Symposium: Life transitions – learning and digital technologies

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Background

This symposium focuses on current research work being explored in the field of life transitions. The Centre for Technology Enhanced Learning in the Department of Educational Research at Lancaster University, UK brings together a range of findings from key institutions working in this field. Recent research in compulsory and post-compulsory education, training, employment and organisational settings provides usefully detailed examples of how digital technologies are used by individuals in specific life transitions, together with theoretical considerations of the features and factors that shape these. This symposium will present a range of perspectives on this topic, exploring ways in which digital technologies, skills and uses by learners can affect and support them at crucial points in their lives. The aim of this symposium is to develop a wider understanding in this field by considering research findings investigated in different international, national, regional and local contexts, related to learning in informal, formal and non-formal settings.

Our focal question is: how do digital technologies support life transitions?

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Life transitions, learning and digital technologies – common threads and conceptions

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Abstract
This paper opens up the symposium with a central question that all papers will consider from their different perspectives: how do digital technologies support life transitions? Before this question is tackled, a pre-requisite question needs to be considered: what are life transitions? Across the range of papers presented we will see a number of life transitions – moving from one part of the education system to another, from education to work, from one set of working practices to another, and from one workplace to another. Features of these transitions can be quite different. The nature of the distinct transitions researched will be explored in this paper, as will their relationships with digital skills and the development of digital skills to support specific needs in each distinctive transition.

Life transitions occur at different times across a lifespan, and different technologies can be used according to age. Early learners (up to 5 years of age) may use digital technologies such as Bee-Bot programmable floor robots, Roamers or Pixie Robots that are not used by older learners, but they also use devices modified specifically to accommodate access and use by this age group, such as laptop computers, mobile telephones, photocopiers, scanners and televisions (Aubrey and Dahl, 2008). Technologies accessible to users clearly affect how they can be applied to life transitions, but another factor that is involved is the different levels of technology uses according to age. These are demonstrated by evidence from Ofcom in the UK (2012). Data from other sources indicates that levels are different in other countries, however (see, for example, Eurostat, 2010).

Technologies accessible to individuals also change over time. Shifts in software happen about every eighteen months, while in major hardware facilities they occur about every five or ten years. Mega-changes (about every ten years) and major changes (about every five years) are more hardware related (Passey, 1999), while regular changes are more software related and are concerned with the introduction of new software, upgrades of existing software, and the doubling in the power of computer capacity within an eighteen month period. These changes affect the affordances and facilities that learners can use over time, and apply to their life transition needs.

Learning settings also change for individuals across a lifespan. Early learners initially experience informal, home settings. For some, from perhaps 3 years of age, and for others from about 6 years of age, they experience learning in somewhat more formal kindergarten or nursery school settings, moving to more formal settings from about 5 to 7 years of age, while from about 9 to 11 years of age many learners will experience learning within non-formal club and society settings. More informal settings can again predominate for some learners when they reach 16 years of age or more, when learning happens at home, and non-formal experiences tend to increase as learners work in more specific communities, societies or groups (Passey, 2013). In training and employment situations, non-formal settings may also arise more frequently, where groups of learners are involved in problem-solving or team endeavour approaches rather than being involved in more formal classroom settings.

This paper will introduce features and factors that affect learners in their uses of digital technologies in life transition settings. A conception of the ways learners use digital technologies within life transitions will be developed; subsequent papers will explore factors and features in more specific settings and detail.

Keywords
Life transitions, digital technologies, life transition factors, life transition features

Biography

Don Passey is Professor of Technology Enhanced Learning and Co-Director of the Centre for Technology Enhanced Learning in the Department of Educational Research at Lancaster University, UK. His research spans uses of digital technologies to support learning, for those in compulsory education, those who find it hard to learn, and those seeking employment and training.

