The London School of Economics and Political Science

The Role of Play in Enhancing Decision-making in Innovation Creativity Environments

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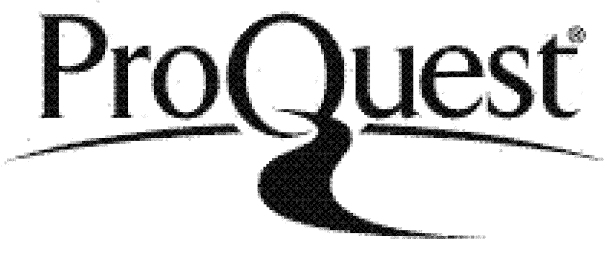

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Declaration

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Abstract

This thesis investigates Innovation Creativity Environments (ICEs) located within the London School of Economics by looking at events taking place within these specific spaces. ICEs are gaining popularity within organisations and academic institutions as places to foster creativity for decision-making. Much has been written about these types of spaces in organisational and business contexts, but academic research is virtually non-existent. This research sets out to document two main objectives. The first objective is to describe and narrate *what* actually happens in Innovation Creativity Environments before, during and after the event taking into account crew facilitation and participant perspectives. The empirical focus of the thesis is on a series events mounted annually in these environments on "Project Dreams and Reality," with the aim to support MSc students in the Institute of Social Psychology, LSE to prepare for their dissertations and future careers. The thesis provides, as its first objective, an in-depth narration of in the documents what actually happened within ICEs. The second objective is to understand *how* these environments function and provide Group Decision Authoring and Communication Support (GDACS) that facilitate creative decision-making. Through interviews, observations and participation the research identifies two main pathways in which play supports the decision-making processes with ICE. First, play enables participants establish a background-of-safety, a concept coined by Sandler and Sandler (1978), is a psychoanalytical cognitive model that identifies safety as a feeling quality within the ego and motored by the ego, which is usually taken for granted. The ego tries to maximize safety experience, rather than avoid anxiety, allowing students to risk being creative. Secondly, play nurtures the decision-hedgehog (Humphreys and Jones 2006) which positions decision-making through the construction of narratives making the rhizome that constitutes the body of the hedgehog with the fundamental aim of enriching contextual knowledge and creativity for decision-making within Innovative Creativity Environments.

Keywords: Innovative Creativity Environments, Group Decision Authoring and Communication Support (GDACS), creativity, play, background-of-safety, decision-hedgehog.

To my husband

my children

and my mother.

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I am thankful to all the participants who volunteered to be interviewed especially to the crew who worked with me on events in the Robinson Room. I am thankful for the support of my LSE colleagues and staff, who shared ideas, office space, articles, chocolate, coffee and empathy.

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Lastly, I would like to thank my husband – Scott, without whom this thesis would have been impossible. He had to endure being awoken at night to discuss ideas, proof read hundreds and hundreds of pages, listen to me complain and threaten to quit. And he did all this with a smile. He has not only been supportive emotionally and academically, but he has been hands-on in allowing me to proceed and finally finish my thesis. He accompanied me to conferences and even got involved when we needed a scribe during one of the events there. During my upgrade at the LSE, he pushed our newborn son back and forth in the hallway of the department. When I first went back to working on my PhD he watched our children. And when I wanted to go a conference for some final insight before submitting my dissertation he took for granted that I would go and he would take care of our children. Without him, I never could never juggled having children and completing a PhD.

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1 Introduction

"A journey of a thousand miles must begin with a single step."

Lao Tzu

This research is concerned with Innovation Creativity Environments. What are they? What happens in them? How do they support and utilise creativity? How do they promote better decision-making? By documenting events within Innovation Creativity Environments, interviewing participants and carrying out various observations, this research seeks to answer these questions.

1.1 Personal motivation

This research is truly a culmination of my previous research engagements and personal experiences. I pursued my interest in psychology at the University of California at Berkeley by majoring in psychology. I focused on developmental psychology, with particular interest in language development (which I researched with Dan Slobin) and autism (with Lisa Capps). Later, I participated in research at the Institute of Psychiatry looking at sibling relationships and their interactions during game playing. After that, I started working in market research. Working in an organisation opened my eyes to a completely new set of realities and I became very interested in organisational psychology.

This led to my MSc in Organisational and Social Psychology at LSE. I vividly remember going through my thesis process. I did not realise at the time that I would come back to LSE where one of my outputs would be to improve this process in the future for other MSc students.

After I completed my Masters at LSE, I started working at London Business School as a secondary lecturer on an MBA course on Organisational Behaviour. The professor, Babis Mainemelis, is an inspirational lecturer with a keen interest in creativity. I found the subject was fascinating. On the practical / creative continuum in life, I lie on the practical side and am married to a very creative artist. Reading about creativity and creatives gave me incredible insight and a whole new perspective on being creative within organisations and outside of them. With that came the realisation that creativity should really be part of everyone's life, even mine. With Babis Mainemelis, I started participating in research projects on creativity and time pressure at London Business School. During this time, I decided I would like to pursue my own research on creativity in organisations. I was still in touch with my current supervisor Patrick Humphreys. Through him, I found out that he and others at the LSE (e.g. Garrick Jones) were about to build a flexible learning environment to support creative decision-making. My PhD proposal focused on these purpose build spaces as transitional spaces (Winnicott 1971) and how interactions function within these spaces. At the beginning of my research, play was one of several processes, but it soon became the only process I focused on.

Suddenly my research life had come a full circle. Once more, I was looking at developmental perspectives, only now, as they were relevant to play and was applying them to adults and creative processes. This has evolved into my research. I am encouraged by the professors who have given me knowledge along the way, encouraged to improve experiences at work for others and inspired by my personal artist, who lives that which I can only study.

1.2 Purpose

This study stems from a motivation to inspire creativity even in those who are not recognised creative. Creativity is considered a powerful source in organisations and for

that reason organisations are continuously looking for ways to support creative endeavours. Thus, Innovation Creativity Environments are gaining popularity within organisations and academic institutions as places to foster creativity for decision-making. Much has been written about these types of spaces in organisational and business contexts, but academic research is virtually non-existent. This research sets out to document two main objectives. The first objective is to describe and narrate *what* actually happens in Innovation Creativity Environments before, during and after the event taking into account crew facilitation and participant perspectives. The empirical focus of the thesis is on a series of events mounted annually in these environments on "Project Dream and Reality", with the aim to support MSc students to prepare for their dissertation in the Institute of Social Psychology, LSE. The second objective is to understand *how* these environments function and provide Group Decision Authoring and Communication Support (GDACS) that facilitates creative decision-making.

Essentially creative decision-making is supported by using play and creating a background-of-safety as well as enabling decision support by allowing multiple levels of problem definitions. The research focuses on documenting, understanding, and improving Innovation Creativity Environments by scrutinising the background-of-safety utilising the model of the decision-hedgehog to show how idea generation can be nurtured.

RESEARCH AIMS

1 Explore and empirically document what happens during an event in an Innovation Creativity Environment.

2 Show how theories of play function as supportive methodologies for creativity during events in an Innovation Creativity Environment.

3 Provide an alternative understanding of decision-making using the theory of the decision-hedgehog and the background-of-safety.

RESEARCH QUESTIONS

1 *What* actually happens in Innovation Creativity Environment events before, during and after the event taking into account crew facilitation and participant perspectives?

2 *How* do these environments function and provide Group Decision Authoring and Communication Support (GDACS) that facilitates creative decision-making?

1.3 Theoretical integration and contribution

Decision-making lies at the crux of every organisation. Rational perspectives of decision-making are showing high rates of disappointment (Cyert and March 1992; Nappelbaum 1997). Disappointments stems from failures of implementation, the rise of unintended outcomes, the impact of cultures of fear and failure within organisations (Humphreys and Nappelbaum 1997) and problems associated with externalisation of decision systems designers who design from outside the game for those who are inside (Humphreys 1989). New decision-making models have emerged (Humphreys and Jones 2006) as organisational decision-making is evolving. This research investigates how dedicated spaces, such as an ICE, support GDACS.

Within Innovation Creativity Environments, the decision-hedgehog, explained and explored in chapter three, serves as the theoretical backdrop that unites this discussion. Essentially, this model takes into account previous theories from collaborative decision-making in order to build a more accurate model that can be used to guide contemporary collaborative decision-making. The model looks like a hedgehog (hence the name), a creature or a body that is covered in spines. Importantly, this model is build on a background-of-safety spines (Sandler and Sandler 1978) within the decision. Rather than having a single spine as previous models have, the hedgehog has multiple spines, which are

embedded in plateaus (Deleuze and Guattari 1988). The decision maker has to navigate through these plateaus, which are high intensity structures that allow people to feel safe. The feeling of safety is key to navigating through the plateaus. Safety is also a common antecedent for creativity, play, exploration and decision-making. But how is safety created and how do we know that safety has been achieved? Through observations, interviews, reflections and literature this research investigates the notion of safety as experienced (of success and failure) during a workshop within ICE.

Different types of Innovation Creativity Environments exist, and each type carries a different name. Despite many differences, these environments all share the basic infrastructure, support teams, play as a method and creative endeavours. The purpose of this research is to fill an empirical gap by exploring a site specific cases that will contribute to the literature by reporting what a day in such an environment looks like, address the underlying concepts and overt issues that support the environment address the covert issues that allow the environment to function using creativity. The emphasis at all times is on the processes and the events rather than the physicality of the space.

1.4 How the chapters are divided

This section provides a quick overview of the organisation of the thesis to guide through the thesis.

Chapter 1 presents an introduction to the research, including personal motivations, purpose and research aims. The two research questions are presented and contribution to knowledge is discussed.

Chapter 2 presents a general survey of the research on creativity and play elucidated in terms of psychological safety. The intention of this chapter is to provide an orientation

within the field and review of the relevant past research. Frameworks of creativity, play and the background-of-safety, in which the thesis research is embedded, are explored.

Chapter 3 addresses the evolution of decision-making from rational choice to contemporary Group Decision Authoring and Communication Support (GDACS). It introduces the concept of the *decision-hedgehog* as a construction of narratives with the primary aim of enriching understanding of the contexts of decision-making.

Chapter 4 presents examples of Innovation Creativity Environments currently in use in organisations and academia. These are commonly known as flexible learning environments or iLabs.

Chapter 5 presents the methodology and analysis of four case studies including observations, interviews and focus groups.

Chapter 6 present an in-depth description of the case studies, following events within an ICE. This chapter presents the first steps in filling the empirical gap on research within innovation laboratories (addressing research question one). It not only describes actual events, but also identifies how such events are set up and what roles the supportive crew takes to allow participants to become more creative.

Chapter 7 conveys findings and discussion that stem from the qualitative research, including observations and interviews, as they pertain to establishing or failing to establish a background-of-safety for participants.

Chapter 8 presents findings and discussion from interviews as well as observations of how play helps nurture the decision-hedgehog and identifies failures and opportunities for development. (Chapter 7 and Chapter 8 address research question two.)

Chapter 9 discusses the implications of these findings for theory, academics and practitioners who utilise play or creativity as modes for consulting.

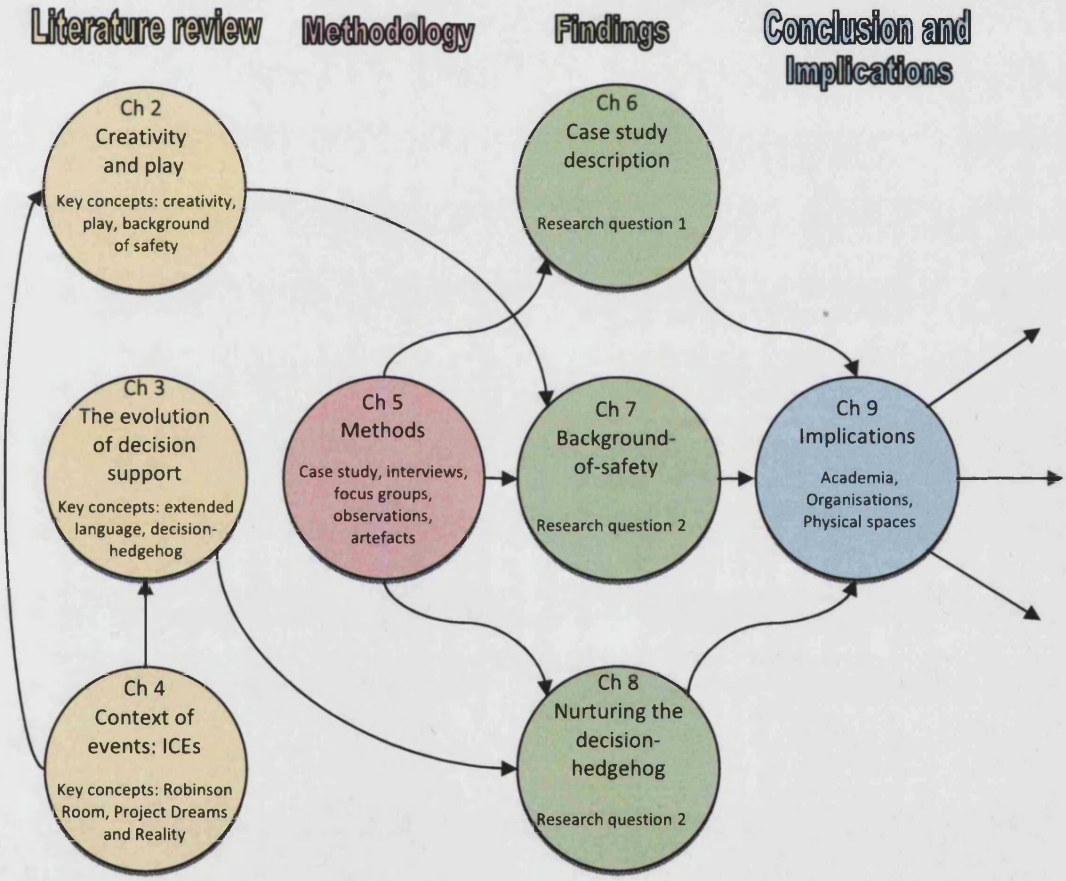

Figure 1.1: Overview of chapters

2 Literature review: creativity and play

"Creativity requires the courage to let go of certainties."

