kordaki, 2011) or the time it takes to learn new skills and manage new forms of communication (Salmon, 2000). Barbera and Clarà (2012) in their systematic literature review highlight that time has been neglected in e-learning research even though it is often noted as a key requirement in general teaching and learning, and that the use of technology is frequently offered as a solution to temporal difficulties. Many e-learning tasks are described in terms of their temporal characteristics (synchronous or asynchronous) and the temporal flexibility afforded by e-learning programmes is often promoted as a benefit to the learner. However, Allan (2007) argues that the flexible approach that e-learning offers may be undermined if the concept of time is overlooked or not made explicit.



Education + Training

Vol. 56 No. 2/3, 2014

pp. 179-189

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0040-0912

DOI 10.1108/ET-11-2012-0114

By taking a temporal lens to investigate e-learning, this study provides the opportunity to explore the experiences of e-learners in relation to different individual perceptions of time and different organisational perspectives or “temporal cultures” that may influence the successful realisation of temporal flexibility in e-learning. It explores time preferences of individuals and temporal cultures of e-learning courses. In examining the dominance of “clock time” in western culture, it argues that the use of technologies in teaching and learning necessitates a change in this time perspective for e-learning.

For this study e-learning is defined as “learning facilitated and supported through the use of information and communications technology” (JISC, 2012). It is specifically concerned with part time learners undertaking a top-up course to complete their undergraduate degree by distance learning. It uses a multi-method approach (De Laat and Lally, 2003; Jones, 2004) and a narrative analysis to analyse the data. It explores the experiences of e-learners in relation to their time preferences and the change in temporal culture that technology has brought to their learning. In doing so it examines the time personalities of individual learners, drawing a distinction between those with a polychronic conception of time who prefer to engage in two or more tasks or events simultaneously and those with a monochronic conception that prefer to concentrate on one activity at a time.

Individual temporal perceptions

The distinction between monochronicity (doing one thing at a time) and polychronicity (doing more than one thing at a time or in parallel) was first examined by Hall (1983) who used these concepts to describe the “temporal personality” of individuals, and even of entire nations. Hall (1983) argued that polychronic individuals view time as an infinite resource and interpersonal relations are at least as important for them as the task to be performed. They undertake to do several things at a time and are strongly oriented towards the present. They are less bound to a timetable or a procedure. In contrast monochronic individuals view time as a commodity that can be wasted and therefore must be spent wisely. Their extreme concentration or dedication to one particular task reduces in importance the need for interpersonal communication.

Many studies of time and e-learners, such as those examined by Barbera and Clarà (2012) focus on what individual learners do with their time resources; however, these studies examine the use of time under the dominant time perspective in western culture. This orientation is sometimes referred to as “clock time” where time is seen as a resource that can be used and therefore its use must be optimised. This assumption of the construct of time has limitations when examining what individuals do in an e-learning situation, as it does not allow for the consideration of polychronic time use (Kaufman *et al.*, 1991). Activities are presumed to be undertaken one at a time (monochronically), while many activities are actually undertaken simultaneously (polychronically) (Davies, 1990). So learners may be engaged in a home or work activity at the same time as an e-learning activity.

Jacques (1982) highlights that we may live at the same time but not in the same time as we each have our own time perspective. Each individual learner distinguishes his or her perception of time as exact or true, whereas time is in fact variable and, even though time may be perceived as constant, it is actually socially constructed (Benabou, 1999). Individual learners may be undertaking the same e-learning activities but as a consequence their perceptions of e-learning will be effected by their individual perception of time (Graham, 1981). The difference in temporal perception is based on

how individual learners organise time and process tasks as monochronic (one at a time) or polychronic (simultaneously) (Kaufman *et al.*, 1991).