Digital skills and motivation in young people

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Abstract
How are skills and motivations associated with digital technologies involved in supporting life transitions? Evidence about motivations and how they relate to digital skills is emerging but needs to be located in a clearer and firmer theoretical base. While reviews such as Condie (2007) seem to imply a strong positive impact of digital technologies on motivation, the research is acknowledged as being highly reliant upon poorly articulated definitions of motivation itself. Only one study covered by the review (Passey et al., 2004) was seen to be based upon an explicit definition of motivation. The relationship between digital technology use and motivational characteristics is known to be complex and two-way (Valentin et al., 2013). The distinctions between motivation for the use of digital technology and the impact of digital technology upon motivation for engagement in other activities are a clear required focus for future work. This paper will consider how the current evidence enables a level of understanding of motivation and life transitions with digital technologies, and how an extension of research in this field would support our deeper understanding.

Keywords
Digital technologies, engagement, re-engagement, motivation

Biography

Colin Rogers is Professor of Social Psychology in Education and Associate Dean for Undergraduate Studies, Faculty of Arts and Social Sciences at Lancaster, and a member of the Centres for Technology Enhanced Learning and Social Justice and Wellbeing in Education. His research has concerned the development of motivational theory, but primarily the application of theory to a range of educational concerns across the three main age-related sectors in compulsory education.

Digital skills and competencies in schools

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Abstract
How are digital skills and competencies with digital technologies developed in schools to support immediate and longer-term life transitions? Learners need digital skills and competencies if they are to use these to support their life transitions. Evidence about schools and what they are doing to develop digital skills is far from clear. There are different models of digital competences and skills which have emerged in recent years in the UK and Europe (Ferrari, 2012; Hague and Payton, 2010). It is not clear who is driving this agenda, but it includes in the UK, for example, the UK Government, the European Commission and industry, and the differing priorities for each. There is a current gap in policy in terms of the National Curriculum in England about how digital competences and skills should be developed in schools and the gap in knowledge of what is happening in schools. The Confederation for British Industry has highlighted the need for action in this respect (2012), as have the video games and video effects industries (Livingstone and Hope, 2011).

This paper will set out and compare a range of recently developed frameworks, which identify digital skills and competencies drawn from the UK, from across the wider European Union, and internationally to include Australia, Malaysia and the United States (for example, Ferrari, 2012: Hague and Payton, 2010). It will also explore who and what is driving this agenda. The models will be set within the context of recent evidence from the UK and more widely within Europe that highlights the deficits that exist in children and young people's skills and competencies in order to emphasise the need for schools to address this issue. The need for these skills and competencies in specific life transitions will be considered.

Keywords
Digital technologies, digital literacy, digital competencies, digital skills

Biography


Sue Cranmer is Lecturer in Technology Enhanced Learning at the Centre for Technology Enhanced Learning, in the Department of Educational Research at Lancaster University. Sue's research interests are broadly focused on how digital technologies enhance learning; digital inclusion and digital literacy across the lifespan at home, at school and in other settings.

Digital skills for job search and career support

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Abstract
How do digital technologies support life transitions for those moving into employment? Traditionally the model for career support has focussed on expert, professionally qualified careers advisers meeting with customers face-to-face for a one-to-one advice interview. But today's clients have more access to technology, and particularly mobile technology such as smart phones and tablets. They have access to a vastly increased amount of information. They have more opportunities to choose between and choices have become more complex. In the labour market, economic conditions mean many face increased competition for jobs. Employers are increasingly demanding digital skills. These factors have led to advice service providers like Prospects facing higher expectations from users and funders. There is pressure in the career support marketplace to adopt a different model, less narrowly focussed, less individually focussed and fundamentally one that is "digital by default". This paper will highlight how current practices in careers support are using digital technologies to aid transitions from education to employment and training.

Keywords
Digital technologies, career advice and guidance

Biography

Michael Larbalestier is Head of Research at Prospects, an employee-owned company specialising in education, employment and training. His research supports innovation in service and business development. Michael is Editor of "Interchange", a monthly magazine updating the business world on education, employment and training matters. He has particular interests in use of technology to improve learning outcomes and service efficiency.