Erich Fromm

2.1 Introduction

The literature on creativity is vast. Research ranges from developmental perspectives to organisational ones with a current trend for organisations and academics to talk about "boosting creativity" (e.g. Zhou and Shalley 2003). Within organisations adult creativity is frequently linked with organisational success (Heunks 1998). Developmentally, creativity in children is frequently linked to play (Sutton-Smith 1997) and are an indication of creativity in later life (Schmukler 1982-83; Clark, Griffing et al. 1989). Research on play in children stresses developmental benefits within social, emotional and cognitive domains. And yet, little literature exists that examines adult play within the organisational context (Schrage 2000). This chapter presents a review, albeit certainly not an exhaustive one, of creativity and play, identifying the basic concepts and the more intricate details as seen relevant for this specific study. The chapter begins by defining creativity in terms of *process* (but acknowledging that product cannot always be ignored), what is meant by creativity and why attention needs to be paid to it. Next, play is discussed in terms of development (from childhood through adulthood). The discussion of play incorporates Winnicott's (1971) notion of transitional objects and potential space and in Sandler and Sandler's (1978) discussion of the background-of-safety – one of the two main theoretical frameworks that guides the empirical findings.

2.2 Creativity

This chapter begins by defining creativity as relevant to this study. As organisations and academia identify a need to foster creativity, Innovation Creativity Environments have been called into being, gaining increased popularity. This chapter continues with a discussion of the benefits of creativity need for it to be fostered. Research has identified many benefits of creativity, emphasising individual well-being and organisational performance. What is lacking in the literature is how creativity can be fostered through play within purpose-designed spaces to aid decision-making. For the purpose of this study, this is reviewed in terms of psychological safety.

In terms of decision-making, creativity plays an essential role as a tool that allows for the progression of thought and exploration of options. Deleuze and Guattari (1988) call this phenomenon exploring the rhizome. Unlike trees or their roots, the rhizome connects any point to any other point allowing for infinite possible connections. Humphreys and Jones (2006) argue creativity feeds into the body of the hedgehog. The primary purpose of this section is to define creativity within the context of Innovation Creativity Environments, decision-making models, and this study.

2.2.1 Defining creativity

Any study of creativity has to take into account that there is not a single definition to describe creativity, a problem indigenous to all creativity research (Mumford and Gustafion 1988). In a recent research project the author identified 94 definitions of creativity collected from 462 articles and 50 books between 1990 and 2008 (Salvich 2008). Definitions for creativity come from different fields including psychology, business, science, art and history. With divergent views and a multitude of definition, any research employing creativity has to carve out an appropriate explanation of creativity for the particularities of the study considering existing definitions.

A popular definition for creativity, from Sternberg and Lubart (1996), is the ability to produce work that is both novel and appropriate. Another commonly accepted definition among social psychologists states that the product of creative work is considered creative when it is (i) novel but also (ii) has a value, usefulness and fitness for a particular purpose (Weisberg 1993; Boden 1994; Amabile, Collins et al. 1996). By defining creativity as a useful novelty, psychologists have clearly placed the emphasis on creativity as an outcome or product. One problem with the product view of creativity is that it emphasis productivity rather than creativity while ignoring the process.

Others, however, are beginning to look at creativity as a *process* that ebbs and flows over time in response to problems that arise unpredictably (Drazin, Glynn et al. 1999). In this view, creativity is intricately connected to sense making, problem finding, and interpretation of events and situations. Creativity is embedded in sense making by identifying how individuals attempt to orient themselves to, and take creative action in events that are complex, ambiguous or ill-defined (Drazin, Glynn et al. 1999). The purpose of this research is to identify how to foster creative processes as defined above and investigate how to deal with this ambiguity safely.

Looking at creativity as a process also enables researchers to look at how creative participants are being, without judging the actual product. In this way, individuals can make comparisons with previous experiences of creativity and with others with whom they share this experience. Using a process definition here is particularly useful as play is investigated as a major pathway to creativity. The product and the process of creativity cannot be fully separated and indeed the product is required to consider the process. In terms of this research it is not originality (Barron 1955) or product, but the ability to see

things differently, and the process of not grasping the first but coming up with many solutions, that defines creativity.

However, within the process definition, the product of creativity is not overlooked. This research does not evaluate final products (e.g. the student's thesis) that have come out of a creative process. Rather it seeks to utilise interim products as data points with which to then judge the success or failure of a specific process. In addition, select concepts of creativity as a product are necessary to understand the core ideas of the research project are embedded in a process definition of creativity.

In line with the process definition above, creativity definitions can be categorised within three domains – the process, the product or the person. For this research, creativity is defined as the *process* of engagement in creative acts, regardless of whether the results are novel, useful, or creative (Drazin, Glynn et al. 1999). This is in line with Torrance's (1998) thinking which defines individual creativity as a process of sensing problems, making guesses, formulating hypotheses, communicating ideas to others, and contradicting conformity or 'what is expected.' Creative engagement is a process in which an individual behaviourally, cognitively, and emotionally attempts to produce creative outcomes (Kahn 1990). In other words, this research uses the notion of creativity as an individual or a group's ability to find new and novel solutions to existing problems. This is the quintessential notion of exploring the rhizome and coming up with contextual knowledge.

Most vividly, in this research, creativity is closely intertwined with the process of play, art and theatre in an effort to encourage students to think more openly. The creative process is about exploring the rhizome, as stated before, and possible solutions beyond the expected.

New knowledge must be build on old knowledge and the link is creativity in accordance with Tsoukas and Chia's (2002) view that "...change is not an exceptional or special activity individuals undertake..." but an everyday necessity and consequence of learning, knowledge creation and creativity. There is evidence that the unreflective adoption of premises and old patterns of solving problems is detrimental to creativity. If individuals are given a series of problems for which a given solution 'works', they would tend to use that solution even if it is no longer the best, better way to solve would not be detected (Lunchins 1942). In order to 'break free', be creative and develop new knowledge, people need to think 'outside the box' (Hampden-Turner 1999). Drucker (1994) states that the essence of management is about how existing knowledge is best applied to produce new knowledge. Nonaka and Takeuchi (1995) propose that creativity is strongly related to the creation of new knowledge. In this research then, the basis of knowledge must be taken into account in order for students to be able to elaborate and extrapolate. When this knowledge is absent, as is explored in the discussion section, students find themselves outside their comfort zones and background-of-safety, unable to nurture the decision-hedgehog and incapable of creative thought.

In addition to a process or product view, some look at highly creative people, such as Darwin, Einstein, Galileo or Feynman (Gruber and Wallace 1999). Isaksen, Dorval and Treffinger (2000) explain that creativity is often associated with something out of the ordinary, zany, or in the arts. Others believe that not all, but many people have creative potential. Richard Florida (2002) proclaims in his book The Rise of the Creative Class that recent years have witnessed rapid growth of a creative class. This class is made up of scientists, engineers, architects, designers, authors and various types of artists as well as some who work in business, education, health care and law. In all, the creative class totals 38 million people in the USA, which is approximately 30% of that nation's workforce. Using this definition, it is not difficult to conclude that nearly everyone with some form of

higher education belongs to the creative class (Florida 2002). This study supports both the belief that creativity exists in almost everyone (Isaksen, Dorval et al. 2000) and that creativity should be a part of everyone's life (Amabile 1989).

The absence of one definition and one proposed 'best test' to measure creativity makes it difficult to standardise research on the subject. One may argue that the standardisation of creativity research contradicts creativity itself, which escalates the difficulty of coming up with the ideal research tool for creativity. This psychometric problem begins, in fact, with a debate over the definition of creativity. As this is a problem not to be alleviated, research must elucidate how and why researchers measure creativity in a particular way. A paper and pencil examination of creativity may be fruitful to individual creative assessment as an outcome, but this study intends to look at creativity as a process and the ways in which this process can be optimised with particular reference to play. This would shed insight beyond 'potential' creativity and shed light on creativity and innovation as acts accomplished in the workplace.

Creativity can be approached on multi-levels ranging from individuals and groups to organisations. However, most studies tend to use a lens employing only a single perspective at a single level. Sternberg and Lubart (1999) note there are only a handful of studies of creativity that investigate both cognitive and social variables. A comprehensive study of creativity, as suggested here, addresses an integrated view of cognitive, affective and social implications on creativity overall. Steyaert, Bouwen, and Looy (1996) suggest that creativity is a socially-constructed event where meanings are constructed through conversation and interaction (Berger and Luckmann 1967). They focus on how the actors experience the context, how they make meaning out of the alternatives, and how they perceive their own creativity. Creativity allows people to break free of the knowledge trap and move forward (Sternberg and Lubart 1999). Looking at creativity as a socially

constructed phenomenon, the conversations and interactions that make up creativity thus depend on creativity as being a process. Only a process view of creativity allows for the integration of socially constructed phenomenon. Play is one process that supports creativity in its development.

Several studies have investigated elements that encourage or stifle creativity. These elements can be summarised as the four P's: Personality, surrounding People, Place and Processes. While this research acknowledges that *personality* is integral to understanding why some people are more creative than others, it aims to facilitate any person's creativity, not merely those who are already considered 'creative individuals'. The influence of *other people*, such as peers and superiors (e.g. employers, professors, etc) will be incorporated as an element of the psychological environment and particularly the role of the crew and facilitation will be discussed in particular. The *process* that will be investigated in this study as facilitating creativity is *play*. Whilst studies on play are abundant in the field of child development, play as a topic of inquiry is among the least studied and the least understood in organisational psychology and understudied in organisational research (Mainemelis and Ronson 2006). This research reviews some developmental perspectives on play that illuminate child and adult play as well as play in organisations, and discusses links between play and creativity. The role of *place* in creativity will be studied within an Innovation Creativity Environment, specifically, LSE's Robinson Room. However, neither an in-depth review of the environmental perspectives of creativity will be undertaken, nor an in-depth insight into what types of places, or aspects of space (see Amabile 1996) that have been identified in research to encourage and stifle creativity will be undertaken. These are areas to potentially study after the dissertation. The role of space in creativity stands out as a subject significant for future exploration.

For the purpose of this research, it is important to distinguish between creativity and innovation. Whereas creativity is concerned with the process of producing novel and useful ideas, innovation is the implementation of these ideas (Scott and Bruce 1994). This research project looks only at the creation of ideas and does not follow participants to see if ideas are successfully applied. It thus focuses on creativity as a process rather than innovation. Therefore, while the ultimate goal of an Innovation Creativity Environment is to apply innovation, this is outside the scope of this research. In other words, this research does not address the innovation (i.e. application of creativity) deriving from events in Innovative Creative Environments, but is limited to the creative processes, which should, if successful, lead to innovative outputs.

In conclusion, this research defines creativity as the process of coming up with different ways to solve problems. Assumptions include that most people have some degree of potential for creativity and that creative processes can lead to creative products as well as individual wellbeing. This research hypothesises that play enables individuals to be more creative, within organisational and academic settings.

2.2.2 Creativity at work

Creativity is an essential asset in today's ever-changing competitive work environment. Two reasons for fostering and increasing creativity are:

1. the improvement of the individual work experience and
2. the benefits for the organisation at large

Thus, the prior aids individual psychological satisfaction and the second improves 'business.' Similarly, academia, where the crux of the data is being collected, needs to keep up with these concepts to function successfully in the present and to prepare students for an organisational world that expects these premises.

Fostering creativity is important in today's science and business arenas, especially in more competitive fields where the pressure for creativity and maintaining a competitive edge has become more intense. Research suggests that that creativity is very important for the long-term survival of organisations (Devanna and Tichy 1990), because it enables organisations to remain competitive in a rapidly changing environment and achieve a competitive advantage (Amabile 1988). Competitive advantage depends on organisations ability to utilise existing creativity and its ability to generate new ideas and knowledge more efficiently (Oldham and Cummings 1996).

Creativity provides the raw intellectual materials – ideas, concepts, insights, and discovery – that eventually become new theories, approaches, tools, products, and services that underlie innovation (Heerwagen 2002). It is generally acknowledged that creativity is associated not only with economic prosperity but also with advances in knowledge, health (West and Altink 1996) and individual wellbeing and happiness (Csikszentmihalyi 1996).

In order for individual or group creativity to prosper, organisations (including academic institutions) must make efforts not to stifle it. King and Anderson (1995) provide a general literature review on organisational antecedents of creativity that results in a summary of major findings in regard to organisational characteristics that encourage or inhibit creativity. *Leadership* should be democratically determined, and participative styles facilitate creativity whereas authoritarian styles inhibit it. Similarly, the crew and facilitation who help lead the group and individuals in learning environments must by definition be participative. Strongly hierarchical *structures* inhibit creativity whereas flat structures with permeable boundaries between subdivisions facilitate it. This is at the essence of collaborative events and stakeholders in decisions must feel free. Creativity is encouraged by *climates* that are playful about ideas, supportive of risk taking, challenging, and tolerant of debate (King and Anderson 1995). Here the significance of a background-of-safety is eminent.

Other studies identify some of the same organisational factors enabling creativity such as flat organisational structures and high levels of communication between functions and departments (Anderson and King 1993). Greater autonomy for individuals, teams and departments, reduces centralised control and allows employees to creatively prosper. Through discussion and conflict, innovation occurs. However, not all conflict is beneficial. Whereas in cognitive conflict, the argument over and discussion of ideas, allows for creativity, inter-personal (i.e. "I-hate-you") conflict that attacks the people rather than the ideas, stifles creativity and other positive group processes. Hence, even an investigation of individual creativity must acknowledge group interactions. Still, this methodology favours an individualistic perspective on creativity. A major challenge in creating events is to foster safety for argumentation while avoiding dysfunctional group processes that stifle creativity and enjoyment all together.

