The Inter-Life project: researching the potential of art, design and virtual worlds as a vehicle for assisting young people with key life changes and transitions

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The Inter-Life project: researching the potential of art, design and virtual worlds as a vehicle for assisting young people with key life changes and transitions

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Careers work in the twenty-first century faces a key challenge in terms of digital technologies: to evaluate their potential for careers work in challenging settings. Given the rapidity of developments, technologies require evaluation in research innovations and naturalistic settings. Virtual worlds offer potential for careers and guidance work, and the therapeutic domain. To illustrate this, we present examples in which young people explore their feelings and ideas, plans and difficulties, while preparing for film-making. During this they develop important life transition skills. We argue that the power of virtual worlds – to support emotional and cognitive engagement – could be utilised in practice settings. We conclude that they are serious candidates as digital tools in the careers and guidance domain.

Keywords: virtual worlds; art and design education; creativity; research communities; transition skills development; careers guidance work; practitioners

We need intermediate runaway objects which are less spectacular and more inviting... bringing together the big and the small, the impossible and the possible, the future-oriented activity level vision and the here and now consequential action. (Engeström, 2009, p. 305 and p. 328)

Introduction

One of the key challenges for careers work in the twenty-first century will be to evaluate existing, emerging and potential uses of digital technologies to deliver enhanced careers work practice in a multiplicity of challenging economic and social settings. There is now a bewildering array of digital platforms and tools available. These technologies develop with a rapidity that makes systematic evaluation difficult even for researchers working with them in a sustained way. For many careers practitioners it may feel impossible to undertake such evaluations, let alone implement the technologies in a pilot setting where there may be conflicting professional and research pressures, as well as resourcing issues for undertaking such work.

'Virtual worlds' are one of these rapidly changing internet-based technologies – one that shows very considerable promise for work in the careers guidance field. The aim of this article is to examine this promise through an evaluative and critical account of the 'Inter-Life' virtual worlds project that focused on supporting the development of life skills in young people (13–17+).

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The aim of the Inter-Life project was to investigate the use of virtual worlds, and creative practices in art and design, to support transition skills development for young people to enhance their management of important life transitions. Virtual worlds are '... persistent, avatar-based social spaces that provide players or participants with the ability to engage in long-term, coordinated conjoined action' (Thomas & Brown, 2009, p. 37). They offer the possibility of realistic and sustained 'immersive' interactive environments that can be used in a variety of formal and informal settings. They allow new forms of collaborative interaction that have already been glimpsed through online gaming, and open up a wide array of new learning and guidance opportunities that seemed unfeasible only 17 years ago (Moore, 1995).

User-controlled 'avatars' can work together in a very wide range of 'realistic' activities where the 'users' can be young people and their advisers/mentors/supervisors who may be geographically distributed. However, there are as yet very few reports in the literature of the realisation of this potential in the careers and guidance field. In this article we illustrate findings from the Economic and Social Research Council/Engineering and Physical Sciences Research Council-funded 'Inter-Life' project (Teaching and Learning Research Programme/Technology Enhanced Learning phase, 2008–2011; see http://www.tlrp.org/tel/) focusing on how young people in Trinidad used Inter-Life creatively – individually and collectively – to assist in understanding and navigating their key life transitions. We provide an example from two of over 40 participant-led workshop sessions that took place in the Trinidad Virtual Research Community (TVRC) during the project. However, the pupil interviews quoted in this article took place after the whole workshop series had been completed. At the present time the project continues to analyse and assess the many activities in which young people from both the UK and Trinidad were engaged during the workshops. Further details will be available elsewhere (Lally & Sclater, 2012). The Inter-Life project created two virtual island environments in consultation with user participants: Inter-Life Island 1 (ILI-1) for 18+young people to work on school-to-university and within-university transitions, and Inter-Life Island 2 (ILI-2) where pre-18s (13–17+) can work on creative activities and skills development related to the challenges of a range of real world transitions. Both islands are extensively modified environments based on Second Life (Baker, Wentz, & Woods, 2009; Boulos, Hetherington, & Wheeler, 2007; Wankel & Kingsley, 2009).

Virtual world communities, transition and activity theory

All young people have to face and negotiate complex life transitions, both in their personal lives and in their educational lives. Transitions can involve emotional, cognitive and social change and development, as well as coping with new expectations and requirements of educational and work placements. During transitions young people need to develop a wide range of skills in order to understand and manage these complex processes. Many of the contexts with which young people are now faced are so complex that the cognitive and emotional burden requires additional resources and support.

It has been argued by Ahier and Moore (1999) and Philip (2010) that young people face radically 'new' forms of transition, and that this set of processes is more complex and diverse than in the past (Ahier & Moore, 1999) with 'extended dependency' during the period of transition from youth to adult. This results in

increased uncertainties and risks for young people in the task of constructing their adult identities. Ahier and Moore argue that in order to understand this process some new theorising and refocusing are required. Furlong and Cartmel (1997) and Beck (1992) have argued that this uncertainty has developed as the links between family, school and work have weakened, alongside similar weakening in 'traditional' forms of authority. The traditional structures of transition have also become obscured within a marketised education offering the 'illusion' of individual choice. These factors can result in a paradoxical process: increasing of 'individualism' in the public sphere, and simultaneously increased reliance upon family resources in the private sphere. Underneath this the processes of transition may remain highly structured, continuing to reproduce class-determined, gendered and unequal life chances. Ahier and Moore suggest, however, that this focus on the family in its traditional forms as the unit of analysis does not take sufficient account of the complex forms of experiential, cultural and economic assets that now need to be managed in the process of transition. They argue that the need to facilitate transitions within a network of 'others' requires a re-theorising of transitions within a broader context, not only within the immediate family and its associated processes of social reproduction. Arising from this analysis, the Inter-Life project aimed to develop both a 'virtual research community' and a suite of additional 'transition tools' to assist young people, individually and in groups, to develop skills to support them during life transitions. The virtual community was designed to provide a safe, flexible environment for risk taking, conflict resolution and the development of other life skills. Ethical issues, and related safety matters relating to immersive technology-enhanced learning, were examined by the authors in an ESRC monograph (Lally et al., 2010). Ethical approval was obtained from the University of Glasgow, and all participants in this research were volunteers.