Digital skills for employment

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Abstract
How are digital skills developed for those involved in life transitions to employment? Digital skills are developed over time. Some of these skills are developed in formal education, others in informal and non-formal education settings (Kroes, 2011; Leahy and Dolan, 2010; Livingstone, 2009). Digital skills are acquired over time through educational and social use of technology, through formal instruction, informal self-learning and learning from peers. Modern life necessitates a degree of digital skills mastery if an individual is to succeed in navigating, evaluating and creating information to secure progression to further and higher education, training and employment (Leahy and Dolan, 2011; Hague and Williamson, 2009).

Technology is changing the way people live in today's "Information Society". Work is global, personal communication is immediate and information is available at all times of the day and night. Digital skills are needed to understand and cope with these changes as a person moves through the various stages of life. As the EU has stated, "Information and communication technologies profoundly and irreversibly affect the ways of working, accessing knowledge, socialising, communicating, collaborating - and succeeding – in all areas of the professional, social, and personal life of European young people and citizens" (EU, 2013, p.15). The Digital Agenda for Europe (2010) has recognised the need for digital skills for innovation and growth in Europe. However, these skills' requirements are constantly changing: "In a competitive and rapidly changing world, workforces need to be capable of continuously adapting to shifting job requirements and organisation procedures related to new skill-intensive technologies" (CEDEFOP, 2013, p.37). Unemployment in the EU reached 10.7% by December 2012, yet the number of "digital jobs" is growing at a rate of 3% per annum (Eurostat, 2012). As technology touches all levels of society and business, e-leaders with digital skills (e-skills) are needed at every level in an organisation (Leahy and Dolan, 2013). According to Accenture (2013), "Every Business Is a Digital Business", but what skills are needed in order to obtain employment? There have been several frameworks developed to address this issue and to help employees identify skills gaps in supporting a life transition. This paper examines the different definitions of the skills, and the skills' frameworks that have been developed to help understand what is needed during major changes in a person's life.

Digital skill frameworks can allow us to view digital skills and how they relate to soft skills. These frameworks are useful to allow a person to understand, and sometimes measure, their digital skills; examples include the European Computer Driving Licence (www.ecdl.org), the Skills Framework for the Information Age (www.sfia-online.org) and, for ICT professionals, the European e-Competence Framework (http://www.ecompetences.eu/). Many training and educational organisations use the frameworks to provide training, testing and certification (Ferrari, 2012). In the UK, the Confederation for British Industry (CBI) undertakes surveys that identify digital as well as other skills required by employers (CBI, 2011). As EU Commissioner Neelie Kroes (2011) stated, "You are nowhere without digital skills in the 21st century".

Keywords

E-skills, e-business, digital literacy, e-leaders

Biography

Denise Leahy is an Associate Professor in the School of Computer Science and Statistics in Trinity College Dublin. Before moving to the academic world, she worked for many years in information systems in business. Denise was very involved in the creation of the European Computer Driving Licence (ECDL). She is Course Director of the M.Sc. in Management of Information Systems in Trinity College, is a Chartered Engineer and a Fellow of the Irish Computer Society.

Transitions in organisational learning and knowledge sharing in companies in Malaysia

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Abstract
How do digital technologies support life transitions for those in employment situations? In Malaysia, companies have shown strong interest in the adoption of new emerging digital platforms where knowledge can be shared, collaborated, crowd sourced, and reused (both internally and externally) at the corporate level. Challenges persist, however; motivational factors at the organizational, people and technological levels demand well-planned implementation strategies. Conversational intelligence from communications among participants is a wealth of new knowledge that has constantly been unable to be properly harvested by many business operators. Advanced text analytics is an option that can be integrated as a part of the knowledge synthesis tools to benefit these organizations in a much more competitive business eco-system nowadays.