One problem with understanding creativity at work stems from the problem with the definition of creativity. Whereas most commonly, creativity is described as a product rather than a process and organisations tend to emphasise stable factors such as group composition rather than dynamic processes that underlie and support creativity. As discussed, this research is interested in the process of being creative. This research is an opportunity to study creative processes with actual organisational actors and tap into 'real' processes of creativity. At this macro level, organisational creativity can result not only from activities born of a single individual, but rather from dynamic and changing processes of sense-making that emerge and establish themselves as the negotiated order of a point in time.

Indeed, creativity is the driving agent for many organisations in an effort to keep up with and sometimes lead their fields. Some may assume if creativity is so important in the

organisational world, it must also be important within some models of academia – where people are educated to fulfil their later roles within work. In 1991 National Advisory Committee on Creative and Cultural Education (National Advisory Committee on Creative and Cultural Education) declared an urgent need to develop creativity. Creative Partnership (www.creative-partnership.com) is one of the initiatives that grew out of that report (which has close links with the LSE). Here school children are given an opportunity to interact and collaborate with creative individuals. This research project has a similar motivation and looks at fostering and teaching students at a graduate level to be more creative in their endeavours.

And yet, as Oldham and Cummings (1996) point out, "unfortunately, little is known about the conditions that promote creative performance of individual employees in organizations" (p. 607). This research concludes that to promote creativity in individuals, a safe environment needs to be fostered through play.

2.3 Play

The concept of play easily recognised and understood. We know what play is and we know how to recognise it (Mainemelis and Ronson 2006). The link between play and creativity has long been documented in academic literature. Early works by Huizinga (1944) state that in play an individual's creative faculties are at their best. The flexible approaches activated in play allow a temporary stepping out of semiological reality into a sphere of activity that is a world of its own. This reality is created in the imagination (Huizinga 1944) which is the ideation process of creativity. Play is essentially a formless experience (Winnicott 1971) and it is this characteristic that makes play conducive to the free flow of imagination and hence creativity. Organisations seek to be more creative but despite the link of play and creativity, play in organisation is under-valued and under-studied.

2.3.1 Defining play

Play is complex and diverse and can take place in a variety of contexts and is linked to a multitude of developmental and learning outcomes. In turn, it is generally accepted that a single definition is neither necessary nor sufficient to capture such multi-dimensionality (Coalter 2001) and "seems almost impossible to achieve" (Smith, H et al. 2003: 178).

It is thus often preferred not to define but highlight the *psychological and sociological processes* that define an activity as play (Rubin, Fein et al. 1983; Pellegrini and Smith 1998). Literary definitions appear to also agree to disagree – play cannot be simply defined. There are many theories of play and many of them are contradictory or at least, irrelevant to one another. Yet, everyone implicitly knows what is meant by the words play and being playful. Everyone plays, in work or in leisure, alone or with others, with objects, processes, or ideas. Mainemelis and Ronson (2006) depict the different academic interests of play stating that some researchers study the body, some behaviour, some thinking, some look at groups, others at individuals, some study experience and some study language – but they all use the word *play* to describe these. In this research project play, include puppets, dolls, stuffed animals, masks, instruments, blocks, clay, motion, drawing and even words and ideas. Play is not confined to, but incorporates playful actions of children and adults alike.

Play is an ambiguous phenomenon and in order to guide a definition of play, this thesis draws upon a question articulated by Sutton Smith (1997), one of the front-runners in play research:

> "We all play occasionally, and we all know what playing feels like. But when it comes to making theoretical statements about what play is, we fall into silliness. There is little agreement among us, and much ambiguity. Play can seem so straightforward and simple until one takes the time to try

> to understand it. Does play serve a purpose? If so, how and for whom? Do adults play? If not, then when does play stop? What is it then that adults do on the golf course, on the tennis court, in the garden, or in the workshop? Is recreation play? If not, then why not and what is it? Is play a diversion, an opportunity to rehearse something in a safe and protected environment, or something else entirely? I warn anyone who takes a peek behind the curtain of play that a confusing world awaits." (Sutton-Smith 1997: 1)

The literature review on play will endeavour to answer these questions.

Does play serve a purpose?
If so, how?
and for whom?
Do adults play?
If not, then when does play stop?
Is recreation play? If not, then why not and what is it?
Is play a diversion?
An opportunity to rehearse something in a safe and protected environment?

2.3.2 Developmental perspectives of play

Historically, theories on play and creativity date back to Plato and made notable advances with Friedrich Schiller in the 1800s. Here, however, the emphasis is on modern theorists of play. Focusing on the emotional domain of development, psychoanalytic theorists Sigmund Freud and Erik Erikson looks at play in terms of catharsis (relieving emotional tension) (Schaeffer 1994). Psychoanalytic perspectives explain the value and purpose of play in allowing children to express negative emotions that relate to situations in which they have no control in their everyday lives. These include traumatic experiences and conflicts. Children incorporate stressful situations into their play and deal with them. Freud and Erikson believed that only children play and with maturity grow out of this need.

Jean Piaget discusses play in terms of using objects as something else and the relationship between play and exploration. Piaget (1962) shifts the focus of study from social and emotional aspects of play to children's cognition. He identifies six criteria that are typically used to describe play: (a) lacking precision, (b) spontaneous, (c) pleasurable, (d) lacking organisation, (e) free from conflicts, and (f) consisting of additional incentives. He places

play within his stage-based theory of cognitive development and assigned it a significant role in the growing of children's minds. Underpinning his views of how play contributes to children's cognitive development are two processes whereby children construct knowledge: assimilation and accommodation. Play fades away and the child becomes more competent at entering the real world. As children grow older, their games become more realistic, more adapted to the real world.

Lev Vygotsky (1978) further develops Piaget's theories in socio-cultural theories of play. Play, for Vygotsky (1978), contains in a concentrated form all developmental tendencies. In contrast to Piaget, Vygotsky states that play should not be judged on whether or not the act is enjoyable. Vygotsky named two criteria of play: (a) an imaginary situation, and (b) rules correlating with the imaginary situation (Nicolopoulou 1993). An imaginary situation exists when children play in order to fulfil their wishes. Vygotsky describes all imaginary situations as having rules and how throughout play, young children use objects to represent items. Though play children create zones of proximal development. Vygotskians view play as the most significant 'leading' activity of the early childhood years (Vygotsky 1977). This means that the most significant psychological achievements of the early childhood age occur while children engage in play. Play in a Vygotskian view is reserved for children.

Central to this study is the work of Donald Winnicott. Although Winnicott writes in detail about the importance of play during childhood, he also believes, that play is as important during adulthood (1971), stating, "Whatever I say about children playing really applies to adults as well" (p. 40).

Winnicott acknowledges a link between childhood play and adult creativity (but he does not specify how this link operates). Winnicott considers play to be a universal

characteristic of being, and its effective use to be a requisite for health. He views play and experimentation as the primary means by which the infinite stimuli and experiences of the world are reconciled into an individual perspective. In Winnicott's formulation of play, a person is able to experiment with his or her culture and environment in transitional spaces. These spaces allow the child or adult to expose elements of his or her in attempts to integrate with the external world.

> "Play is immensely exciting. It is exciting not primarily because the instincts are involved, be it understood! The thing about playing is always the precariousness of the interplay of personal psychic reality and the experience of control of actual objects. This is the precariousness of magic itself, magic that arises in intimacy, in a relationship that is being found to be reliable." (Winnicott 1971:64).

Sandler's (1978) notion of the background-of-safety is based on Winnicott's thinking. Winnicott's notion of play within potential spaces and with transitional objects will be revisited later in this chapter to link it to a background-of-safety.

Developmental perspectives address the benefits to the individual, which can actually be seen as the purposes of play. The *New Charter for Children's Play* (Children's Play Council, 1998) lists the following benefits to the individual in terms of emotional, educational and socio-psychological benefits of play.

- Play promotes children's development, learning, creativity and independence.
- Play keeps children healthy and active - active children become active adults.
- Play allows children to find out about themselves, their abilities and their interests.
- Play is therapeutic. It helps children to deal with difficult or painful circumstances, such as emotional stress or medical treatment.
- Play gives children the chance to let off steam and have fun.

Play is regarded as providing both *immediate benefits* to participants (e.g. a sense of freedom, fun, release of energy) and longer-term *strategic* individual and social benefits, such as ensuring successful development into adulthood (Barnett 1990).

Positive outcomes of play are discussed widely in academic literature and are substantial (Caplan and Caplan 1973). Play is usually emphasised as a means to another end. But play can also be "a relatively spontaneous act of the organism ... that is enjoyable in itself" (Csikszentmihalyi 1975). Play is viewed as having intrinsic motivational rewards of its own (Carr 2003). If this were to be the case one may wonder, "why play is not valued in today's life schema?" (Caplan and Caplan 1973), and why are play benefits so seldom discussed in term of adult play?

2.3.3 Pretend play

Fein (1987) describes pretend play as symbolic behaviour in which "one thing is playfully treated as if it were something else" (p. 282). An essential characteristic of child's play is a dimension of pretend—that is, an action and interaction in an imaginary "as if" situation, which usually contains some roles and rules and the symbolic use of objects (Singer and Singer 1992). Pretend play is emphasised in this paper over other forms of play (e.g. competition, chance, etc.) as exercises in ICE frequently have dimensions of pretend as in designing and acting out skits.

Pretend play has been conceptualised as a ground for the expression of creativity and for the facilitation of creative processes (Fein 1987; Singer and Singer 1992). It has even been hypothesized that pretend play itself is a natural form of creativity (Brann 1991). Russ (1993) suggests that pretend play is important in developing creativity because so many affective and cognitive processes involved in creativity occur in play. In creative processes, the imaginative is sought, where imagination is the representation of what does not yet

exist. Through pretend play, people are able to explore small worlds (Humphreys and Jones 2006).

Roger Callios (2001), in his seminal piece on Man, Play and Games terms simulation play (also known as mimicry) as a situation where players create an imaginary universe and see themselves as someone else. In games of simulation, illusion plays a great part: player and audience have a pact to believe that something is real, even if they know for sure it is not real. However, the player does not intend to deceive the spectator by pretending he/she really is someone else. It involves the creation of mental representations that lack direct counterparts in reality and the wilful enactment of those representations as if they were real. In simulation, play and mimicry the boundary of reality and fantasy are blurred. Mimicry starts in childhood as pretend play and continues in adulthood as fantasy (Mainemelis and Ronson 2006). Several researchers have also identified the similarities adult improvisational theatre and children's pretend play noting that pretend continues to exist during adulthood (e.g. Sawyer 1997; Göncü and Perone 2005). It is also accepted that art is play (Sandelands 2010). It is thus taken for true that adults also engage in pretend play. This research looks at pretend play in adults in the form of theatre productions or skits, utilisation of toys and props and artistic playfulness to aid decision-making.

2.3.4 Elements of play enabling creativity

Various fields have identified the importance of play. Within developmental psychology it has been emphasised that children's play is vital to learning about the environment (Kolb 1984) and foundations of imagination, which mature ultimately into artistic and scientific creativity (Smolucha 1992). Creativity and play are linked in affective, cognitive and social domains and must be understood in these terms within Innovation Creativity Environments.

Affective, cognitive and social elements of play cannot be separated *per se*, but of the purpose of discussing them, it is easier to look at each domain individually. While freely engaging in play, children acquire the foundations of self-reflection and abstract thinking, develop complex communication and metacommunication skills, learn to manage their emotions and explore the roles and rules of functioning in adult society (Verenikina, Harris et al. 2003).

Play facilitates emergence of creativity through generating positive affect, which increases cognitive flexibility, verbal fluency, and an ability to organise ideas as well as facilitates transformation abilities, remote associations and analogical transfer, all of which are positively related to creativity (Isen 1999) and knowledge creation. Positive affect leads to helping behaviours (Carlson, Charlin et al. 1988), and encourages people to make more favourable judgements and rate others higher on dimension of liking, competence and desirability to work with (Forgas and George 2001). Mainemelis and Ronson (2006) suggest that affective elements of play are more important than cognitive ones as play does not necessarily make people smarter, but appears to make people happier (Russ 1993). However, it must be noted that play involves negative as well as positive emotions. Play also allows for the expression and transformation of unpleasant or horrifying feelings (Winnicott 1971). Expressing such feelings through play allows individuals, and groups, to safely confront their fears by projecting the emotions onto the play object. It is precisely to enable this exploration that a background-of-safety must be established.

Divergent thinking, or the ability to generate a variety of ideas and associations with a problem (Guilford 1968), is one of the major cognitive processes facilitating creativity directly through play. Play also indirectly facilitates incubation and cognitive restoration (Elsbach and Hargadon 2002). Divergent thinking involves free association, broad scanning ability, and fluidity of thinking (Russ and Kaugars 2000-2001). Beyond divergent

thinking and creativity, cognitive processes that are facilitated through play include improvements to attention, planning skills, and attitudes (McCune and Zanes 2001); perspective-taking (Burns and Brainerd 1979); memory (Jensen 1999) and language development (Gardner 1999). Playing frees evaluation, prevents players from settling on an idea too quickly and thus gives further opportunity for creativity (Feist 1999) and increases contextual knowledge. Successful decision-making is based on the premise that people have an opportunity and ability to explore alternative options and do not settle on immediate solutions. Decision-making promises to be more accurate with the availability of divergent alternatives. This essentially is the notion of exploring the rhizome. Within a rhizome, an infinite number of possible connections can be made. The more possible connections are discovered, the richer the choices and the better the decision-making.