This “temporal personality” has been widely discussed by a number of authors but later studies have shown that monochronicity and polychronicity are not two distinct concepts, but the opposite poles of a single concept (Bluedorn *et al.*, 1992; Usunier, 1991). Kaufman and Lindquist (1999) state that monochrons seem to require a deliberate planned control over their time and hence to identify time periods when certain activities will be undertaken. Hence extremely monochronic learners would be better placed in an e-learning situation based on structured time with a well-planned schedule. Whereas extreme polychrons would flourish in an environment where time was unstructured, with uncertainty and pressure (Kaufman and Lindquist, 1999). This indicates that the temporal expectations for e-learning should be made explicit, allowing e-learners to supplement rigidity or flexibility into their learning activities depending on their temporal preferences.

Time and online learning

Online learning removes individuals and processes from traditional spaces and times (Giddens, 1992), so that space and time become “distant” from each other (Lash and Urry, 1994). In its use of technology, e-learning disrupts the temporal order by altering the ways in which individuals structure their study patterns. It highlights a move towards more “task-oriented” learning where work is focused on the learning task, not the time taken to carry it out. Rather than fixed study hours based on clock time, study time lengthens or shortens according to the learning tasks undertaken. This presents a challenge to the western perspective of time as increasingly time is seen as subjective and a social construction of the actors in the organisational universe (Benabou, 1999). Those learners working monochronically would seek to structure activities and plan for assessments by allocating specific slots of time to each assessment and learning activity whereas learners working polychronically would place less value on temporal order, accept assessments and other activities as they arise and engage in multiple activities simultaneously (Barley, 1988).

Hence the temporal preferences of e-learners may range from an extremely single-tasked, monochronic individual to another who is able to deal with multiple learning, work or domestic tasks. This difference in time preferences may help to explain why some individuals find learning online difficult yet others are completely at ease. Some learners will focus on a single task over a defined period of time (e.g. they work monochronically) while other learners may find it relatively easy to multi-task and work on several tasks concurrently (polychronically). An e-learning situation where learners were always required to be punctual, where time was seen as a resource, routine was the norm and learning tasks were restricted to one or two at a time may be difficult for a polychron. However, an e-learning situation where an individual has the freedom to set their own learning schedule, even at the same time as other tasks such as work, household tasks or eating, would be more conducive to that learner’s concept of time.

Lee and Liebenau (1999) suggest that individuals also differ in their perceptions of time with regard to social time and clock time. For some e-learners, time spent communicating with others is not wasted and for them socialising is an important feature of work and building relationships. However, others see time as a valuable commodity that should not to be wasted and therefore believe they should always be concentrating on the learning task in hand and completing it within specified time.

Therefore, some e-learners may be irritated by online socialising through discussion boards or as part of a synchronous learning activity such as a webinar, whereas others would expect it to be part of the e-learning experience.

An e-learner's temporal perception will also affect the way in which they define the boundaries between learning and other activities. The use of technology in the home provides the potential to bring learning, paid work and household activities together, which can create a blurring of the boundary between learning, work and leisure that necessitates a change in temporal perspectives. The management of time between learning, paid work and home or non-work has focused on scheduling time patterns, which Zerubavel, refers to as encouraging temporal harmonising between "temporally asymmetric worlds" (Zerubavel, 1981, p. 60). However, online learning can be likened to household time which is structured by sequences of tasks rather than quantities of hours as it is grounded in different, more flexible temporalities (Davies, 1990; Morgan, 1996). The sequencing of these tasks establish recurring patterns and rhythms of activities with a continuous rather than discontinuous flow.

Online learners studying at home may need to rely on their self-discipline to devise a temporal structure for their time spent engaged in e-learning activities in relation to other work or domestic commitments. For some learners e-learning presents a challenge as the boundaries between learning, work and home may be uncomfortably blurred. The removal of existing time-space barriers and the incorporation of study, work and leisure into the domestic setting can cause negative effects such as longer working or study hours. This may be because some e-learners are unclear of the boundary between study, work and leisure whereas others may introduce boundaries that are too strict.

The study

The study focuses on research conducted in early 2011 on the experiences of e-learners studying their first module on an undergraduate top-up degree programme in business and management with a modern UK university. The research was a pilot for a larger research study into the temporal experiences of e-learners. The programme was delivered through distance learning using online resources, with most learners studying their course materials at home.