The Inter-Life 'transition tools' were conceived and implemented by the Inter-Life project team as a means of gathering together a generic set of ways of working and engaging, of exploring, and of enabling young people to develop skills that could support their understanding and processing of transitions in multiple contexts. These tools were then used in Trinidad and UK locations. The tools draw heavily upon creative practices in art and design, and team experience of supervision in educational and therapeutic contexts, of the development of many text-based online communities, and of the active use of video in education (for example, for reflective recall). The following summary outlines the conceptual basis of these tools and how they were used in Trinidad:

i. Virtual research communities: this tool is based upon the concept of young people and their mentors, in distributed locations, using technologies to work collaboratively in order to undertake a research investigation. A key element of this tool is that the research should be led by the young people, and focus on a challenging event or situation. The analysis of the evidence should focus on the implications for the improvement of practice as it affects the young people involved (Burton, Smith, & Woods, 2010; Kellett, 2005, 2009).

ii. Creative activities: this tool is based upon the concept of using a range of creative activities to give young people a vehicle for the expression of their feelings, ideas and emotions. It is intended that, in this way, the expression can be uniquely theirs, and can be shared with others within and without the group. In harnessing a wide range of non-verbal modes of expression, this tool

helps to make these expressions more inclusive. In the workshop featured in this article, young people were able to use the interactive board system in ILI-2 to create exhibitions of their own photography, make commentaries on these, and share ideas arising from them (see Figures 1 and 2). In the Trinidad group the home environment/personal setting was used as a context for developing photographic work for a collaborative exhibition (Sclater, 2007, 2011).

iii. Digital image documentaries: the central idea of this tool was to support young people in reflecting upon and then telling a story about aspects of their lives, either personal or shared, using film. The tool was also intended to act as a vehicle for thinking about solutions to problems, and as a way of communicating this to adults and mentors in their lives. Young people in the Trinidad workshops engaged in making short (two to five minutes) critical accounts of transition contexts, problems, issues and solutions, as 'documentaries' that were then used as learning objects in Inter-Life. The films were shared and extensively discussed among all participants.

iv. Supervision/mentorship tools: the concept was intended to be used as a way of sharing the expertise of group members (young people and tutors) without allowing anyone (adult/young person/mentor/teacher) to dominate the group, its thinking or working. In this way, any member of the group could use a supervision approach to reflectively guide participants through a significant event or technique (for example, digital film editing), highlighting the learning processes and outcomes (Lally & Scaife, 1995; Scaife, 2001).

Not all of these tools were implemented fully in the Trinidad community. They were used flexibly as shared values and activities emerged in the group. In the workshops presented in this article the virtual research community became the basis of a range of creative activities. The other tools were used in a subsidiary way in the workshop discussed here. Supervision tools (iv) were used to support skills development, particularly where complex tasks such as film-making (see iii above) were being undertaken.

One of the key issues we faced in the Inter-Life project was to take account of the complexities in the process of transition and re-theorise in a broader context than the family. We decided to use Activity Theory (AT) because we think it offers the possibility of systematically integrating the key components of learning in virtual worlds: tool development and mediation; internalisation of social knowledge; and transformations of the structures of human activity as it arises from learning and development (Kaptelinin & Nardi, 2006). In particular, third generation AT (Engeström, 2001) recognises and attempts to address the challenges of understanding dialogue and the multiple perspectives of participants. It also seeks to understand the complexity of interacting activity systems as those engaged in joint projects seek to develop their goals. The use of this perspective represents an attempt to 're-theorise' transition within a broader context than the immediate family.

Returning to ILI-2, how does Activity Theory map on to its key elements? AT is concerned with 'objects' and the activities that are driven by them (Engeström, 2009). Objects can be concerns, foci of attention, or motivation to achieve a goal. Such objects can change in nature – what Engeström has called 'benign' runaway objects – and transcend boundaries, yield intermediate products and be visible, accessible and cumulative. They allow participants to return time and again, and engage in exchange and feedback with one another (Engeström, 2009). AT, we are arguing

here, provides a coherent theoretical framework that connects the 'aims' of our young people, co-constructed through negotiation with the research team, with the spaces we are calling 'virtual communities' on ILI-2. The 'boundaries' in these spaces are between the school 'activity system' and the home 'activity system'. The unit of analysis, then, is not one or other, or both, of these activity systems but rather the boundary space between them where the young people are attempting to create artefacts (films, photographs and discussions in the virtual community) that explore their concerns and address their sense of justice. Roth (2008) argues that emotions and identity are an integral part of this analysis, and understanding action level emotion ('actions' are the sub-activity processes that constitute an activity) may help with understanding activity level motives. Third generation AT expands the analysis in two directions, tackling both multiple activity systems and their partially shared objects. It also tackles subjectivity, experiencing, personal sense, embodiment and moral commitment. The challenge, Engeström (2009) points out, is to integrate analyses of multiple activity systems and their partially shared objects (films, photographs, and discussions in the virtual community, in this case). Engeström (2009) depicts internet-based social production as a place where the merging of partially shared objects can occur, feeding on more bounded activity systems, yet in some ways beyond them.