In addition to divergent thinking, studies have found relationships between insight (Vanderberg 1980), play and flexibility in problem solving (Pellegrini 1992). Hampden-Turner (1999) argues that creativity is a novel combination of familiar elements and the creative process involves a succession of divergent and convergent thinking periods. Whether it is through art, humour or play, the pleasing, foolish or amusing situation removes one self from present circumstances and affords an opportunity to think 'outside the box' and facilitate knowledge creation (Landry 2000). Berger and Luckmann (1967) call this shift in perspective a commutation that can be observed in children's play and even more sharply in adults play.

Play also has social consequences contributing to creativity. As social organisms, humans strive to belong to and feel part of a group and learn how to live and work in groups with different compositions and for different purposes (Isenberg and Quisenberry 2002). Play serves several functions in satisfying these needs and developing these social and emotional life skills (Isenberg and Quisenberry 2002). People feel more comfortable and

trusting during play. Play builds solidarity and ties between group members (Locke 1989). Play skills help children to form friendship, and adults also can make friends through play (Sutton-Smith 1997). Play with others gives children and adults the opportunity to match their behaviour with others and to take into account viewpoints that differ from their own (Sutton-Smith 1997). A positive social experience in the context of play allows for interaction and exchange of ideas. Edmondson (1999) defines psychological safety as a belief held by group members that the group environment is safe enough to express diverse viewpoints.

2.3.5 Play and learning

Many components of play – curiosity, discovery, novelty, risk taking, trial and error, pretence, games and social etiquette are the also components of learning. Some within contemporary society and educational discourse consider human learning to be a non-playful process accepting the historic notion that gaining knowledge can only be the result of hard labour (Robson 1993). Play is undervalued in educational institutions guided by the view that play is for playgrounds and learning for classrooms (Kolb and Kolb 2010). This view fails to account for the implications of play on divergent thinking, creativity and knowledge creation. Others argue (Karaliotas 1999) that contrary to a dominant learned culture by great effort, playfulness and enjoyment can and should be integral parts of the learning process. Play = Learning is part of the bold title of a recent book by Singer et al (2006) stressing the importance of play in human cognitive and social emotional growth on learning. Acknowledging play in the learning process also illuminates the importance of play in organisational settings, as knowledge creation and learning are integral for not only the advancement, but also the sustainability of organisations.

Mainemelis and Ronson (2006) summarise how play fosters learning. First of all, play minimizes the consequences of learning by providing less risky situations (Bruner 1972).

Secondly, in play, people are less afraid to make mistakes. Thirdly, play fosters behaviour that is less likely to be tried under functional pressure (Bruner 1972). In play, one learns not only how to do something, but also how to do it differently. Fourthly, play promotes metalearing by liberating one from the constraints of objects, contexts, and action, and encourages re-conceptualisation (Schuck 1996). A background-of-safety in play thus encourages affect for learning.

Bruner (1972) views play as a means for acquiring information about and experience in the environment. Once acquired in play, information and experience can be used to maximize the flexibility of the individual. In Bruner's view, play provides opportunities to try combinations of behaviours that would otherwise not be tried. The experiences with these behaviours then can serve as the basis for later learning. Fagan (1982) also suggests that play may provide the generalised ability to adapt to environmental novelty. He finds strong evidence for the claim that enrichment through play enhances behavioural flexibility, including the ability to solve novel problems and respond effectively to novel environments. In this light, play experiences facilitate generalised learning and problem-solving skills, such as seeking multiple solutions, adjusting strategies to the task, and adapting to changing environmental or problem conditions. Learning through play has untapped benefits within the educational domain, but is also essential within organisational settings. Kolb and Kolb (2005) postulate that learning is a more complete and beneficial experience if it takes into account different learning modes.

In terms of Kolbs' learning cycle (Kolb and Kolb 2005) learning spaces such as the Robinson Room allow students to learn in all four modes of the cycle. Participants (students and employees) have the opportunity to experience learning as a **Concrete Experience** or an **Abstract Conceptualization**. They can deal with these experiences by

Reflective Observation or **Active Experimentation** allowing participation in the complete spectrum of the learning cycle, with an equal emphasis on content and process.

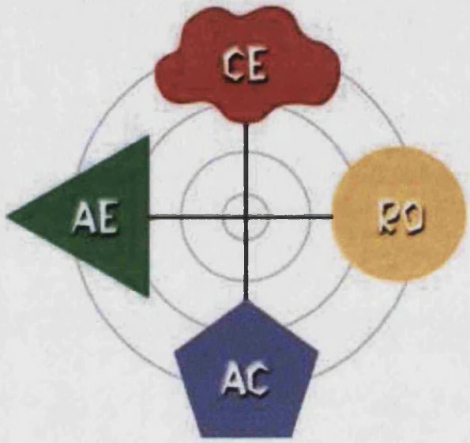

Figure 2.1: Kolbs' Learning Cycle
www.hayresourcesdirect.haygroup.com/lsi/Interpreting-Understanding_nav.asp

Concrete Experience (CE)	**Abstract Conceptualization (AC)**
Learning by experiencing Learning from specific experiences Relating to people Being sensitive to feelings and people	*Learning by thinking* Logically analyzing ideas Planning systematically Acting on an intellectual understanding of the situation
Active Experimentation (AE)	**Reflective Observation (RO)**
Learning by doing Showing ability to get things done Taking risks Influencing people and events through action	*Learning by reflecting* Carefully observing before making judgments Viewing issues from different perspectives Looking for the meaning of thing

Table 2.1: Kolb's Learning Cycle
www.hayresourcesdirect.haygroup.com/lsi/Interpreting-Understanding_nav.asp

The events within ICE incorporate all four learning modes: experiencing, reflecting, thinking and acting. Within ICE play exemplifies experiential learning by encouraging learners to take charge of their own learning, placing equal value on the process and outcome of learning, and by engaging in familiar experience with a fresh perspective (Kolb and Kolb 2010). This is in line with what Barr and Tagg (1995) identify as a shift in education from an 'instruction paradigm' to a 'learning paradigm'. In addition to the four components identified by Kolb an Kolb, social constructivism points to learning through conversation (Bransfod, Brown et al. 2000), which implies involvement in group activity.

Another important perspective on learning comes from Howard Gardner's (1999) frame of intelligence acknowledges that each learner has a bias toward a different style of learning, namely: linguistic (words and language), logical-mathematical (logic and numbers) musical (music, sound and rhythm), body-kinaesthetic (body movement control), spatial-visual (images and space), interpersonal (other people's feelings), intrapersonal (self-awareness) or through natural intelligence. For a successful experience within ICE, all eight styles need to be accommodated. The first two have been typically valued in schools; the next three are usually associated with the arts; and the final three are what Gardner calls 'personal intelligences' (Gardner 1999). A further parallel can be drawn to constructivism, which is the "idea that learners construct knowledge for themselves, and each learner individually (and socially) constructs meaning as he or she learns" (Hein 1991: 1). Learners interact with their environment, which generates collective knowledge (Lebow 1993). Whereas play is often associated with childhood only, learning is generally agreed to be a lifelong process.

2.3.6 Perspectives on adult play

Play literature and research are predominantly concerned with young children, and some do not even acknowledge play in adults. This research is aligned with the views of play researcher Sutton-Smith (1997) that play is necessary throughout life for individuals' growth and cultural evolution. In addition, anthropologists Johan Huizinga (1955) and Victor Turner (1982), acknowledge that adults use play to establish societal norms and recreate them. Yet, play in adults is not ubiquitously acknowledged.

Erikson (1953) suggests adults need to step sideward into another reality to rediscover play. Others suggest that adults need to step out of the real life (Kolb and Kolb 2010), and free themselves from economic pressures and responsibilities before being able to play

(Dewey 1990). For these reasons, many adults view adult play as different from their work: play as recreation, (e.g., playing golf, swimming, poker and camping), for the fun of it, or as entertainment, (e.g. movies, concerts, theatre, and the internet) or play as any activity which reduces stress (Baptiste 1995). Because the nature and process of participation are more important than activities in consideration of play, there is much debate about whether certain forms of activity can be regarded as play – for example, organised sport and games, or the supposedly 'passive' activities of watching television or using computers. Work and play are seen as different domains and Elkind (1988) suggests that work has replaced adult play (Elkind 1988). Others suggest that play is the opposite of work (Baptiste 1995). Play is unbound by time, chosen by players and enhance their knowledge of the world and themselves through interaction with others (Jones 1993) and players feel good through creative self-expression and mastery of skills and tasks (Baptiste 1995).

Even though play is important to children and instrumental to child development, adult play is more highly undervalued. Human psychology has a difficulty theorising about play in adults because doing so calls into question the assumption that play prepares children for adulthood. Ward-Wimmer (2003) states that the ability to play freely for play's sake has been lost amidst societal need to excel. By the time individuals reach adulthood, they have lost touch with their ability to be loose and creative without worrying about other people are doing. This research adopts the view that play is a life long learning process that should not be neglected as people grow older (Rieber 1993). Adult play may be less spontaneous and have less intrinsic value such as emphasizing a passing of time or beating an opponent or improving performance (Coalter 2001). To answer one of Sutton-Smith's rhetorical questions – yes, adults play. In this research, adults play during an event in order to explore possible options in writing a thesis, including topics, methodologies, available support, organisations and institutions as well as possible research fields. They

play with toys and colours and through skits. This is in line with findings of Goncu and Perone (2005) who identify various forms of adult pretend play including Improv, painting, poetry, dance and theatre.

Adult playfulness has typically been characterised by researchers as an enjoyable activity that keeps adults actively involved and intrinsically motivated (Glynn and Webster 1992). Mihaly Csikszentmihalyi (1990) speaks of playfulness as one of the complex traits of creative individuals. "There is no question that a playfully light attitude is typical of creative individuals" (Csikszentmihalyi, 1996: 61). Glynn and Webster (1992) define adult playfulness as

> "... an individual trait, a propensity to define (or redefine) an activity in an imaginative, nonserious or metaphoric manner so as to enhance intrinsic enjoyment, involvement, and satisfaction. Playfulness is a multidimensional construct encompassing cognitive, affective, and behavioural components, which together constitute a continuum along which individuals range from low to high" (Glynn and Webster 1992:82).

Play allows adults to have fun and reduce stress (Baptiste 1995), to learn through "playing with the possibilities, being flexible, staying loose when things go wrong, being curious, thinking creatively, and problem solving" (Jones 1986:xi) and to "take initiative, make choices among possibilities, act and interact, to engage in reflection and dialogue about their experience" (Jones 1993:146). This thesis accepts the beliefs that adults both play and benefit from play. This is particular visible in the field of play therapy. Ward-Wimmer (2003) discusses the benefits for adults (in the context of therapy) of diverse play with puppets, drums, clay, sports, motion, drawing, drama, dolls and sand.

2.3.6.1 Play and work

Glynn and Webster (1992) developed the Adult Playful Scale (APS), for use in studies conducted in the workplace, and Glynn and Webster found that playfulness is positively

related to cognitive spontaneity, creativity, positive task evaluations, involvement, and quality of task performance and negatively related to quantitative functional orientation. The APS consists of 32 adjective pairs on which adults rate themselves using a scale from 1-7. The APS furthermore taps five characteristics including, spontaneity, expressiveness, fun, creativity, and silliness. Glynn and Webster (1992) also find that adults who are more playful perceived work actions as being more enjoyable and kept more of a playful attitude in the workplace. Nonetheless, play and work tend to be used as contrasting more than complementary terms.

In fact, definitions of play often include the antithesis of work. According to the Protestant Work Ethic, work is 'blessed' because by keeping people busy, it draws people's attention away from 'evil thoughts or pursuits,' including those of worldly joy and pleasure that are usually associated with 'sin' (Karaliotas 1999). Play is often characterised by activities occurring in 'free time' (Aitken and Herman 1997) and play is seen as a "waste of time". This philosophy explains why play is more frequently associated with children, something that mature adults grow out of. Dix (2003) argues that surprisingly few adults engage in creative play, but it is when adult-like rationality and child-like imagination meet that effective and innovative solutions are at their best.

With the increase in the amount of time spent at work, there is often no free time for playful pursuits. This increase in work and decrease in free time can result in a decline of physical, emotional and mental well-being. Play can be an antidote, keeping people sane and functional during stress. Csikszentmihalyi (1996) found that children, who thought of what they did as play rather than as work, were more successful and happier later in life. Successful work is about a quality not the quantity of work. Some fear, allowing for play, may take away from precious work time; in fact, this could make work time more

productive. Organisations such as Google and IBM have successfully implemented play into work and reaped the benefits.

Play is frequently used as a metaphor for the ephemeral of life, what is innocent, infantile and foolish (Sutton-Smith 1997). For some researchers, only children play and adults only recreate; for children play is integral for growth and or adults it is only a distraction and irrelevant. Organisations must come to term with that play is a suitable and respectable way to describe intense and meaningful adult learning (Kerr and Apter 1991) that facilitates innovation. This study believes that play is integral for adults as well as for children, and that work and play should not be seen as antithesis.

Glynn and Ibarra (1988) argue that play is not like work because (a) play in more about process, while work is about results (b) play is more elaborate and deliberately complicated (Piaget 1962), while work is more efficient and goal directed (c) play is more emotional and less rational than work and (d) play is intrinsically motivated, while work is more extrinsically motivated. For some people, however, their work is play. Some workers who love what they do can only with difficulty subside to the work and play dichotomy.

One curious aspect of play is that the same activity, which for some is play, for others, is not. The same person may perceive the same activity at different times as play or not. Play is more than just an activity; it is also a state of mind. According to Miller (1973) play is not a set of activities but a way of organising behaviour in relation to any activity. According to Huizinga (1944) the essence of play is not *doing* an activity but *playing* it.

Blanchard (1995) describes a simple model of human activity drawn from anthropology that shows a different relationship between play and work. This model has two

dimensions, pleasurably and purposefulness, with play and work being orthogonal constructs. Blanchard (1995) defines a continuum with work and leisure at opposite ends where work has a purposeful goal, whereas leisure does not.