In order to explore the experiences of the e-learners the research took a narrative interpretivist approach based on predominately qualitative techniques, however, in recognition of the increasing claims for using a multi-method approach to research into networked learning the study adopted a mixed method approach (see Hodgson and Watland, 2004; De Laat and Lally, 2003; Jones, 2004). Quantitative and qualitative research methods are complementary and when used together can assist the researcher in building a comprehensive understanding of e-learning (Jones, 2004). Therefore, as suggested by Lally and De Laat (2002) the study uses a wide range of data sources including discussion boards, students' first assignment, an online survey questionnaire, telephone interviews and the e-learning environment tracking tools. The study aimed to be as close as possible to the meaning of the subjective experience of the learners or as Reissman (1993) states "what life means at the moment of telling" (p. 52), therefore a narrative inquiry approach was adopted as it allowed individual learners to provide their own accounts and interpretations through stories told in their own words (Riessman, 2008; Clandinin and Connelly, 2000). The quantitative and qualitative data obtained was analysed by following the six analytic steps to analyse the stories as outlined by Crossley (2000).

The research focused on the experience of 28 part-time learners who had not studied online before nor had they met each other. All the learners were working full-time and were mainly UK based except for three Europeans. The module was taught by e-learning over 12 weeks entirely online using a combination of learning content, online activities, online asynchronous discussion through the VLE and weekly synchronous discussion using web conferencing software. The module has a nominal of 200 learning hours attributed to it but the breakdown of hours was not discussed with the learners. All learners on the module were made aware of the research by their course leader and through an e-mail from the researcher explaining what the research entailed and inviting them to participate by completing an online survey and a telephone interview. Permission to use learners' data in the form of discussion messages, assignments, survey responses and interviews was confirmed by learners giving informed consent at the start of the online survey. Learners that did not respond to the survey were deemed to have opted out and were not used as part of the research.

To identify learners' polychronic or monochronic preferences an online survey was constructed from the findings of prior research into monochronic and polychronic time preferences (Bluedorn *et al.*, 1992; Kaufman and Lindquist, 1999; Kaufman *et al.*, 1991). This ten-item survey was designed to identify learners' time preferences using a semantic differential scale where learners were asked to identify their preferences against two bipolar statements. The VLE tracking tool was used to identify learners usage of the online resources by identifying timing and duration of online activity over a period of 12 weeks. The remainder of the research was focused on the temporal experiences of e-learners and how temporal boundaries were drawn between "paid work" and "online learning" and "home" and "online learning". Therefore, the telephone interviews focused on the cohort's experience of online learning, how they structured their online learning activities, when and where these took place, whether these were planned or opportunistic, whether they allowed for interruptions; how they managed unplanned interruptions and related questions. This approach allowed an understanding of the temporal experiences of e-learners to be developed and to what extent the temporal boundaries were blurred. All the messages posted by individual learners on two of the discussion board threads were identified and listed in one document ready for analysis (a total of 367 discussion board messages posted in the first six weeks of the module). Each individual learner's first assignment, a report entitled "A reflection on the challenges of e-learning and how I propose to deal with them" was also collated for analysis.

The survey results were scored to calculate each learner's self-reported monochronic or polychronic temporal preference. Individual time graphs were drawn for each learner based on their interactions with the online resources. The telephone interviews, discussion boards and assignments were analysed using template analysis as it allowed for all the data to be thematically organised and analysed according to a set of codes developed a priori (King, 2004). This approach provided a focused technique that allowed the prioritisation of themes that could be examined within individual learner's context as well as across all learners. Categories were derived from the themes in the literature review and a coding template was used to summarise relevant categories and sub-categories. The template was modified and developed as part of the analysis process as the codes emerged from the data instead of from a fixed set.

The multi-method approach afforded the opportunity not only to examine individual learners' experiences against their temporal pattern of e-learning activity but also the experiences of the cohort as a whole. It also provided a reflection on

polychronic and monochronic activity in relation to the learners self-reported temporal preferences. Together the combined analyses enabled the emotional aspects of time preferences in different temporal cultures to be surfaced as well as illustrating the group dynamics between e-learners with different time preferences.