Emerging technologies have and do play a key role in developing enterprise in business. Their uses demand a transition on the part of knowledge workers, however. Emerging communication technology such as Web 2.0 that supports collaborative knowledge sharing in corporate learning paradigms has changed tailor-made, expensive and high learning curve digital systems to simple but well-accepted ones for the members of virtual Communities of Practice (Smith, 2009; Yamamoto and Kanbe, 2008). These platforms revolutionise how participants share, communicate and create knowledge for a new form of learning activity in the corporate setting among younger digital users (Yang and Chen, 2008). The use of Web 2.0 to support Knowledge Sharing (KS) among knowledge workers has been investigated by many researchers (for example, Kaiser et al., 2007; Kim 2008). Studies about uses investigated through a task-technology fit model with systems such as decision support (Gu and Wang, 2009) and eLearning (Klopping and McKinney, 2004) have shown that a good fit between tasks and digital technologies is able to improve performance of knowledge workers. In the research reported here, the study of the fit between task categorization and a knowledge sharing system for enterprise knowledge sharing technologies was carried out. This study investigated an enterprise Web 2.0 system, Yammer, supporting knowledge sharing activities among knowledge workers in a case company. The study examined tasks carried out by these knowledge workers and the types of Web 2.0 functions they used in their day-to-day activities. The task categories and Web 2.0 functions used by the knowledge workers were consistent in terms of findings. An outcome of this study highlighted that intuitive Web 2.0 design, ease of use and a low learning curve were able to elicit both tacit and explicit organizational knowledge from knowledge workers. The study used a text mining technique to demonstrate how new knowledge was created among knowledge workers and how they were exchanged and shared among themselves. The study concluded that knowledge sharing activity among knowledge workers and the fit between Web 2.0 functions used and task categories were consistent and significant. Implications for life transitions in this business context are discussed.

Keywords
Knowledge sharing, Web 2.0 systems, text analytics, implementation factors

Biography

Tong-Ming Lim is the Head of Centre for Innovations and Industry Linkages and a lecturer in the Department of Information Systems. His research areas are peer-to-peer computing and organizational Web 2.0 knowledge sharing, looking at social media analytics and knowledge sharing factors.

Transitions and knowledge sharing among knowledge workers from the perspective of a task categorisation-knowledge sharing systems fit

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Abstract

How are affective skills linked to uses of digital technologies in supporting life transitions in employment situations? The roles of affective skills in developing knowledge sharing transitions in many organizations are strong elements that have positive influence on knowledge sharing, technology adoption and digital learning among technology users. Many theories have been developed: the Discrete Emotion Theory, Affect Infusion Model and Affective Events Theory, to explain the presence of affect (or emotion) in these activities, measured using PANAS, PANAS-SF, the Product Emotion Measurement instrument or Verbal Self-Report (VeSR)/Visual Self-Report (ViSR) (Desmet, 2013; Forgas, 1995; Roseman et al., 1990; Thompson, 2009; Watson, 1994; Weiss, 2005). With appropriate affect elements planted into digital technology learning and adoption strategies, one will see a much greater success rate. Negative affective elements found in one investigation (Craig et al., 2004; Djamasbi, 2007; Levin et al., 2010) can be removed to enhance organizational learning and digital technology adoption among knowledge workers in organizations. It should be noted here that affect is a term often used in consumer research, while affective states covers both emotion and feelings (Damasio, 2003) and is thus a less specific concept.

From the perspective of employee and employer, digital skills in knowledge sharing in Malaysian companies have shown strong interest in the adoption of new emerging digital platforms where knowledge can be shared, collaborated, crowd sourced, reused (both internally and externally) at the corporate level. Challenges persist, however; motivational factors at the organizational, people and technological levels demand well-planned implementation strategies. In this research, a study on the implementation of the POKM, a tailor-made knowledge management system, which is currently used in the IT Shared Services Company, was investigated. The research findings highlighted that the technological, people and organizational factors affect differently between knowledge workers at the junior, middle and senior level. Thirty participants consisting of junior, middle and senior level were interviewed. The questionnaire is adopted from the well-tested Knowledge Management Success Model (Kulkarni et al., 2007; DeLone and McLean, 2004; Nattapol et al., 2010) with additional questions on intrinsic and extrinsic rewards and perception and use of Web 2.0. The research findings highlighted that the quality of POKM is stable, easy to use and organization of the content is rated as ‘good’.