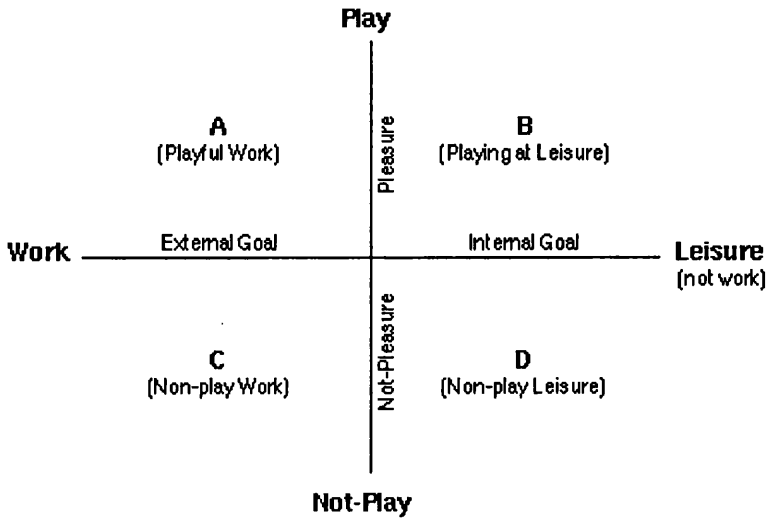

Figure 2.2 The Dimensions of Human Activity (Blanchard 1995)

The four quadrants of the model encompass the full range of human activities. Quadrant A (playful work) defines the 'holy grail' of occupations - getting paid to do a job that is also satisfying and rewarding. Quadrant C (not-play work), on the other hand, includes types of work that are not enjoyable, but are done due to obligations or financial necessity. Quadrant B (playing at leisure) includes those leisure activities that people devote deliberate effort to, usually over extended periods, such as serious hobbies. These are activities in which people grow intellectually, emotionally, or physically (e.g. reading, gardening, chess or cycling). Finally, Quadrant D (non-play leisure) includes those times or activities, technically defined as 'leisure,' when people find ourselves bored, unsatisfied, and with nothing to do (e.g. sitting in front of the television looking for something interesting to watch). In Quadrant A of Blanchard's model, people find themselves in as state of 'Flow' (Csikszentmihalyi 1990). When work and play are successfully untied or seen as synonymous (Kaunui, Thomas et al. 2010), organisations, employees and students

can benefit. The integration of play into the workplace may enable an environment were employees are not only happier but also more creative and productive (Mainemelis and Ronson 2006).

2.3.6.2 Organisational play

In order for play at work, the organisation must support ludic behaviours. Huy (1999) posits that an organisation's capacity to create a context for playfulness allows creativity to flourish without premature commitment to a course of action or decision. Playfulness extends beyond routine humour to allow

> "...safe experimentation and, like jokes, institutionalises disorder within order, expression of taboo issues within a legitimate forum, and surfacing of the repressed without extreme discomfort. Emotional playfulness induces a state of relative emotional equanimity to juggle tensions between foolishness and cold rationality" (Huy 1999: 340).

Within organisations, it has been observed that play and creative generation occurs mostly in common areas. Locke (1989) notes that play take places a few moments before work starts, after work ends, or during breaks. Hence, when play occurs within organisational settings, it usually occurs removed from the core productive tasks (Ronson 2003). This reiterates the play and work divide where play, when engaged in by adults, belongs in the private realm of life. But, as aforementioned this private realm is dwindling. Work Life Balance, or rather, Work Life *Im*balance has received increased attention in recent decades, as the pressures of work have intensified (Guest 2002). In order to work longer hours, people sacrifice exercising, time with partner and friends, social activities, hobbies, entertainment and play.

Traditionally, work had a physical setting with clear boundaries, defined job descriptions and regulated hours oriented to bureaucratic rules (Watson 1995). Institutions defined time that was supervised by others and that which was not (Epstein and Kalleberg 2001).

Today, however, physical and mental boundaries that once distinguished work from non-work are disappearing. The boundaries between traditional home and work spheres are becoming blurred (Nippert-Eng 1996). Home working (Brocklehurst 2001), advances in technology (Giddens 1991), individualisation (Beck 2000) and the emergence of the boundaryless career (Weick 1996) have expedited such changes. Less private time means less time to play, and this has consequences for individuals and organisations. If organisations want to keep the competitve creative advantage and avoid burnout syndroem (Kane 2005) they need to incorporate play in their creative endeavors. March (1976) suggests that by offering a time and a place for play, organisations can foster creativity by temporarily freeing individuals from prescribed rules and responsibilities. He further notes that the very experiences children seek out in play: disequilibrium, novelty and surprise, are precisely the ones organisations try to avoid.

From an organisational perspective, play is often seen as inappropriate; but at a time when innovation is one of the greatest commodities, such attitudes need to change. However, such attitudes can only change if the organisational climate allows ludic behaviour. Indeed, recruiters may wonder why their graduates are not more creative, their recruiting structure and organisational disposition inhibits creative behaviour. The organisational environment must encourage the antecedents of innovation and creativity and must provide safety to foster playful exploration and creativity.

Within organisational settings the functions of play include identity change where people can experiment with possible selves; culture, where play socialises organisational member with the social knowledge necessary to understand the organisation and their place, and psychological adjustment (Mainemelis and Ronson 2006). Applications in organisations, for instance, include managers may experiencing possible futures and identities in role plays (Schrage 2000). Play functions, those specifically enabling creativity, are discussed

in more detail below. Research still needs to show how play specifically facilitates creative thinking (Russ and Kaugars 2000-2001) and decision-making.

2.3.6.3 Play and decision-making

Play can aid problem solving and decision-making. Play generates a positive affect, which increases cognitive flexibility, verbal fluency and ability to organise ideas, all of which are positively related to creativity (Isen 1999) and thus knowledge creation. Play builds solidarity and ties between group members (Locke 1989)which allows idea exchange. Play prevents behavioural rigidity and promotes learning, flexibility, and creativity. Playing frees evaluation, prevents players from settling on an idea too quickly and thus gives further opportunity for creativity (Feist 1999).

Furthermore, in play problem-solving skills are enhanced (Smith and Vollstedt 1985). Winnicott (1971) argues that through play, a succession of ideas, thoughts, impulses and sensations can be communicated, and these can naturally enrich the idea generation and problem representation. Play also can voice the inarticulate (Cohen 1996). In terms of decision-making, play is the key to navigating the Five Levels of Decision Representation described by Humphreys (1984). Play allows for the more creative and innovative pathways to solutions. This chapter discusses play and the emergence of divergent thinking, options and multiple possibilities through play resulting in creativity within ICEs and beyond.

Play supports creative decision-making as it can aid navigation through the rhizome by allowing the safe exploration of alternative pathways. Miller (1973) writes that "play is not means without end; it is a crooked line to the end; it circumnavigates obstacles put there by the player, or voluntarily acceded by him" (p. 93). Play activities frequently involve uncertainty (Callios 2001) that make it difficult to predict what happens next, and

thus leave a sense of unresolved possibility (Marotto, Statler et al. 2003) and risk that can result in paranoid discourse if not stabilised by a background-of-safety. If stabilised against a background-of-safety, in play people can find themselves in flow as discussed below.

2.3.6.4 Play and flow

Csikszentmihalyi (1990, 1997) uses the term "flow" to describe a state of consciousness characterised by feelings of deep enjoyment where our usual measures of time lose meaning, and we experience a sense of control and mastery that results from focused attention on the challenge at hand. Creative productivity seems to flourish during flow. These creative moments seem to occur when there is a suitable ratio between the complexity of the activity and the skill level of the actor. Flow marks a state of consciousness where fears and anxieties about the unchangeable past and the unpredictable future are banished by an immersion in the present. The pursuit of achievable, yet challenging, goals lends order to consciousness, strengthens the self through frequent and regular successful experiences, and establishes conditions for the increased complexity that marks psychological health and development.

Flow derives from activities that provide enjoyment (as compared to mere pleasure). Enjoyment results when an activity meets one or more of the following eight components: 1) challenge is optimised; 2) attention is completely absorbed in the activity; 3) the activity has clear goals; 4) the activity provides clear and consistent feedback as to whether one is reaching the goals; 5) the activity is so absorbing that it frees the individual, at least temporarily, from other worries and frustrations; 6) the individual feels completely in control of the activity; 7) all feelings of self-consciousness disappear; and 8) time is transformed during the activity (e.g. hours pass without noticing). Conceptually "flow" parallels play. Csikszentmihalyi's studies of optimal experience provide many examples of

how play is conducive to creativity through play at work. In this research, Flow theory plays an important role in classifying basic student experiences of the overall event design.

2.3.7 Play and psychoanalysis

Psychoanalyst Winnicott is well known for his work on play, he recognises that the creative experience cannot be understood solely in terms of the subject, but must take into account the environment that it responds to. The recognition that creative experience is something that occurs neither solely within to an individual, but rather between two (or more) subjectivities is an important re-conceptualisation of subjective and inter-subjective space and how to conceive of experience itself, both within the psychoanalytic scene and the wider cultural sphere (Szollosy 1998). The location of creativity must therefore be a transitional area: potential space between two subjects, third area that is neither 'me' nor 'not-me,' that is between the internal fantasy world of the individual and the external world, or between the subjective object and the object that is perceived.

Winnicott (1971) utilises a clinical, psychoanalytic, developmental perspective to emphasise the notion of Potential space as a holding or facilitating environment that suggests the possibility of interplay between the internal and the external. He describes the Potential space as the space situated between the inner and outer reality, between subjectivity and objectivity. Winnicott does not separate the child from his or her environment in terms of the discovery of self, objective distancing, naming, rationalizing, or compartmentalising. Instead, he proposes a fluid, recursive process of separation involving intuition, experimentation and play. Unlike Freud or Lacan, Winnicott believes that separation between the child and her external environment is generated by the child's own need for knowledge (Aitken and Herman 1997). This perspective outlines an active and positive experience with objects and environments rather than a world in which there are not only significant tensions between self and other, but also gaps that can never be

bridged (Aitken and Herman 1997). For Winnicott (1971) all forms of symbolisation are fluid and flexible, allowing for multiple and divergent meanings and, therefore, subjectivities.

Winnicott argues that a person who lives in a realm of subjective omnipotence, with no bridge to objective reality, is self-absorbed and autistic. A person who lives only in the realm of objective reality, with no roots in subjective omnipotence, is viewed by Winnicott as superficially adjusted, and lacking passion and originality (Whitty and Carr 2003). The tension and strain between inner and outer worlds are not eliminated but bound in this space. The Potential space is neither pure fantasy, nor is it pure reality, making it a fruitful building ground for creativity.

Transitional objects initially help the child to develop from total dependence to relative independence, where the transitional object, a blanket for example, represents the mother (Winnicott 1971). The transitional object functions in the potential space. Using transitional objects, virtual territories become accessible and it is here that people can be openly imaginative and make creative associations which can be reverted subsequently back to reality as innovations. For a child to be able to deal with his/her experiences, fears, fantasies and wishes, play needs to take place in a safe (transitional) setting. When the objects continue to exist, independent of the child's awareness of them, they may provoke a new significance in relation to the child. Like Freud and Lacan, Winnicott believes that recognition of a world beyond the self initiates a realignment of 'self' and 'object/other' for the infant (Aitken and Herman 1997). Toys can also be transitional objects in the hands of adults (Sutton-Smith 1992). The important of toys goes hand in hand with their ability to extend the background-of-safety and thus enable creativity. Toys are not just a tool for creativity, but also enable exploration of wider insecure spaces by providing a safe space within the unknown.

Winnicott perceives creativity as a thing in itself that is present in all individuals and expressed through play. Indeed, an understanding of play is essential for understanding Winnicott (1971) as he argues that only when playing are children and adults free to be creative and that only in being creative can the individual discovers him or her self (Winnicott 1971). He considers play a way of thinking and believes that creativity gives a person's life meaning. The use of play with adults, including playing with ideas, and imagination adds to one's creativity.

From a developmental perspective, the potential space is an area in which the infant can be challenged and experiment, but this space is not limited to children. Adults can also interact in potential spaces with transitional objects. Winnicott (1971) insists that potential spaces are not simply confined to the experience of infants, but are something that "throughout life is retained in the intense experiencing that belongs to the arts and to religion and to imaginative living, and to creative scientific work" (p.24). For example, Green (1978) treats the psychoanalytic relationship as transitional. He notes, "Analytic technique is directed towards bringing about the capacity for play with transitional objects. The essential feature is no longer interpreting, but enabling the subject to live out creative experiences of a new category of objects" (Green 1978). In the organisation, potential space refers to a situation where past and future are present at the same time, it is a transition; it is not 'real' yet. Fantasy and creativity are central is this space and the aim is to prepare for the future.

Winnicott believes that given a 'good enough' environment, the interplay of the inner world and external reality promotes the development of self and facilitates growth. It is a space where one can develop psychologically, integrate love and hate and create, destroy and re-create oneself (Winnicott 1971). A creative space must provide, in addition to

freedom from typical and traditional restraints, a sort of sanctuary where trial, error, and failure are not only tolerated, but expected in the interests of progress (Lloyd 2001). Most importantly, this space is safe for individuals (or groups) to risk failing. Failing, as mentioned above, is an intricate part of the creative process.

From an employee or student perception, creativity actually carries high risks if not fully supported by the organisation. Organisations simultaneously hope for creative behaviours while disapproving of failed attempts. However, creative processes require trial and error.

Winnicott (1962) highlights how the potential spaces serves to shield the infant from unbearable mental experience, unthinkable, primitive or archaic anxiety in the vulnerable process of moving from an unintegrated to an integrated state. The experience of continuity of being is thus seen as dependent on three interfacing factors: a) a sense of safety associated with experiencing the inner world, b) an ability to limit concern with external events, and c) the generation of spontaneous, creative gestures.