All 28 learners were invited to take part in the research through an e-mail inviting them to participate. The course leader sent the invitation explaining the role of the researcher as being purely for research and that the research was not connected with their coursework or assessment. Only 11 learners completed the survey questionnaire which also confirmed their willingness to be part of the research project. As only seven of the 11 respondents also agreed to a short telephone interview only the data from these seven learners is included in the analysis for this exploratory study.

Findings and discussion

Analysis from assignments revealed that all learners were focused on time as all of them identified time and its management as a key to their learning. In their discussions of time the learners outlined their intention to plan and manage time through a clock time vision where they had commodified time (Lee and Liebenau, 1999). Referring to the need to “save time”, “not waste time” and to “spend time wisely” all the learners discussed the need for time management and a plan of how they would spend their time. However, there were examples in the assignments and discussion boards of two learners moving to a more subjective temporal perspective (Benabou, 1999) where students expressed their own reflections such as “getting lost in some interesting reading and realising I had spent ages just on one aspect” and “noticing how boring lectures seem to last an age”. As Barley (1988) noted the learners acted monochronically by planning and specifying set times that they would spend studying and most referred to this time as “college time” or “uni-time”.

One learner’s solution to managing their time was by “devising a time table planning how I am going to manage my time on an hourly basis” stating that “it is very important that I manage my time” and that this planning would assist in “identifying and overcoming time wasters (particularly procrastination)”. Only two learners referred to a more subjective view of time and discussed goal setting in relation to time with the recognition that “it’s not how many hours but what you do that’s important”. One of these learners, who specifically referred to Servan-Schreiber’s quote “speed [...] causes us to narrow our horizons, stifling our behaviour and leaving no space to grow” (Servan-Schreiber, 2000, p. 82), noted that “time also for time out sessions” was needed. In contrast there was also a recognition by another learner that “available time is controlled by the individual and only when it is controlled can the individual reach the desired outcome”. Thus highlighting the different temporal perceptions of the learners in their approach to learning online (Graham, 1981).

Further analysis from the telephone interviews and assignments revealed the balancing acts or what Zerubavel (1981) refers to as temporal harmonising that the learners needed to perform to participate in the online activities. Thus highlighting the tensions between the boundaries of “paid work” and “online learning” and “home” and “online learning”. A number commented on their disappointment at not being able to meet their own expectations in terms of temporal participation on the module, indicating the pressure of uncertainty with unstructured time (Kaufman and Lindquist, 1999). Others discussed the use of synchronous verbal communication technologies such as Skype, Adobe Connect or telephone to speed up group activities as they found the asynchronous nature of the online activities frustratingly slow.

An analysis of discussion board messages over time highlighted the increase in discussions referring to time two and three weeks into the module delivery. Over the six weeks of discussion boards analysed individual references to time doubled by week three to an average of four per student and by the end of six weeks this had increased again to an average of seven per student. This increase in temporal discussion was also reflected in the telephone interviews where learners expressed concern about how often they were expected to be online but had only shared this anxiety with others after a couple of weeks. The analysis of the telephone interviews and survey data revealed that the learners' planned approach and clock time vision brought about a number of difficulties, especially with regard to the sequencing of tasks (Davies, 1990).

The learner with the hourly time table revealed that she had "over planned my time" and that "It has not helped my motivation levels at all, I believe it has lowered them". The learners referred to the benefits and problems that the flexibility of e-learning brought. They noted that they could learn "in my own time and in my own space" and that e-learning provided an "opportunity to access information in a boundless frame of time" but that the "flexibility of online learning presented a challenge to time management". The learners tended to focus on time management (Kordaki, 2011) as if that was the solution to their anxiety, rather than considering their approach to continuous learning like household tasks (Davies, 1990). This was surprising as the survey analysis indicated that all learners had self-reported polychronic preferences but none were what Kaufman and Lindquist (1999) describe as extreme polychrons. Therefore some structured study times (monochronic) with more simultaneous (polychronic) activities would have been expected. However, the learners indicated in their responses that they expected structured study times with some flexibility, with some complaining that "it's not like going to class once a week" and "it seems like I have more choice in how long I study for". Together the analysis of assignments, discussion boards and telephone interviews indicated learners developed three different and distinct approaches to managing their study time. These relate to monochronic and polychronic temporal preferences as defined by Kaufman *et al.* (1991):