ILI-2 is a place of 'mediation' – it is a space in which 'boundary activities' can occur, but it is also a place that opens up new possibilities (Engeström, 2009), expanding the horizons of what might be possible. We argue that creativity arising from film-making and photography, and the shared emotional explorations that resulted, can be enabled by a novel space where some of the boundaries of traditional spaces are removed. Thinking can be opened up. A zone of proximal development – as ILI-2 might also be described – is a place for exploration rather than achievement. It is not an empty space but has dominant ways of being derived from home and school. However, because it is a boundary space, it more easily permits the possibility of change, creativity and growth. This thinking is exemplified in an excerpt from an interview at the start of the project, when one of the Inter-Life team members commented:

> I think a lot of educational spaces that exist are deeply constrained by social, cultural and political forces that mostly don't want them to be exploratory spaces and have very restricted views of knowledge creation...and don't want to accommodate a mixing of the social, emotional, and cognitive, whereas I think a lot of our learning is a mixture of all three of those...and so as an educator I was attracted to Second Life as a space where that possibility exists...(Excerpt from Inter-Life team interviews: 1)

Inter-Life, careers and guidance practice and the potential of digital technologies

It is increasingly evident that digital technologies have a role to play in the challenge of reframing the professional identities of careers and guidance practitioners. The development of these technologies in this context is an interdisciplinary endeavour because it develops at the interface between educators, computer scientists, professionals and practitioners. Digital technologies open up beguiling opportunities to reframe policy and research in the careers guidance field. In the therapeutic domain, a recent review by Goss and Anthony (2009) focusing on the use of web-based technologies in therapeutic counselling makes several important observations that have relevance to the careers and guidance field. They commence by observing

that it is now almost a truism among professionals that meaningful emotional interactions can take place online. However, they also point out that the rapidity of technological innovation leads to an understandable caution, and even resistance to these technologies among some of these professionals. Yet it is also the case that client-led demand for online services has driven many new developments, implying that this will be an increasing feature of both the therapeutic and careers guidance fields. For students and young people the internet and its tools are now a 'matter of course' means of communication, and this also fuels demand for online services. Goss and Anthony also argue that these technologies have the potential to 'extend the reach of practice'. This will draw in more clients, some of whom will want to work entirely online, and some in a blended way with face-to-face contact. These developments have led to concerns for safety and, hence, to codes for good ethical practice and training (Goss & Anthony, 2009).

In the same symposium, Simpson (2009) reviews the role of video conferencing, noting positive outcomes from the use of video, with some clients preferring this mode of working to face-to-face contact. She also observes that in the light of these findings it would be unethical to prevent wider use of the video medium. Moving on to the field of virtual worlds (in which Inter-Life is built), Banos et al. (2009) report one of the first multi-purpose virtual worlds to be developed in the counselling context. Known as EMMA's World, research with this system supports the assertion that significant emotional change can occur, by supporting general emotional states in a safe and unthreatening space, so that participants can work with these states to bring about personal change.

Virtual developments that are closer to the careers guidance domain include the 'Virtual Counseling Center' (VCC; http://vcc.asu.edu) at Arizona State University (ASU) (Horan, 2010). This highly innovative project is currently the most advanced in the field, developing a comprehensive range of state-of-the-art resources for careers assessment, development and counselling. It is entirely free, and administered over the internet. It also includes an incipient set of life skills resources. A recent study focused on careers counselling in higher education, using Second Life, concluded that this virtual world system (Yu, Chang, Hsieh, & Chen, 2010) has potential, although it was not favoured by participants in the study. There are also emerging reports of virtual work experience worlds that reveal much greater potential in work with teenagers (Dugosija, Efe, Hackenbracht, Vaegs, & Glukhova, 2008; Milne, Horner, Benjamin, & Monteith, 2008). The work of Milne et al. (2008), for example, describes UK-based research sponsored by a 'Virtual Work Experience Board' that was originated by Highlands and Islands Careers Scotland. Its aim was to provide virtual work experience for teenagers in geographically remote areas of Scotland using 3D virtual worlds. The greatest potential of this kind of provision may be where the availability and variety of 'real' work experience are severely constrained. However, as expertise and technologies advance, it could become a very significant opportunity for young people to gain more experience than a single two-week placement could provide. This could include international experience. The pilot work was developed by a multi-partner consortium that included the Scottish government and the Digital Design Studio at Glasgow School of Art. The partners provided expertise in web technologies and 3D content, as well as educational and careers expertise and technology development experience. In the initial phase six virtual worlds were created, representing a range of work experience options including transport, customer call centres, health service (accident and emergency)

and retail. The realistic 'gaming quality' environments were supplemented by video interviews of real workers talking about their jobs. These could be accessed through the virtual worlds. Job interview experiences in virtual world spaces are also being developed (Chang, Lee, Chen, & Yu, 2012), but as yet there are no references in the literature to this application in careers work with teenagers. In conclusion, while there is now a promising range of emergent virtual developments in both the therapeutic and guidance domains (especially EMMA's World, VCC and the Virtual Work Experience Board), few of these have attempted to research the nature of activity and skills development in young people through sustained interactions in 'realistic' activities.