Just as the mother must ensure her 'handling' of the child does neither inhibit creativity by oppressing expression nor is perceived as too negligent to promote anxiety, the organisation or school must make sure its employees or students do not feel oppressed or anxious, but free to experiment. In terms of collaborative events then, the key is to find a balance of challenge and safety or to be more precise, to challenge within the constraints of safety. Indeed, this assumes a balance between structure and freedom. The physical and emotional environment as well as a (good-enough) support team must respond appropriately to the participants' needs, where flexibility of the environment and the participants is key.

In terms of decision-making, explorations are made within the background-of-safety (Humphreys and Berkeley 1985) as will be elaborated in much more detail below. A person who comes into a space and is received in a psychologically safe and playful environment may create a more inclusive and comprehensive small world (Greenwood 2003). Bowen and Hosking (2000) recently discussed the need of potential spaces for organisational learning, identifying that "episodes of change, innovation, conflict and the like, where different parties meet and share perspectives, can be this sort of [potential] space" (p. 273) and conclude that a relational metaphor of organisational learning can contribute to the creation of such places. Narrative ways of conveying insight and understanding are the future for communicating knowledge (Czarniawka 1998). This multi-voiced approach (rhizome by Deleuze and Guattari 1988) is supported by Innovation Creativity Environments.

There is also an organisational application to Winnicott's notion of potential spaces. A company (or school) that wants a creative culture needs to provide space that will encourage this kind of activity. Ideas have a much better chance of conception and survival when they have plenty of room (Lloyd 2001). The nurturing as well as the generation of ideas needs to take place in a risk-free zone. People need to feel safe to explore boundaries that allow new ways of seeing. The "Cycle of Creativity" (Hodgkin, 1985; in Tucker, 2002) consists of borderless movement between practice, play, and exploration. It identifies the transitional object and play central to creative process. Kauffman (1995) identifies three interdependent human roles as *homo ludens* (playful), *homo faber* (practicing), and homo sapiens (wise explorer). According to the model, creativity occurs through a fluctuation between humans' different roles as playful, practicing, and within the background-of-safety.

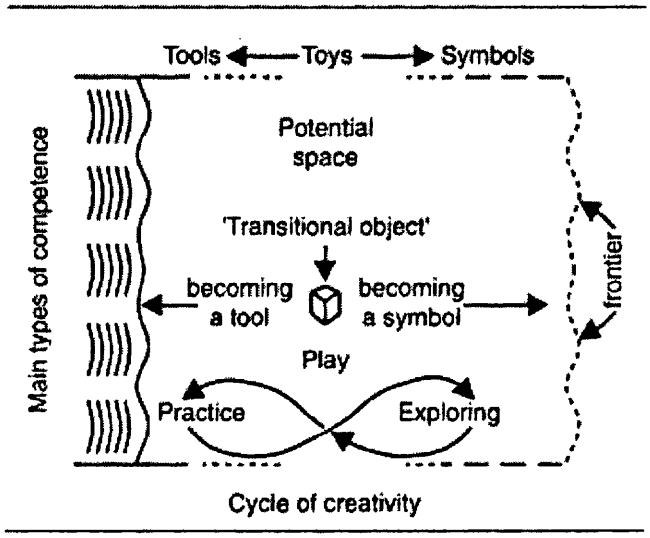

Figure 2.3: Cycle of creativity (Hodgkin, 1985; in Tucker, 2002)

2.3.8 Play and the background-of-safety

The background-of-safety, as conceptualised by Sandler and Sandler (1978) is a psychoanalytical cognitive model that identifies safety as a feeling quality within the ego, and motored by the ego, which is usually taken for granted. The ego tries to maximise safety experience rather than avoid anxiety. According to Freud, signal anxiety alerts the ego to an impending internal danger, whereas Sandler postulates that safety-signals are an indication of a mental state that points in the direction of greater safety.

The pursuit of the background-of-safety operates on an unconscious level (hence it is called a background). Through perception, the ego copes with unorganised input and organises and integrates it, resulting in a feeling of safety. Joseph Sandler (1987) later extends the notion of safety beyond its link to perception, "*all* aspects of psychobiological functioning, insofar as they proceed smoothly and harmoniously, can be regarded as generating safety feeling" (p. 1). This raises the possibility that a range of sources can provide safety. Sandler emphasises the crucial importance of the earliest affective interchanges between caregiver and infant. His model does not extend beyond childhood

drives. However, as applied in the decision spine, and in line with other psychoanalytical models, it is believed that the active pursuit of safety is equally relevant to adults.

The relevance of the background-of-safety in terms of decision-making can be understood in terms of the risk each decision carries. A major challenge of decision-making is uncertainty, and a major goal of decision analysis is to reduce uncertainty to alleviate some of the risk. But one can never know all possible outcomes of pathways, which forces the decision maker some aspects of risk. Creative decision makers need to have the autonomy to make their decisions through exploration and experimentation with the accepted risk of failure.

Ultimately, in decision-making, it is the goal to extend the background-of-safety. How this can be done is the focus of this research and brings us to the conceptualisation of the decision spine, which must be understood within the historical context of traditional decision-making models.

2.4 Summary

Summarising play research (Rubin, Fein et al. 1983), play activities are freely chosen, intrinsically motivated, attention to means not ends, exploratory, free from external rules (as opposed to games/sports) and actively involved. According to Winnicott, play takes place in a safe place. Creativity is a major asset to organisations and academia, but both organisation and academia continuously question how to foster creativity. Using play and theories thereof can enhance decision-making processes by establishing a background-of-safety that accepts amounts of manageable risks. Thus, play fosters creativity as it creates a background-of-safety allowing for risk taking, an essential component of the creative process as well as decision-making. In order for play to be a key component of the creative

process, it must be acknowledged as part of adult behaviour by management of organisations and academic institutions.

3 The evolution of decision support

"I hear and I forget. I see and I remember. I do and I understand"

Confucius

3.1 Introduction

The Innovation Creativity Environments exist to help individuals and groups make better decision and are more creative. The connection of creativity and decision-making is that decision-making is the process of generating and evaluating alternatives. The more alternatives one is able to generate, the richer and better the decision-making process (and hopefully the decision) become. Creativity allows individual and groups to generate more, different, alternatives to choose form. Similarly, play is helpful in decision-making in that it helps one endeavour through flexibility and safety. This is the building stone of the decision spine and more specifically the five levels of representation of the decision problem (Humphreys 1984), an intricate part of "decision-hedgehog" (Humphreys and Jones 2006), which is the theoretical backdrop to this paper. This backdrop is adapted to the practicality, importance and theories of the background-of-safety (Winnicott 1971; Sandler and Sandler 1978).

The discussion will follow a series of events in a particular Innovation Creativity Centre, the Robinson Room at the London School of Economics (LSE). There are several different approaches identified in the literature that describe processes that take place in facilitating environments. These are largely framed in terms of decision-making and learning within flexible learning environments (Rieber 1993). This paper, thus, must also acknowledge the evolution of group decision support (GDS) in order to present a full picture of collaborative

events. The decision-hedgehog is an alternative to classical organisational decision-making, moving away from Rational Choice Theory to a more complex but apt decision-making system. It functions within Group Decision Authoring and Communication Support (GDACS). Indeed, using the decision-hedgehog can be seen as a better adaptation of collaborative decision-making, which originated with Decision Support Systems (DSS), moved to Group Decision Support Systems (GDSS) and carrying on to what is being described throughout this research as GDACS.

3.2 Supporting decision-making

DSS is a concept first introduced around the early 1970's in an attempt to support organisations in planning, choice and implementation of decisions (Huber 1981). Although there is a general underlying idea as to what DSS is all about there is no single definition of the term (Turban, 1988; Doukidis, 1989; Bannon, 1997). In fact as Turban (1988: 8) argues, it "is a content-free expression" which suggests that it means different things to different people. Bannon (1997: 95) refers to DSS as an "umbrella term" which includes information technology applications that "support" people in making decisions. In essence, a DSS is a technological tool that aids the human agent through the decision-making process without making the decision for him or her, based on rational choice. Given the limitations of individual decision-making a new direction was needed that shifted the focus to enhancing the information resources available to groups through the use of information technology (Phillips 1989; Kleindorfer, Kunreuther et al. 1993). DSS provides structure and support for the decision process, but limits the decision makers' autonomy and creativity. In an attempt to overcome this, Group Decision Support Systems build on DSS, adding the element of collaboration.

GDSS were designed in the 1980s for groups to come together and collaboratively make decisions with the aid of information technology in order to avoid the pitfalls of Rational

Choice Theory. Phillips (1989: 210) expanded definition of GDSS is "The use of information technology to help groups of people consider uncertainty [what is the problem, how should we solve it, what are our options], form preferences [what is the risk we want to take, what are the trade offs between objectives], make judgments and take decisions within prescribed limits." There are four main stages identifiable in GDSS. The first one involves the recognition of the problem, the second is about generating an evaluative context, the third concerns the evaluation of the different actions and their consequences and the fourth is selecting the action.

Creative works have often been produced in collaboration (Sternberg and Lubart 1999). In the decision spine discussed later, GDSS is formalised in terms of developing a structure of the problem frame, exploring what-if questions and making the best assessment. GDSS does not look at higher level problem expressing discourse or exploration of small worlds. The problem thus is that discourses are taken for granted and problems already framed in the small worlds. There is a drive for action, but a lack of rational. The implications for this, within group decision-making, are that there is less buy-in, once the decision is made, implementation can be problematic and solutions may not be ideal. Stakeholders may not be involved in all aspects of the decision-making process and those who are involved to not fully get to explore and communicate their conceptual models (Humphreys 1989).

One example of GDSS is Decision Conferencing. This is a method of organisational decision support in a group-centred environment. First introduced by Cameron Peterson in the 1970s (Phillips 1989), Decision Conference is of particular interest because it employs a highly portable, chauffeur-driven computer system to support face-to-face meetings devoted to a focal problem that demands intensive collaboration and consensus building. It brings together experience from information technology, decision analysis and behavioural studies in order to help groups create a shared understanding. This in terms,

helps groups create a shared understanding and reach an agreement for commitment to action (McCartt and Rohrbaugh 1995).

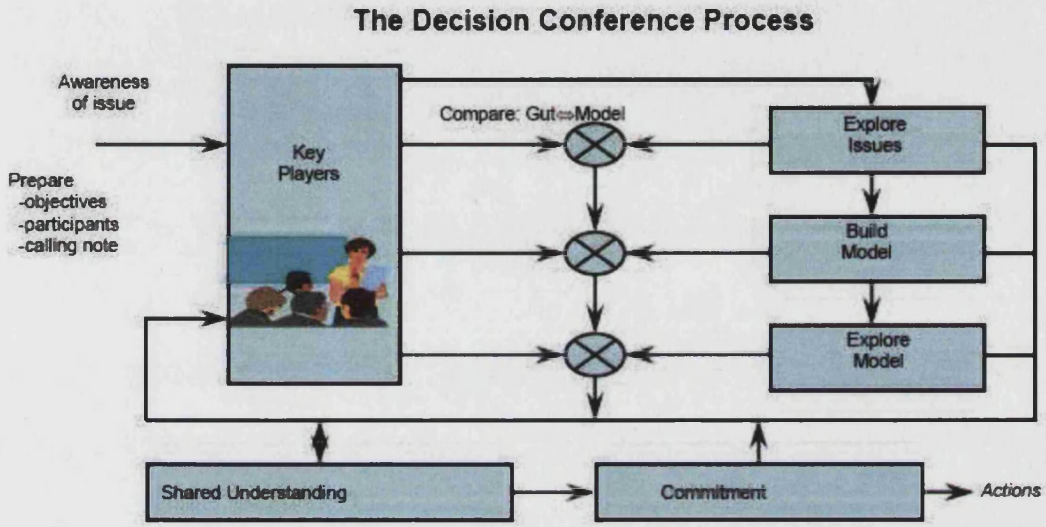

Figure 3.1: The Decision Conference Process (Phillips 2004)

A typical Decision Conference consists of two days of intensive work with participants from the client side, one or two facilitators and a decision analyst (Phillips 1989). The role of the primary facilitator is to guide the process, ensure that there is a smooth interaction between the group members, help the group structure their discussion, think creatively and imaginatively, identify the issues, model the problem, enable communication, manage conflict and ensure that there is a shared understanding. The decision analyst is there to assist the facilitator by transferring the model that the latter has drawn on the whiteboards into a microcomputer (Phillips 1989; McCartt and Rohrbaugh 1995)

GDSS are criticised for over-relying on the rational model of decision-making (Bannon 1997). According to Huber (1981: 3), "the rational model portrays an environment where organisational decisions are consequences of organisational units using information in an intendedly rational manner to make choices on behalf of the organisation". Furthermore,

given that this model does not function at higher levels of the decision spine, there is a lack of creativity and exploration for better solutions. Recently, this model has come under attack with the more evolved GDACS favoured for group decisions. The objectives of a decision conference are to generate a shared understanding of a problem and commitment to action. This is achieved by creating a computer-based model, which incorporates the differing perspectives of the participants in the group, examining the implications of the model, refining it, testing different assumptions and implementing a solution.

GDACS introduces a wider functioning and more apt decision-making model. Operating with these wider levels allows local groups to use their own knowledge and discourse to frame problems when exploring possible solutions, enabling identification of problems providing context, rational and claims. The decision spine is a representation of the decision problem that is discussed in detail in section 3.4. Essentially, it moves from a feeling state about the problem (at Level 5) to a doing stage (at Level 1). As Humphreys and Jones (2006) indicated, GDACS facilitates creative authoring by enriching contextual knowledge that can improve the process of developing at Levels 5 and 4 of a decision spine.