- *Intentional approach*, identified by planned and specifically timed online learning time (often referred to as "uni-time") with clear demarcations between "paid work" and "online learning" and "home" and "online learning". Learning activities took place at a set time, one at a time (monochronically).
- *Unintentional approach*, identified by unplanned opportunistic online learning time with a blurring of boundaries between "paid work" and "online learning" and "home" and "online learning". Learning activities did not take place at a set time and were usually combined with other activities (polychronically).
- *Blended approach*, a mixture of intentional and unintentional where learners set aside specifically timed online learning time but also took advantage of opportunities as they arose, e.g., replying to discussion thread by phone or listening to online lecture on smartphone whilst commuting (both polychronic and monochronic).

Initially learners followed an intentional monochronic approach but claimed to have changed their approach to online study time since the start of the module. Some learners had used diaries or other time-management tools to schedule their online study time with a few just fitting in their online activities around other work or home activities. All reported an unexpected increase in the frequency of online

interactions as the module progressed. This was reflected in the VLE timeline activity which started off being very distinct in the first few weeks but then became more frequent with short interactions in between longer online sessions. The learners demonstrated a move from an intentional monochronic approach to a more polychronic blended or unintentional approach as they progressed on the module and gained more experience of studying in an e-learning environment. However, this brought about anxiety for the learners as none had identified themselves as extreme polychrons (Kaufman and Lindquist, 1999).

The analysis revealed that learners began to recognise that the time vision of the course was continuous and more like household time (Davies, 1990) rather than discontinuous like a traditional weekly classroom experience. For some, especially those trying to follow an intentional approach, this brought anxiety as they felt they needed to be continuously engaged with the online learning environment. As Kaufman and Lindquist (1999) suggested this move to an unstructured time brought pressure to the learners who were not strongly polychronic. They reported that they “felt shocked at the amount of time online” stating they were “logging in repeatedly to check what was going on” with “intensive study all the time” and that “It was the time of ‘information overload’”. Many also highlighted that they needed to undertake “many things at the same time” and one learner talked about how he reflected on his readings by explaining them to his young son at bath time. Others discussed how they used their mealtimes to read discussion boards or find articles for assignments as they perceived the need to undertake learning and other activities simultaneously or polychronically. All of which highlighted the move to unintentional or blended approaches as the learners recognised the continuous nature of online learning was more a different temporal world to work or previous study (Zerubavel, 1981).

Conclusions

Although this research is only a small exploratory study it has highlighted that new technologies have prompted a change in the temporal culture of learning and therefore educational institutions need to carefully consider the design and delivery of e-learning programmes. Online learning alters the temporal culture from discontinuous to continuous where tutor led learning activities are moved from a specific place and clock time to task-based activities where spatial location, timing and temporal duration become the responsibility of the learner. This has a number of implications for both the e-learner and the educational institution. If individual learners have different time preferences ranging from monochronic to polychronic and therefore different temporal approaches to e-learning, then higher education institutions need to consider how all e-learners can be supported. Learners with a polychronic time perspective and a tendency to unintentional or blended approaches to e-learning will need to be given different types of support and guidance than those with a monochronic view and a preference for a more rigid planned approach. Recommendations for the future design and delivery of online programmes and in particular for the module studied in this research have been made by the researcher. Module tutors have been asked to make explicit the time to be spent on learning activities. In particular the timing and duration for discussion board activity has been incorporated into all modules. A recommendation to include some discussion of temporal preferences during course induction has also been suggested.