Creative practices in virtual worlds

Virtual worlds such as Second Life offer many possibilities for creative approaches to learning, the development of creative practice and emotional literacy (Doyle, 2008; Gaimster, 2008). Early innovators in the field of creative expression in virtual worlds (Moser & MacLeod, 1996) provided the intellectual basis and impetus for the development of a range of artistic practices that were previously 'impossible' in 'real life'. There is now a burgeoning range of artistic activity (Doyle, 2010; Magruder, 2011) occurring in these virtual spaces, including music and other performance arts, experimental work on sound and immersive experience, and installations that metamorphose as the participants' avatars move through them. For example, Doyle's 'Kritical Works in SL' project (Doyle, 2008) argues that the Second Life space itself is performative for both the artist and for the audience. Using Kriti Island, a research island she created for the University of Wolverhampton on the Second Life grid, Doyle interrogates the art works, Ping Space, Remembrance and Remains, and the Autonomical Grid produced by the virtual artists Angrybeth Shortbread, Chingaling Bling and Kisa Naumova. She analyses novel approaches to using the space of Second Life for creative practice. These move beyond Second Life as a purely presentational space, into aspects of performance in which the audience are part of the work itself.

McNiff (2011) holds a view of art-based research which is not dissimilar to our own thinking as a research team: that the use of artistic expressions by researchers can be viewed as a 'form of knowing', a form of personal enquiry that can generate knowledge in and through itself independent of language. The Trinidad Virtual Research Community (TVRC) explored this potential on ILI-2 where we used interactive boards, photography, montage based upon photographic work and documentary film-making to act as a vehicle for the development of meaning making and self-expression (Sclater, 2007). The artefacts developed and created in Second Life were reflective of the efforts to apply artistic expressions to further personal insights and to ultimately effect change.

In this study the young people together with the research team constituted a research community in which each person was a researcher. McNiff (2011) argues for an emphasis to be placed on the body and its senses alongside the use of film, video and photography as a means to develop source material and to systematically document research outcomes. Such an approach can be distinguished from a method of inquiry that in much arts-based research attempts to view artefacts created by subjects (of the study) as data that are later interpreted using discursive or interpretive methods employed by the research team. Young people in this study

were able to express themselves through this creativity, share their worlds, enter the worlds of others and discuss these experiences. These became part of the collective history of the shared space in which they were engaged together. Making digital documentary films was also used by TVRC as a vehicle for attempting to examine 'real life for teenagers in Trinidad'. This kind of work has previously been undertaken in real world informal spaces with young people (Lin, Grauer, & Castro, 2011) but not in a virtual world.

Inter-Life research questions

The original research questions of Inter-Life arose from a need to understand how individuals and groups can work and develop in virtual communities supported by a virtual world. In addition, Activity Theory helps to shape the focus of these questions around tools, resources, goals and personal agency. The synthesis of these two influences also shaped the coding schema used for content analysis (see Appendix). The questions were:

(1) Authenticity, identity and the context: how do participants experience the context of Inter-Life?
(2) How does this change during their activities in the workshops?
(3) How do the opportunities to 'personalise' their involvement interact with these experiences, to effect engagement?
(4) How do Inter-Life experiences contribute to identity formation and self-image?
(5) Development of skills and resources (cultural, experiential, systems/economic): what skills and resources to manage transitions are developed through individual and group engagement in Inter-Life scenarios and 'Tools of Transition'?
(6) Transfer from the context: how do skills and resources acquired in Inter-Life transfer into real-life contexts?
(7) How are risk, conflict and goal setting handled in the virtual world and how does virtual behaviour map to real behaviour?
(8) Are individual and group personas consistent across the real and virtual worlds?

These questions form the basis of the narrative in the example from workshop 16 presented below. They have also been identified elsewhere in the literature as central questions for the wider field of virtual worlds research (Dede, 2009).

Methods and methodology

The Inter-Life project methodology is based upon the pioneering work of Lally and associates. This work attempted to develop theoretical perspectives that would be sufficiently powerful to account for the key elements of online learning and teaching in higher education (De Laat & Lally, 2003; Lally & De Laat, 2003). Activity Theory was identified as a promising candidate, based upon an approach developed by Halverson (2002), and multi-method analytical techniques, including content analysis, social network analysis and critical event recall, were, for the first time, applied together to the analysis of text-based communication interactions, cognitive

and meta-cognitive activities, and social network patterns of learning and teaching in online environments (De Laat, Lally, & Lipponen, 2006; De Laat, Lally, Lipponen, & Simons, 2007a, 2007b). In this article a similar type of content analysis was applied to the real-time, text-based interactions of participants. The content analysis reveals the ways in which the young people on Inter-Life Island are constructing new skills, developing new insights and applying these to the real world. This analysis is combined with quotes from reflective interviews. Together, these data enable us to explore the development of identity among participants as it emerges through the creative and research activities. The coding schema (see Appendix), developed from AT and the research questions, was used by three researchers to code utterances from ILI-2 workshops. The unit of analysis was the entire utterance, and this was coded using only one schema coding per utterance. Once a code was applied, for example coding an utterance that linked ILI-2 activity to the 'real world' as 'MRW', then the same code was applied to subsequent (follow-on) utterances until a new code could be applied. This coding process required coder training. Two coders would code the same workshop, and then participate in a 'coding conversation' to examine differences in coding values. A third coder moderated these conversations and differences. Table 1 shows the number of utterances coded for each category, for all participants for the workshop featured in this article, taken from the TVRC. This group of young people worked with the Inter-Life project during 2010–2011. The group consisted of young people in the 15–17-year-old age group, and all were volunteers who undertook participation in the project during their own time. All the participants are referred to by their avatar names.

What happens in virtual world activity?