Utilising GDACS can result in better collaboration, buy-in and implementation of decisions taken and, most importantly in this context, allows for decisions that are more creative. In other words, by exploring Levels 5 and 4 participants look at more options and possible solutions resulting in innovation. Importantly, as indicated in the section on the decision-hedgehog, processes do not close after a decision is made but learning continues as people continuously think about the issues (and go back up the decision spine into the body of the hedgehog).

This type of GDACS event, as explored through the decision-hedgehog methodology shows what happens within an ICE event and how we can foster creativity and innovation within academia and organisations. In order to understand the decision-hedgehog, we need to review the evolution of decision-making that led to the conceptualisation of the model. As with other explanations of decision-making, this begins with the model of Rational Choice.

3.3 Decision-making post Rational Choice

All decision-making begins with a discrepancy between the actual state and the desired state. In order to achieve the desired state, decisions have to be made. This simple construct traditionally had a simple answer Rational Choice Theory. The Rational Choice decision-making model is guided by the following premise:

1. Recognise and define the problem.
2. Identify the objective of the decision and the decision criteria.
3. Allocate weights to the criteria.
4. List and develop the alternatives.
5. Evaluate the alternatives.
6. Select the best alternative as the decision.
7. Implement the decision.
8. Evaluate the decision.

The rational decision-making model is useful in guiding our approach, but it does not work perfectly or predictably, as the context of most decisions is seldom so simple or rational. The fundamental core of this Rational Choice theory is that social interaction is basically an economic translation that is guided by the actor's rational choice among alternative outcomes (March 1994). People simply do not have the capacity to define, diagnose, design and decide that neatly.

Criticisms and challenges to the Rational Choice theory are vast (Cyert and March 1992; Nappelbaum 1997; Morçöl 2007). Most relevant to this research is a critique by cognitive psychologist Herbert Simon (1960) which points out that individuals' behaviours are affected by biases and the decisions are not as rational or economic as described by the Rational Choice model. The failure of the Rational Model and "decision-making as a choice" has led to the emergence of alternate discourses (Humphreys 2004).

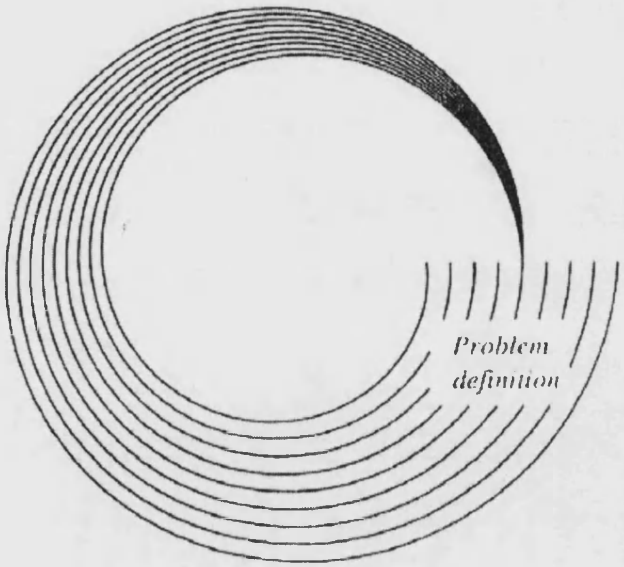

Figure 3.2: The Problem Definition Cycle (Nappelbaum 1997)

Simon (1960) refers to a linear model of decision-making moving through three different stages *Intelligence*, *Design* and *Choice*. During the *Intelligence* phase there is a search "for conditions that call for decisions." In other words, the environment or the reality is examined and there are attempts for the identification and definition of the problem. In the *Design* stage all the "inventing, developing and analyzing possible course of action" takes place (Simon, 1960: 2) constructing "a model of an existing or proposed real world system." Finally, the *Choice* phase refers to "selecting a particular course of action from those available" (Simon, 1960: 2); it is about selecting a proposed solution to the model.

Implementation was added later as a fourth phase and it is about solving the real problem and not the model that represents it (Turban and Aronson 2001).

Whereas Simon's model is a linear and sequential representation of the problem, Nappelbaum's (1997) model is more cyclical stressing the importance of iteration into the decision-making process. A task is never complete, instead one has to go back and redefine the problem from the beginning. The premise of redefining problems and starting the decision process repeatedly are essential parts of the decision-hedgehog model.

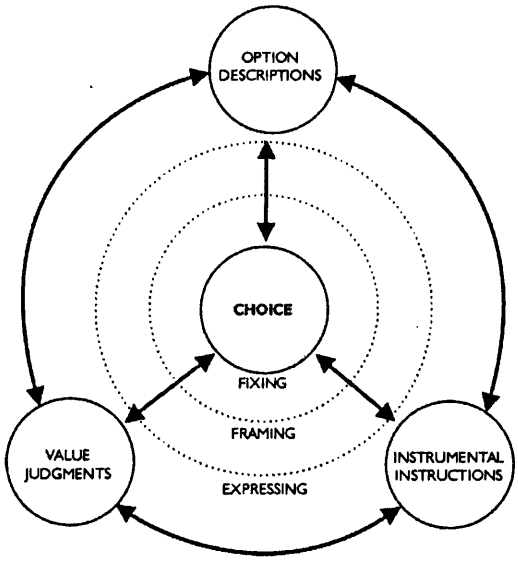

Figure 3.3: Circular Logic of Choice (Nappelbaum 1997)

Nappelbaum (1997) identifies the importance of the adequate representation of the problem in order to be able to address and solve the problem. Problem representation, according to Nappelbaum, cannot be separated from both formulation and solving. He introduces the concept of "the problem definition cycle" (figure 3.2) a reformation of the problem, narrowing and specifying it every time in order to maintain an internal consistency of the representation. The cycle starts from the formulation of the problem

and ends at the same point, with the problem sharpened. From that point, the cycle starts again until it reaches the point of solving the problem (Nappelbaum 1997). The circular notion of the decision-making process, leads to the Circular Logic of Choice. Nappelbaum (1997) insists that this linear logic of choice is not realistic, and represents the circular model of choice (Figure 3.3). This model demonstrates that "objective reality" and "subjective preferences" can be balanced, and the knowledge and subjectivity of all the participants involved in the decision-making and implementation processes are taken into account.

3.4 The decision spine

The five levels of representation of a decision problem is explains how the decision maker shifts from feeling that something needs to changed to the action towards making a change – with a decision.

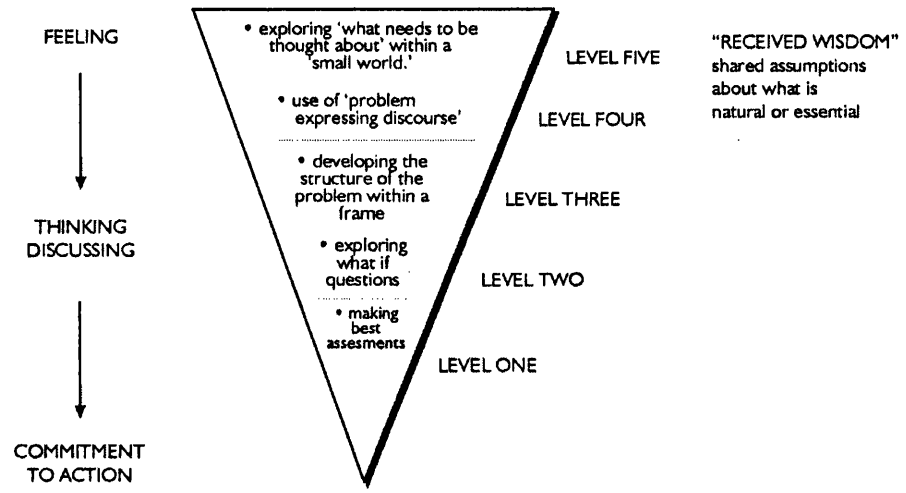

Figure 3.4: Five levels of representation of decision problems (Humphreys and Jones 2006)

The five levels of representation of decision problems (Figure 3.4) are presented as an inverted triangle descending from the feeling (Level 5) to action (Level 1) – and on a parallel course from more abstract to less abstract conceptualisation. According to Humphreys and Berkeley (1985), this indicates the progressive decrease in discretion in

thinking, as one moves downward from Level 5 (exploring fantasy scenarios and dreams with conjecturality beyond formalization or structure) towards fixed structure and zero discretion at Level 1 (making "best assessments").

During decision-making, the decision maker moves through the different levels (up and down) until there is a commitment to action, when a decision has been made and acted upon. Decision-making is an iterative process. The alternatives available influence the criteria applied to them, and similarly the criteria established influence the alternatives one will consider (Humphreys 2004). Each level is constrained by what can be thought about at the level above (Humphreys and Berkeley 1985). The decision maker must thus at times revisit higher levels to enable better narrowing at lower levels. Criticism for GDSS is that it only functions at Levels 1-3, not being able to consider higher levels. It is in Levels 5 and 4 that advanced decision-making models like the decision-hedgehog functions. It is at these levels that creativity becomes an asset and play becomes a pathway with a background-of-safety for exploration.

At Level 5, exploration occurs within the bounds of what participants are prepared to think about. This contextual knowledge indicates what an individual can imagine, located in the symbolic imaginary. The symbolic imaginary can be linked to Winnicott's (1971) potential space where discovery takes place, which intersects the internal and external world of the child (Steyaert 2002).

According to Humphreys and Berkeley (1987), the roots of the decision problem are imagined through explorations through the rhizome carried out within the 'small world' (Savage 1955; Toda 1976). Here, creativity can be introduced through the creation of trust, a rich cognitive context and psychological safety. Indeed, only within the presence of

a background-of-safety can decision makers venture into the rhizome without facing a paranoid discourse.

At Level 5, is where the decision maker realises that there is a problem and where this problem is shaped or constructed. The boundaries of the problem are unclear but become defined by "what the decision maker is prepared to retrieve from his or her semantic memory or 'unconscious'" in thinking about the decision problem (Humphreys, 1998; 4). Because the exploration of 'small worlds' is beyond language, alternative ways within the decision-making process must be utilised to be able to explore the rhizome. Fantasy projection and alternative futures, as in plays or skits, is one way of achieving this, given a background-of-safety. Participants can explore the unthinkable, but cannot present the results as this level is beyond showing and telling. In order to present they need to move down a level.

Traditional decision-making models and decision conferencing do not address Level 5, limiting how creative the decision-making process can be further down on the cognitive framework. Within Innovation Creativity Environments, a background-of-safety is created in psychologically safe environments enabling participants to explore the rhizome, enriching the context and allowing for more creative, cognitive endeavours further down the decision spine. It is one of the goals of this research to explore how to extend the background-of-safety without setting constraints.

Depending on the constraint set in 'small world' boundaries set at Level 5, at Level 4 problem a expressing language is linked to frames to handle and analyse that problem (Humphreys and Berkeley 1987). While Level 5 creates a map for exploration of the problem, Level 4 focuses on the parameters of the problem. For better decision-making, the boundaries must be sufficiently inclusive and not simply dictated by 'discourses of

truth' (Foucault 1988) which are 'unquestionable' or 'natural' statements for "backing the claims in the minds of those participants in the decision-making process who need to be persuaded to accept them" (Humphreys 1998:4). If decision makers limit what could be included in representations of the decision-making problem to what is 'unquestionable' or 'natural' the outcomes are restricted, lack creativity and may not be optimal.

At Level 4, representations become explicit and are formalised within frames. These frames are identified by decision makers as relevant to handle the decision and to structure aspects of the problem. Structuration is still substantive rather than analytical (Levine and Pomerol 1995) and the problem is identified by the decision maker. At this level problem expression and the notion of what should be explored are key. Through problem expressing discourse, contextual knowledge becomes external knowledge as claims of what is in and what is outside of the decision-making process. This knowledge, however, is not lost and remains available in future decision-making processes.

Within traditional decision-making models, such as Rational Choice, Level 4 is often beyond an individual's realm. In more evolved decision-making models, such as GDACS and decision conferencing, stakeholders are brought together bringing in differing perspectives of the problem and thus elaborating on claims proving what should and should not be thought about in the representation of the decision problem (Humphreys and Jones 2006), enriching the context of problem expression, but seldom functioning at this level. It is at Levels 5 and 4 that the workshops described in this paper, Project Dreams and Reality, takes place.

Level 3 marks the change of exploring options to evaluating them. At this point, the decision-making process becomes more individualistic and traditional decision-making models (e.g. DSS and GDSS) are considered. At this level the decision maker defines the

structures within the frames. These frames are identified through claims made through problem expressing language (Humphreys and Berkeley 1987). Level 3 focuses on structuration and is often referred to as conceptual model building (Humphreys 1998).

At Level 2, "What if" questions are explored and a sensitivity analysis is carried out. By "what if" questions, the process of creative decision-making thus becomes one of conjecturality, (Eco 1986) that is inherent in the testing, discarding and re-testing of ideas (Kelley and Littman 2001). At this late stage, ideas are narrowed down and there is a "need for rational and tight processing modes" (Kaufmann and Vosburg 2002). At Level 1 the decision maker comes to the point of actually making a choice, making a commitment to action. In terms of the decision-hedgehog, this is termed "pricking the real," at which point the problem definition begins anew. Unfortunately, in this 'optimal' act of choice, when "pricking the real" does not necessarily withstand reality testing, it terminates the decision-making and the process that supports it (Kleindorfer, Kunreuther et al. 1993). Whereas in conventional decision-making solving the problem ends here, within the decision spine the process remains open (the process can start again) as the decision-hedgehog has several not just one decision spine. The full decision-making process is an overall process of widening out and then gradual narrowing down.