The study has highlighted that despite the apparent match of polychronic time preference to polychronic temporal culture of the e-learning course most learners

appeared to have undergone a temporal culture shock during their first experience of e-learning. The move from an intentional approach or blended approach towards a more unintentional approach was forced on all the learners. Although, this temporal culture shock, prompted a shift in behaviour by the e-learners in this study it suggests the temporal aspects of e-learning does need to be considered by HEIs. The temporal culture or temporal expectations of the e-learning course needs to be made more explicit and consideration of different individual time preferences should be noted as learners will approach e-learning in different ways. Expectations of the amount of time involved for online activities must be managed within the context of an individual learner's time preference and not only presented as an amount of clock time. Furthermore, it argues that the identification of the timestyles of learners has the potential for better understanding of behaviours and may help reduce conflict and lead to more realistic expectations of behaviours of e-learners. Online learning activities need to support both continuous and discontinuous approaches to allow time for reflection and differing timestyles. Managing the change in temporal culture also needs to be considered and discussed with e-learners as well as sharing individual time preferences to facilitate harmonious group work and continued participation. A failure to recognise the different time preferences and temporal cultures in e-learning environments may result in recurring difficulties with retention.

Time is an important aspect of the online learning experience of learners and if e-learning is to be an effective method of learning, then time preferences and temporal culture must be considered in the design and delivery of online courses. The multi-dimensional nature of the learning environment is unlike a traditional classroom experience, which is uni-dimensional. This has implications for both the learner and the educational institution as a learner's temporal perception will affect the way in which they define the boundaries between learning, work and non-work and their approach to learning at a distance. Despite the literature on e-learning highlighting the benefits of temporal flexibility it provides very little analysis of individual experiences of that temporal flexibility. The research outlined in this study suggests that learners' temporal perception will affect the way in which they define the boundaries between study and other activities and their approach to learning online. Likewise, the dominant time orientation or temporal culture will determine the approach to e-learning within the online course. A failure to recognise these different time perspectives may explain some of the problems in e-learning.

Further research is needed to explore the issues raised by this pilot study to further explore the experience and temporal preferences of e-learners. The identification of the temporal preference or "timestyle" of individual learners has the potential for better understanding of behaviours and may help reduce conflict and lead to more realistic expectations of behaviours of learners. Surfacing the differences in time preferences may help learners clarify their approaches to e-learning and as a result may assist with retention. Online-learning provides a flexible solution for the training and higher education sectors, however, in order for it to be effective for all learners the temporal aspects need to be considered in all aspects of the design, delivery and evaluation of online programmes and courses.

References

- Allan, B. (2007), "Time to learn? E-learners' experiences of time in virtual learning communities", *Management Learning*, Vol. 38 No. 5, pp. 557-572.
- Barbera, E. and Clarà, M. (2012), "Time in e-learning research: a qualitative review of the empirical consideration of time in research into e-learning", *ISRIN Education*, Vol. 2012.