Each workshop was conducted on Inter-Life Island 2 (ILI-2), the private island in Second Life that was available only to the young people, staff and researchers of this group. The TVRC met on over 40 occasions. This group was invited through informal contacts with their school and staff. The workshops sampled in this article (Introductory Workshop [1], and 'Life, Art, Poetry' [16]) were the first and 16th in the first series of 20 workshops that took place during February to July of 2011. The young people and their teacher had been invited to join the project on a visit of one of the research team to Trinidad. Ten students expressed an initial interest in participation. There was no formal induction to engage the young people in the process, but informal meetings were held on ILI-2 in the weeks preceding the workshop series to help the young people to experience the possibilities of the island. Each workshop lasted approximately one hour, and was conducted on ILI-2 with text-based communication. The tutors (researchers in the UK and teacher in Trinidad) also communicated via Skype during these sessions, in order to help to manage the workshops as they unfolded. Planning sessions took place before each workshop, usually in ILI-2. The chat log for each workshop was between 400 and 500 lines. The workshops were described to the young people as a place in which they could choose a topic of concern to them in their lives, and then investigate it using film and photography. The 'object' of the workshop series, then, was to develop a 'research commission', and investigate it.

The first formal workshop of the series had the themes 'Claiming the Space', 'Freedom and Irrational Rules' and 'Working Together'. It featured two of the three principal student research community members throughout the series: Marshall

Table 1. Coded utterance values for Trinidad Virtual Research Community Workshop 16 (31 May 2011).

Tutors *Code*	SC	CASC	APC	GPI	FSP	FBS	ANRS	TRCN	GNP-R	DL	MRW	Totals
Avatar												
Jianhua Galaxy	94	17	15	16	0	0	5	12	9	0	38	**206**
Cobalt Dertzer	35	2	12	2	0	0	6	2	4	0	10	**73**
Totals	129	19	27	18	0	0	11	14	13	0	48	**279**
Young People *Code*	SC	CASC	APC	GPI	FSP	FBS	ANRS	TRCN	GNP-R	DL	MRW	Totals
Avatar												
Anabel Ashland	64	13	0	3	0	0	2	4	1	0	0	**87**
Ralph Navarita	26	3	1	2	0	0	3	4	1	0	4	**44**
Shelly Coy	36	15	21	11	0	0	6	3	8	0	12	**112**
Philip Kroll	20	1	6	1	0	0	2	1	0	0	4	**35**
Totals	146	32	28	17	0	0	13	12	10	0	20	**278**
Tutor Total	129	19	27	18	0	0	11	14	13	0	48	**279**
Young People Total	146	32	28	17	0	0	13	12	10	0	20	**278**
	SC	CASC	APC	GPI	FSP	FBS	ANRS	TRCN	GNP-R	DL	MRW	
YP Male Total	46	4	7	3	0	0	5	5	1	0	8	**79**
YP Female Total	100	28	21	14	0	0	8	7	9	0	12	**199**
Tutor Male Total	129	19	27	18	0	0	11	14	13	0	48	**279**
Tutor Female Total	0	0	0	0	0	0	0	0	0	0	0	**0**
Grand Total	275	51	55	35	0	0	24	26	23	0	68	**557**

Figure 1. The agenda for an early planning meeting on an interactive board in the 'Beach' gathering arena, prior to the commencement of the workshops.

Vectoscope and Ralph Navarita. In this first 'formal' meeting of the group, three of the major themes that would come to dominate the space surfaced very quickly. The early part of the conversation was mainly concerned with introductions, making arrangements for the workshop series and deciding exactly what to do. The tutor team had agreed some initial 'ground rules' in a previous planning meeting, and these were used to stimulate a discussion about 'a code of conduct' for the group (see Figure 1 on one of the interactive boards situated in the gathering arena, with a list of main points from this meeting, including 'suggestions and formulation of code of conduct').

While there was social discussion among tutors about which young people might appear, there was also a parallel discussion about facilitating the concerns of the young people as a basis for film-making activities. In the first formal workshop, one of the two young people who appeared that evening – Marshall Vectoscope – expressed an interest in constructing buildings, having already toured the island and investigated the cars, temples and other structures (constructed during previous activities). The discussion explored how we might use the expertise of a member of another group who had originally constructed these items to assist in this new building process. It was clear that Marshall wanted to 'claim the space', and make some new buildings and transport artefacts (cars) of his own.

The direction of this discussion was changed when one of the tutors, Grover Warden, asked: 'Is there an issue at school that is a cause for concern these days?'
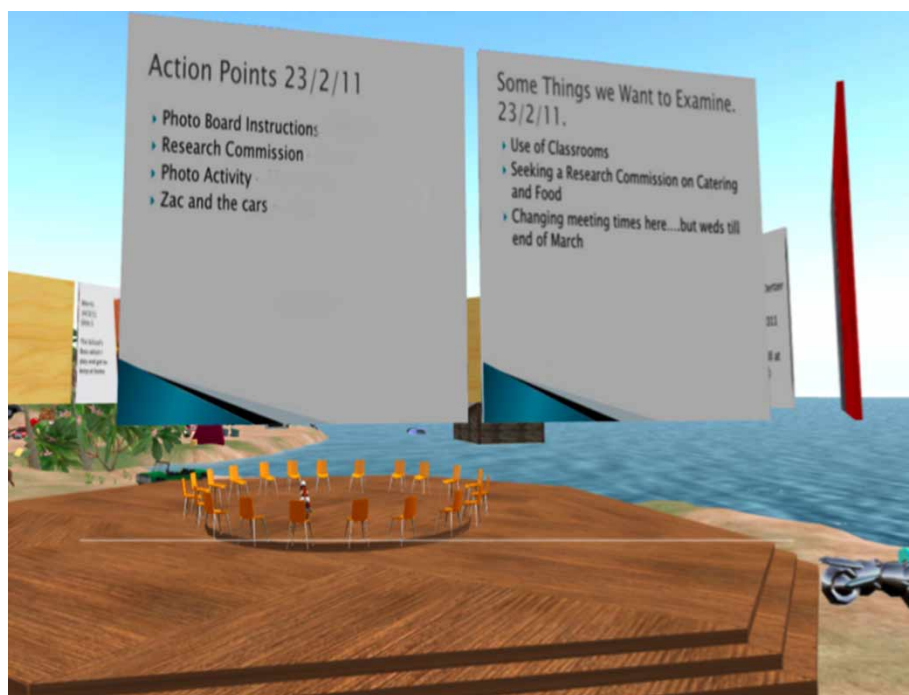
Figure 2. Tutor and student summary from Workshop 2 on an interactive board in the 'Beach' gathering arena.