However, POKM has poor response time and search capability. The content is found to be difficult to locate in the POKM but most participants agree that knowledge stored in the POKM is helpful, can be accessed anytime and anywhere and useful for their day-to-day job. As for the user interface, POKM is not very pleasant to use with a weak set of functions and features. For user satisfaction towards POKM, it is shown that users are not satisfied with the efficiency and effectiveness of the systems. However, employees generally are satisfied with the ease of access, download and reuse of knowledge contained in POKM. In terms of perceived POKM benefits, users agree that POKM is the enabler for acquiring new knowledge and innovative ideas, managing and storing knowledge, and accomplishing tasks more efficiently. Lastly, knowledge users agree that POKM functions enable knowledge networking, sharing, and creation in the organization.

Keywords
Knowledge sharing systems, task categorization, role of affect, performance impact

Biography

Angela Lee Siew Hoong is a lecturer and she is the Business Intelligence Coordinator in the Department of Information Systems. Her research areas focus on knowledge sharing using Web 2.0 technology and the impact of the role of affect on the knowledge workers from the aspects of job performance and technology adoption.

Digital skills for those in transition – where next

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Abstract
How do digital technologies support life transitions? This paper will provide an overview of findings presented within the previous papers, and highlight areas for future research. In this context, it is clear that different learning landscapes allow for different learning approaches and enable the uses of more specific digital technologies. In learning contexts, a “formal curriculum offers a core range of subject needs; the informal curriculum provides opportunities for these to be developed in another context and with the support or involvement of parents, family or friends; and the non- formal curriculum provides opportunities for young people to work in teams and groups on authentic problems and products” (Passey, 2013, pp. 200-201). Learning in formal classrooms often involves uses of topic-specific software, curriculum-wide learner-centred software, curriculum-wide teacher-centred software and online resources supporting curriculum-wide needs, while learning in informal home settings often involves uses of online resources supporting revision needs, online learner support, and software involving and supporting parents, while in non-formal groups learning involves uses of online learner support and project and after-school club activities involving digital technologies. There are implications for developing effective uses in the future that relate to supporting learners in different life transitions. From the results presented in previous papers, a comparison of a number of life transitions, and the importance of uses of digital technologies and associated digital and soft skills in different learning settings will be offered.

From the evidence presented in this symposium, evidence related to a number of key questions will be drawn together:

- How and under what conditions do digital technologies and skills enable a stabilising or positive impact upon life transitions?
- What associated skills are concerned in developing social and cultural capital, integrated or developed alongside these digital skills?
- Do digital skills enable individuals to survive situations by empowering and enabling of change rather than just responding to it?
- What is the potential of digital technologies to support life transitions, in relation to recommendations about what needs to happen next?

To take our understanding further, and to develop appropriate practices to support lifelong learners in the future, there is a clear need to explore research questions in the context of life transitions and the roles that digital and associated soft skills play in: employment; training; and school settings. Within these settings there is a need to explore different life transitions, which might build further from: an employment transition that aims to strengthen business effectiveness and efficiency through knowledge sharing developments; training transitions concerned with major employment shifts (from ex-armed forces to civilian employment); transitions concerned with major social shifts (from non-employment to employment); or school to school transitions (across the key primary to secondary phase). Our understanding in these fields from local, regional, national and international perspectives will be considered in the context of emerging research.

Keywords

Digital technologies, learning landscapes, informal, formal and non-formal learning

Biography

Don Passey is Professor of Technology Enhanced Learning and Co-Director of the Centre for Technology Enhanced Learning in the Department of Educational Research at Lancaster University. His research spans uses of digital technologies to support learning, for those in compulsory education, those who find it hard to learn, and those seeking employment and training.

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