- Barley, S.R. (1988), "On technology, time, and social order: technologically induced change in the temporal organization of radiological work", in Dubinkas, F.A. (Ed.), *Making Time: Ethnographies of High-Technology Organizations*, Temple University Press, Philadelphia, PA, pp. 123-169.
- Benabou, C (1999), "Polychronicity and temporal dimensions", *Journal of Managerial Psychology*, Vol. 14 Nos 3/4, pp. 257-268.
- Bluedorn, A.D., Kaufman, C.J. and Lane, P.M. (1992), "How many things do you like to do at once? An introduction to monochronic and polychronic time", *The Academy of Management Executive*, Vol. 6 No. 4, pp. 17-26.
- Clandinin, D.J. and Connelly, F.M. (2000), *Narrative Inquiry: Experience and Story in Qualitative Research*, Jossey-Bass, San Francisco, CA.
- Crossley, M. (2000), *Introducing Narrative Psychology: Self, Trauma and the Construction of Meaning*, Open University Press, Buckinghamshire.
- Davies, K. (1990), *Women and Time. The Weaving of the Strands of Everyday Life*, Avebury, Aldershot.
- De Laat, M. and Lally, V. (2003), "Complexity, theory and praxis: researching collaborative learning and tutoring processes in a networked learning community", *Instructional Science*, Vol. 31 Nos 1/2, pp. 7-39.
- Giddens, A. (1992), *The Consequences of Modernity*, Polity Press, Cambridge.
- Graham, R.J. (1981), "The role of perception of time in consumer research", *Journal of Consumer Research*, Vol. 7, March, pp. 335-342.
- Hall, E.T. (1983), *The Dance of Life: The Other Dimension of Time*, Anchor Press/Doubleday, Garden City, NY.
- Hodgson, V. and Watland, P. (2004), "Researching networked management learning", *Management Learning*, Vol. 35 No. 2, pp. 99-116.
- Jacques, E. (1982), *The Form of Time*, Heinemann, London.
- JISC (2012), "W-learning pedagogy programme the joint information systems committee", available at: www.jisc.ac.uk/elearning_pedagogy.html (accessed 12 October 2012).
- Jones, C. (2004), "Quantitative and qualitative research: conflicting paradigms or perfect partners?", in Banks, S. et al. (Eds), *Networked Learning 2004*, University of Lancaster, Lancaster, pp. 106-112.
- Kaufman, C. and Lindquist, J. (1999), "Time management and polychronicity: comparisons, contrasts, and insights for the workplace", *Journal of Managerial Psychology*, Vol. 14 Nos 3/4, pp. 288-312.
- Kaufman, C.J., Lane, P.M. and Lindquist, J.D. (1991), "Exploring more than twenty-four hours a day: a preliminary investigation of polychronic time use", *Journal of Consumer Research*, Vol. 18, December, pp. 392-401.
- King, N (2004), "Using templates in the thematic analysis of text", in Cassell, C. and Symon, G. (Eds), *Essential Guide to Qualitative Methods in Organizational Research*, Sage, London.
- Kordaki, M. (2011), "Adopting the role of online teacher as a researcher and model builder of learners' needs to approach time as a context-dependent factor within networking settings", eLC Research Paper Series No. 3, Universitat Oberta de Catalunya, eLC, pp. 6-15, available at: <http://journals.uoc.edu/ojs/index.php/elcrps/article/view/n3-kordaki>.
- Lally, V. and De Laat, M. (2002), "Cracking the code: learning to collaborate and collaborating to learn in a networked environment", in Stahl, G. (Ed.), *Computer Support for Collaborative Learning*, Lawrence Erlbaum, Hillsdale, NJ, pp. 160-168.
- Lash, S. and Urry, J. (1994), *Economies of Sign and Space*, Sage, London.
- Laurillard, D. (2007), "Technology, pedagogy and education: concluding comments", *Technology, Pedagogy and Education*, Vol. 16, pp. 357-360.

-
- Lee, H. and Liebenau, J. (1999), "Time in organizational studies: towards a new research direction", *Organization Studies*, Vol. 20, pp. 1035-1058.
- Morgan, D.H.J. (1996), *Family Connections. An Introduction to Family Studies*, Polity Press, Cambridge.
- Reissman, C. (1993), *Narrative Analysis*, Sage, London.
- Riessman, C.K. (2008), *Narrative Methods for the Human Sciences*, SAGE Publications, Thousand Oaks, CA.
- Salmon, G. (2000), *E-Moderating*, Kogan Page, London.
- Servan-schreiber, J. (2000), *The Art of Time*, 2nd ed., Marlowe & Co, New York, NY.
- Thorpe, M. (2006), "The issue of time in eLearning, EDEN annual conference", available at: www.eden-online.org/contents/conferences/annual/Vienna/Keynotes_on_the_web/Thorpe.doc (accessed 12 October 2012).
- Usunier, J.U. (1991), "Business time perceptions and national cultures: a comparative survey", *Management International Review*, Vol. 31 No. 3, pp. 197-217.
- Zerubavel, E. (1981), *Hidden Rhythms. Schedules and Calendars in Social Life*, University of California Press, Berkeley, CA.

Further reading

- Harvey, D. (1990), *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*, Blackwell, Cambridge, MA.
- Holder, R.J. and McKinney, R.N. (1992), "Time in the new workplace", *Journal for Quality and Participation*, Vol. 15 No. 6, pp. 30-38.
- Karsten, L. and Leopold, J. (2003), "Time and management: the need for hora management", *Personnel Review*, Vol. 32 No. 4, pp. 405-421.

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