Marshall Vectoscope replied: 'Well the only things that people in our school complain about . . . are rules we think are irrational'. This led to an extended discussion between the tutors and Marshall about rule conflicts arising out of use of classrooms, and being allowed to go off site at lunchtimes to purchase food. Another of the tutors, Cobalt Dertzer, said: 'So it's an issue of freedom?' Grover Warden added: 'We must accept the possibility that research might not get you what you seek but it would be a great start on the road'. This conflict between the school activity system and personal activity systems led to a creative discussion about how a commission to investigate the issue might be set up.

As this workshop contained four members of the tutor team (three based in the UK and one in Trinidad) and only two young people (both based in Trinidad) (tutor utterances: 90%; young person [YP] utterances: 10%) there was considerable discussion about timetabling of meetings. This issue of time was a constant aspect of discussion, and fitting in the research community around home and school life has proven to be a tension in itself (Figure 2 shows tutor and YP notes from this meeting, on an interactive board).

Ralph Navarita (YP): right well i decided to do a slide on some of the issues Grover sent me that i have observed firsthand
Marshall Vectoscope (YP): i made a slide using some issues people may have in school
Grover Warden (T): brilliant work; we have waited a long time to see these boards being used in this way
Cobalt Dertzer (T): so have you guys raised these issues before?
Jianhua Galaxy (T): what would we like to do with these issues?

> Indire Emerald (T): i will talk to some of the girls at school again and see if I can get any more students involved. This has been great – a real step forward for us as a group. What might we plan? We are enough to continue addressing issues on the boards, hopefully with more. But we are making progress with those who are here.
> Cobalt Dertzer (T): Ralph and Marshall – if any of your friends are interested in joining we're always looking for people!
> (Trinidad Workshop 1, 23 February 2011, excerpt 1)

The 'Life, Art, Poetry' workshop (see excerpts below) was the 16th in the first series. By this point the TVRC had become a dynamic and fluid group. Contributions from the two tutors (both based in the UK) (n = 278) were matched in number by the four young people (all based in Trinidad) (n = 279) who attended (see Table 1).

As in other workshops in the series, social comments and comments relating to general maintenance of the group ([SC] – see Appendix for explanation of codes) were the largest proportion of utterances. For the young people 52% of utterances were social; for tutors it was slightly lower (46%). These were the kinds of introductory comments one would find in many face-to-face meetings with young people in informal settings. However, here the tutors and young participants were several thousand miles apart.

> Annabel Ashland (YP): Jianhua galaxy . . . where you from?
> Annabel Ashland (YP): lol
> Jianhua Galaxy (T): From the UK
> Jianhua Galaxy (T): I am part of the Inter-Life Team
> Annabel Ashland (YP): oh really where about
> Jianhua Galaxy (T): with Cobalt
> Jianhua Galaxy (T): and Grover and Indire
> Annabel Ashland (YP): where y'all from?
> Annabel Ashland (YP): Indire is our trini teacher . . .:/
> Jianhua Galaxy (T): Well shall we introduce ourselves to you?
> Annabel Ashland (YP): ahaha yeah . . .
> (Trinidad Workshop 16, 31 May 2011, excerpt 1)

In the earlier workshops much of the conversation was dominated by problem solving [FSP], as there were many arrangements and plans, including timetabling and use of virtual world facilities. In workshop 16 this had dropped to zero. The young people were now much more engaged in creative discussions [CASC] (12%), many of which they initiated. These discussions also involved the tutor team, but they were participating at a lower level (7%).

In this workshop the young people talked about endangered species, and this arose from a conversation about the avatars we were using to represent ourselves on ILI-2. The avatars can be human, or animal, or machine (e.g. robots), and the fox avatar used by a member of the team had partly prompted this conversation. Later, Ralph Navarita (YP) had changed his avatar into a stegosaurus/dragon, and this led to the 'endangered species' discussion. The avatar facility, which allows participants to change their visual identity, had powerfully supported a conversation in which the young people expressed considerable anger and other emotions about loss of species, about wanting to see and also protect these animals, and make films about them. They were gaining new perspectives [GNP-R] and personal insights [GPI] into their own feelings about these losses. In this workshop young people's utterances that showed evidence of new perspectives were 4% [GNP-R], almost double the value for earlier workshops. For the tutors the [GNP-R] it was 5%. For the young people the

sections of conversation in which new perspectives arose and were discussed sometimes led to the desire to acquire new and relevant skills [ANRS]:

> Shelly Coy (YP): has anyone been to japan?
> Jianhua Galaxy (T): not me
> Jianhua Galaxy (T): but want to go
> Cobalt Dertzer (T): no i might be going next year but not sure
> Shelly Coy (YP): i want to as well
> Cobalt Dertzer (T): v. expensive
> Jianhua Galaxy (T): it's had a tough time recently
> Shelly Coy (YP): sooo badly i wana go
> Shelly Coy (YP): Like i feel bad and i wana help any way i can
> Jianhua Galaxy (T): yes
> Jianhua Galaxy (T): well it's taught the world a lesson about nuclear power
> Ralph Navarita (YP): definitely
> Shelly Coy (YP): true
> Cobalt Dertzer (T): if you like japan you could go teach English there when you're older
> Cobalt Dertzer (T): I've a few friends doing that now
> Shelly Coy (YP): currently I'm trying to learn Japanese
> Jianhua Galaxy (T): My daughter would be interested to hear that
> Jianhua Galaxy (T): she likes languages too
> Shelly Coy (YP): I've want to learn Japanese and Russian
> (Trinidad Workshop 16, 31 May 2011, excerpt 2)

New and relevant skills [ANRS] discussions had increased from very low levels when the community was establishing itself to 5% for young people in this workshop (see excerpt 2). This excerpt shows how the flow of the discussion, which had previously been about food preferences, led to Shelly's question about Japan. Suddenly the possibility of travelling and learning and teaching languages emerges, and Shelly makes plans to learn Russian as well as Japanese.

One crucial aspect of these animated conversations relates to how they map onto the real (i.e. non-virtual) world. In this workshop 'mapping onto the real world' [MRW] was the largest coding category for the tutors (17%), and the third largest for young people (7%) after activities promoting confidence [APC] (10%) and creative conflicts [CASC] (12%). As the workshops unfolded, the young people who worked with us increasingly brought in their real world skills to assist with their projects. At the same time, ideas and skills developed on ILI-2 were being used in real world activities. There was evidence of 'merging' of the virtual (i.e. on ILI-2) and the real (i.e. school and home).

We conducted interviews with three of the young people as the second workshop series concluded (after almost one year). In these interviews we talked about their impressions of the island and its activities. None of them had done any previous work in Second Life. This group produced a series of video shorts during the project, including guidance on how to use the island, on recreational sailing and other topics that they had chosen. One recurrent theme in the interviews was the possibilities afforded by the space for creative activity. One of the young people felt that he had ownership of the space, and another that his creativity was fostered. All of those interviewed felt that their skills had developed in several ways, including video editing, teaching others and being responsible to other members of the team. They had been involved in communicating clearly with adults in a variety of contexts. This had required reflection and the formulation of clear plans, explanations and presentations. Timetabling and scheduling of work was also required. Each young

person had been required to identify his or her strengths in relation to project activities, and negotiate the inclusion of these into the work plan. Crucially, they had all been required to think about other members of the team, and the individual roles that would be required in the film-making process.

> The island gave me freedom to do what you want . . .
> It gave me a chance to do projects . . .
> It felt like my space . . .
> I've become more serious about study during the year . . . and more involved with sports too . . .
> Making videos has . . . helped my sense of team work and responsibility . . .
> My video editing skills have developed . . . it's new stuff . . .
> Working on the island has helped me to see that my ideas are like my friends' [ideas] . . .
> it's easier to discuss things . . .
> (Excerpts from interview with Young Person 1, 17 November 2011)

The group also spent more time with each other outside the island space as the workshop series developed.

> A great place to work . . . somewhere I could work . . .
> A really great creative atmosphere . . . it really fosters creativity . . .
> It's an open environment . . . your own little sand-box to play around in . . . while doing the research . . .
> We worked together as a team . . . we spent time with one another outside Second Life . . .
> I never really worked on projects with them before . . . so I learned about my friends doing this . . .
> The project helped me to be more responsible . . .
> An avatar can be just like you . . . or some crazy thing you want to do . . . it's got more like me gradually . . .
> You learn from their avatar what people like . . .
> The island lets you see what people really like doing . . .
> (Excerpts from interview with Young Person 2, 7 November 2011)

There were also issues with the level of work required, and the effect this had on the size of the team, with some members dropping out as the work progressed. The issue of confidence building was central to the experience of the young people during these challenging new tasks. The ability to work to deadlines and apply oneself to the task in hand was commented upon as central to the experience.

> I thought the place looked cool when I first saw it [the ILI-2 space] . . .
> Sounded like hard work . . . all the projects . . .
> It was cool to be able to show other people how to do things . . .
> I've had to do things by a deadline . . . and attend meetings, and plan better . . .
> I've learned about culture . . . English culture . . . from you guys . . .
> Some people didn't have the dedication . . .
> (Excerpts from interview with Young Person 3, 8 November 2011)

These three young people had engaged with the project throughout both workshop series. In this group there were seven others who had visited intermittently, added their own enthusiasm and energy to the crucible of ideas and creative activities and then departed to other areas of enthusiasm. We chose not to seek replacements after the end of the first workshop series, because the disruptions caused by constant new introductions required more capacity than we had available in the group at that time.

Discussion and conclusions

In this article we commenced by arguing that careers work in the twenty-first century faces a key challenge in terms of digital technologies: to evaluate their existing, emerging and potential uses to deliver enhanced careers work practice in a multiplicity of challenging economic and social settings. Furthermore, given the rapidity of technological development, it is essential that promising technologies are selected and evaluated 'in use', in research innovations and in naturalistic settings. In our view, 'three-dimensional', immersive virtual worlds, such as Second Life, present promising candidates for evaluation and use in the careers and guidance domain, and the therapeutic domain, as evidenced by the upsurge in recent development work cited above. Transitions are a central feature of all youth work, and building on the analysis of several authors who have argued for a re-theorisation of transition beyond the family, we selected and created a highly customised version of Second Life called Inter-Life. We used Activity Theory to help in this process because we think it can provide a way of reconceptualising transition, by focusing on the development of a broad range of skills and tools that young people need to develop in order to cope with increasing and sometimes paradoxical demands, and yet still be able to identify and develop their own goals and motivations ('benign runaway objects' to use Engeström's terminology) in a negotiable way. The young people interviewed for this article cited an extensive array of career-related skills, including interpersonal and team skills, as well as personal organisation and communication skills. They also reported increasing confidence, as well as a better understanding of the realities and challenges inherent in their projects.

We have presented a rationale for using creative practices, including film-making and photography, as a vehicle for young people to work informally on research projects that they have conceived and developed, within the virtual island space, in what we have called 'virtual research communities'. These spaces, we argue, are versatile and can be adapted for use by a wide range of such communities, using generic tools (in our case photography, film-making, supervision and creative activities) for a wide range of purposes. In this article we have presented two examples of excerpts from workshops – with participants from Trinidad and three sites in the UK – in which a group of young people (15–17 +) openly explore their feelings and ideas, plans and difficulties as they engage in film-making. In the careers and guidance domain this power of virtual worlds, to engender both emotional and cognitive engagement in distributed groups, could be applied in a wide variety of realistic and near-realistic activities. In our project, the virtual world became a 'boundary space' for creative activity, between home and school. It had fewer rules than either of these spaces, and yet needed rules to function. It was a space that the young people could claim and feel at home in, yet 'allowed' for supervision and group mentoring. In our example, we have tried to indicate through a small sample of coded data how the young people acquired new career-oriented skills as they interacted to plan and execute their film-making. They also engaged in creative discussions arising from the conflicts of the boundary space (between home and school). There is also evidence here (more extensively discussed elsewhere; see Lally and Sclater, 2012, for example) of the ways in which the ideas and skills developed in Inter-Life map onto real world activities, and *vice versa*. There is evidence of new insights appearing during the creative work and discussions. The virtual world in this project was somewhat like the real world, but had features such

as the ability to fly, customise or radically change one's appearance, and reconfigure the space easily. These features provided an incentive to 'do something new and different'.

The group we have presented here as an example of sustained and creative activity with young people also presented the research team with many challenges. The young people's own research agenda, explored through discussion and film, was central to their creative development. However, it was slow to emerge from discussions, despite the novel and non-hierarchical nature of the virtual space. More structured activities and tightly defined activities may develop more quickly. Yet once the group became stable in composition the initially labour-intensive support provided by the research team lessened. Another set of challenges relates to the implementation of virtual worlds in practice settings in the counselling and guidance fields. One of the main barriers is the current lack of standards that developers can use when building the 3D 'platforms' that are needed to 'host' virtual activities such as Inter-Life and the Virtual Work Experience Board. However, there are many ongoing and concurrent developments in computer networking that may eventually lead to the widespread commercial availability of the '3D internet', widely predicted to happen within five years (see Alpcan, Bauckhage, & Kotsovinos, 2007; Rattner, 2009). These may make virtual worlds as ubiquitous for adults as they are already for teenagers who use bespoke 3D gaming worlds (for example 'World of Warcraft'). Until this happens, many promising 'one-off' initiatives cannot easily and cheaply be scaled up for widespread use. Development will also require investment. For example, technical expertise and resources will be needed for the production of support materials. The scripting of careers scenarios and simulations will require ongoing efforts. These may become available commercially. Young people may acquire the relevant skills socially and through entertainment devices. As with any other new internet-based technology, staff training will be required for careers and counselling staff.

In conclusion, we think that virtual worlds are a serious candidate for further consideration as digital tools in the careers and guidance domain. They can support sustained creative collaborative activity, the development of communities, and serious skills acquisition. Groups can work in a distributed way, powerfully sharing expertise that is not available on any single site. They can be used to change the dynamics of activity, so that young people can support and learn from each other in shared projects, with supervision and mentorship shared among remote professionals. International collaborations can be supported that would not otherwise be possible. These findings also open up further multiple possibilities for the use of virtual worlds more widely in education. In formal settings, virtual worlds can offer a place for serious creative engagement (in many aspects of art and design education, for example). In higher education environments, the possibilities for collaboration between remote groups where 'presence' and long-term, coordinated conjoined action are required (Thomas & Brown, 2009) can now be supported by virtual worlds.

Not least, in terms of reframing careers and guidance work for the twenty-first century, virtual worlds offer the potential for innovation and research, as well as working with new theorisations (such as Activity Theory) that can help us to understand the complexity of human activity as participants learn and develop through their career and life transitions. Not all of this is evidenced here, but it is visible from where we stand. We hope that this will encourage others to undertake

further work in a range of settings. The survival of much of our professional activity may come to depend upon such work.

Acknowledgements

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Appendix

Inter-Life coding schema showing 'high level' codes used in content analysis, based upon Activity Theory and the research questions.

Activity in Virtual World	Code Abbreviation
Social and/or Community Actions	SC
Conflict in Activity Stimulates Creativity	CASC
Activities Promoting Confidence	APC
Gaining Personal Insight	GPI
Finding a Solution to a Problem	FSP
Feeling Better about Something	FBS
Acquiring New and Relevant Skills	ANRS
Using Tools, Resources, Contexts, Networks	TRCN
Gaining New Perspectives – Reconfiguring	GNP-R
Deep Learning	DL
Mapping onto the Real World	MRW