In the decision-hedgehog, the triangle that represents the five levels of representation is embedded within the circular logic of choice. The triangle takes on a cone-like construct and becomes what is known as the decision spine (Figure 3.5). The circular logic of choice works on the premises that the actual state-of-affair differs from a preferred state. In order to reach the preferred state decisions have to be made on how to get there. Therefore, going down levels is no longer a straightforward process, but a constant engagement between expressing, framing and fixing.

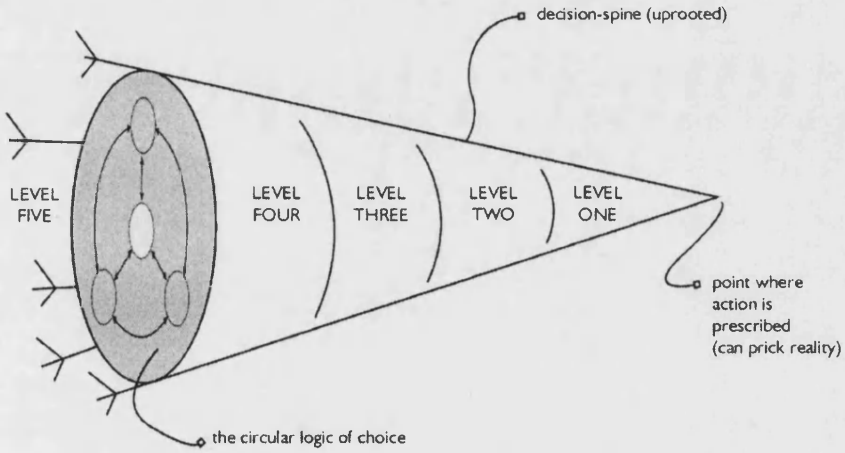

Figure 3.5: Decision-spine (Humphreys and Jones 2006)

Whereas the spines of a real hedgehog emerge from its body, the decision spines of the decision-hedgehog are embedded in a body-without-organs (Deleuze and Guattari 1988). Unlike a body located in the real (i.e. a hedgehog in a garden), the body-without-organs (Deleuze and Guattari 1988) is located in the imaginary. This means it exists only in the imaginary reality. It is accessible through story telling, communication and exploration with groups, which are all collaborative activities. The body-without-organs is an unreachable desired state, and while psychoanalysis concerns interpretation and fantasy, the body-without-organs concerns experimentation. The body-without-organs functions as a locally intense structure of unstructured knowledge known as plateaus. Its internal structure is called a rhizome.

> "To become completely lost is perhaps a rather rare experience for most people in the modern city. We are supported by the presence of others and by special way-finding devices: maps, street numbers, route signs, bus placards. But let the mishap of disorientation once occur, and the sense of anxiety and even terror that accompanies it reveals to us how closely it is linked to our sense of balance and well-being. The very word "lost" in our language means much more than simple geographical uncertainty; it carries overtones of utter disaster." (Lynch 1960: 4)

The rhizome may be a way of being lost within an environment without actually feeling the desperation described by Lynch. Given the antecedents of a safe environment, the rhizome

may provide an alternative understanding of how to navigate through unknown territories. Navigation does not necessarily to be planned as all levels interconnect and all paths potentially lead to a solution. Here we are reminded that sense-making in organisations occurs when members confront events, issues and actions that are somehow confusing or surprising (Wick 1993).

As Deleuze and Guattari (1987) explain, a rhizome is a map and not a tracing.

> "Make a map not a tracing. The orchid does not reproduce the tracing of the wasp; it forms a map with the wasp, in a rhizome. What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real" (Deleuze and Guattari 1988: 12).

Rhizomes create smooth space, and cut across boundaries imposed by vertical lines of hierarchical order. Rhizomatic thought is multiplicitous, moves in many directions and connects to various other lines of thinking, acting, and being. A tracing is genetic in the sense that it evolves and reproduces from earlier forms.

> "All tree logic is a logic of tracing and reproduction" (p. 12). The map is open and connectable in all of its dimensions; it is detachable, reversible, and susceptible to constant modification. It can be torn, reversed, adapted, to any kind of mounting, reworked by an individual, group, or social formation." (Deleuze and Guattari 1988: 12).

The rhizome thus contrasts with the arbolic, which is linear, hierarchic, sedentary, and full of segmentation and striation. Arbolic thought, prevalent in life sciences, represented by the tree-like structure of genealogy with branches to subdividing into smaller and smaller categories. While arbolic thought is vertical and stiff, rhizomatic thought is non-linear, anarchic, and nomadic. Similarly, processes within facilitating environments are not a straight line. Eco (1986) writes that the rhizome is constructed in a to allow interconnectivity of all the paths without a centre or periphery, and be "potentially

infinite" (Eco 1986: 577-558). When a rhizome is broken, or disrupted, in one location, it forms a new line or connection to elsewhere.

Deleuze and Guattari (1988) outline the six principles of the rhizome as follows: The first two, the principles of connection and heterogeneity, state, "any point of a rhizome can be connected to anything other, and must be" (Deleuze and Guattari 1988: 7). The ideal or perfect network is a system of maximum connectivity between points. The third, the principle of multiplicity explains the multiplicity of lines and connections, comprising that "there are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines"((Deleuze and Guattari 1988: 7). The fourth, the principle of a signifying rupture states that "a rhizome may be broken, shattered at a given spot, but it will start up again on one of its old lines, or on new lines." (Deleuze and Guattari 1988:7). In a rhizomatic network, movements and flows can be re-routed around disruptions. Further, the severed section will regenerate itself and continue to grow, forming new lines and pathways. The fifth and sixth principles, of cartography and decalcomania conclude that "a rhizome is not amenable to any structural or generative model" (Deleuze and Guattari 1988:8). Here, Deleuze and Guattari differentiate between maps and tracings.

Drazin et al. (1999) summarise that an individual (1) develops an intra-subjective cause-and-effect map of events, actions, and consequences; (2) places himself or herself in this map; and (3) takes action according to this map as events unfold. Frames organize meaning, motivation, and subsequent involvement and action. During any experience of work activity, an individual not only develops a sense of what is going on but also a sense of how to engage. By placing oneself on the map, where all ways lead to a potential solution, the individual feels free to be creative as pressures of success are removed in a safe space.

However, within the environmental contexts of this study, not only do these maps change, but also individuals are able to navigate through the experience without maps. Furthermore, different individuals can function on different paths within the maps they create and join at any point in a rhizomatic fashion. As Goffman (1974) notes, even though two actors share a similar set of experiences, their frames of reference may differ based on their positions with respect to that activity. In terms of the rhizome, this suggest that two people may help each other in the rhizome as their paths may unite and continue together, or, they may stay on their own paths and have completely different experiences.

This concept is similar to Eco's (1986) idea of a third kind of labyrinth – a space of conjecture like a rhizome which "has no centre, no periphery, no exit because it is potentially infinite ... it can be structured, but never definitively" (Eco 1986: 57-58). This is the ideal space for creativity to occur as one can constantly play and move around the rhizome with infinite outcomes. Having no exit creates a space in which time does not constraint creativity, judgement is not a factor, and safety is implicit.

It is imaginable that in the rhizome, people's paths may cross, unite, and diverge. Every person is affected by each other's actions. People take ideas of those before and craft them into their own. They collectively shape and reshape solutions and definitions of problems through the levels until reaching is a point of action. Then they may jump back into the body of the rhizome and start the iterative process over, again and again. Trough play they navigate the rhizome by creating the space. For instance, stories are told in the space thus enriching by the story.

It is impossible to navigate through the same space the same way twice. As one can never jump into the same river twice (Heraclitus 544 BC), processes in rhizomatic environments

are fluid, never the same, never static. Specific moments can be revisited retrospectively through documentation, but the same experience cannot be relived.

The goal is to create infinite connections between the real and the imaginary. Because the rhizome is a doubling of fantasy and reality, the conjectures are infinite. A person is free to make as many connections as possible, thereby discovering options that never would have been discovered if reality and fantasy were not linked. These connections translate into creativity within a creative space. A creative space is encouraged by a dialectic between the real and the virtual against a background that allows such explorations in safety. It is also critical to note that the rhizome has multiple entryways like a map. This means that individuals do not have to enter the same place the same time or even the same plane, but are free to roam navigating through their maps, as individuals or small groups, finding their way ultimately using play as a navigational device. The arena is generated and reconstituted by participants who inhabit it, allowing them a chance to discover their own agency and previously unseen resources.

3.5 The decision-hedgehog

The decision-hedgehog is a body-without-organs, covered in many decision-spines open for exploration and nurturance in the plane of the symbolic/imaginary (Figure 3.6) (Humphreys 2007). This allows for collective fantasies to be simultaneously actualised in the real and symbolic realms. When there is only one decision-spine, the prescription of the solution to a certain decision problem is always hegemonic (Humphreys and Nappelbaum 1997). Sometimes what appears to be best course of action may not actually be worth implementing and a new, more appropriate path has to be found. In order to succeed, there need be more than one decision spine, and the roots of these decision spines are located in one arena which constitutes the body of the hedgehog.

"Conceptualising decision-making as 'learning' requires gaining feed back from the effect of embarking on 'chosen' courses of action (pricking the real to gain information) that is not treated in isolation, like a diagnosis, but which extends the rhizome that constitutes the body without organs of the decision-hedgehog in which roots of the decision spines are located, enriching contextual knowledge for subsequent decision-making along a plethora of other spines rooted in this rhizome." (Humphreys and Jones 2006:6)

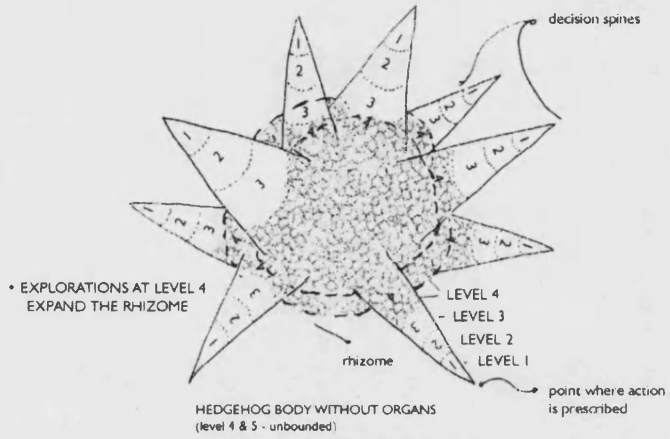

Figure 3.6: Decision-hedgehog cross-section: Decision-spines rooted in the rhizome constituting the body-without organs (Humphreys and Jones 2006)

Every decision made within ICE is defined by the collection of information, alternatives, values, and preferences available at the time. A Rational Choice theory presupposes an ideal decision environment that possesses all possible information. However, information is unlimited and can never be exhaustive and entirely accurate. Hence, there is always a risk involved in decision-making. The idea behind nurturing the decision-hedgehog is to create an opportunity to see many (not all) possible pathways through exploring the rhizome before making a decision.

The decision-hedgehog operates on the premise of the decision-spine, however, speculates that there is more than one spine functioning within decision-making processes. This means that, unlike with a single spine, the problem is not actually solved once the decision maker makes a decision, but rather through a continuous cycle of decision-making that

takes into account pathways that were not connected to the "mainline" trajectory of the initial decision (Humphreys and Jones 2006). The hedgehog requires several decision spines, as decisions are never made in isolation of each other, but all decision influences each other. Thus, decisions are made under the influence of other decisions. This is known as a 'stream' in decision-making. There is a stream of decisions surrounding any given decision; decisions made earlier have led to this decision's potential actualisation and limitation. Many other decisions will follow from it. Within the decision-hedgehog, each stream is represented by a different decision-spine.

This research is most interested in the aspects of the hedgehog related to the process of enriching context. The hedgehog is a culmination of the individual theories. The important aspects for this analysis, however, begin at Level 4 of the decision spine which feeds into the rhizome and body-without-organs. The questions of how to nurture the decision-hedgehog and fertilise the plateaus for future decision-making are essential to this research. The nurturing of ideas takes place at Level 4 and 5 of the decision spine. Decision-making models that only function on Levels 1-3 of the decision spine are often less adequate for precisely these reasons. Functioning at Levels 5 and 4, feeding into the rhizome and exploring small worlds, the decision-hedgehog model thus is able to overcome biases and heuristics, which otherwise taint the decision-making process. Using the decision-model encourages questioning assumptions and information that easily come to mind, paying attention to the base rates, especially when an event is very rare or very common, considering multiple anchors, imagining extremes, encouraging idea generation and encouraging tolerance of ambiguity by providing a safe space.

On a personal level, the decision-hedgehog rhizome is experienced as a map formed through exploring potential pathways to develop contextual knowledge, rather than as a tracing of 'reality.' Resources for conceptualisation of collaborative outcomes may be

innovatively accessed and their transformation imagined through voyages along these pathways, doubled in imagination and in reality. On a social level, the rhizome is activated, extended and revised by the participants in the group, through making and exchanging stories about discovery and innovation in the conceptualisation, utilisation and transformation of resources for living. When they are authored in multimedia, these stories involve *showing* as well as *telling* what is, and what *could* be, thus enriching context – rather than *being told* what *should* be.

3.6 Extended language

Koestler (1964) states, "true creativity often starts where language ends" (p. 177). The concept of extended language comes primarily from the field of decision analysis discussed by Patrick Humphreys and Patrick Brézillon (2002). Extended language is the dyadic relationship of restricted language combined with rich language. Simply stated *restricted language* consists of spoken or written words and text that tell you about things or what could be done. Restricted language is textual, linear, one dimensional, and, as the name indicates – restrictive. Spoken, written and thought language, based on the use of words, is restricted because words are created and defined through a shared and limited set of meanings. The cultural and grammatical rules that enable words to be understandable by everyone who speaks a language also limit their meanings and thereby can exclude potential courses of action.

Rich language on the other hand shows multiple dimensions and uses audio visual materials to communicating "what could be" rather than dictating "what should be" (Humphreys and Brezillon 2002). Therefore, "audio-visual composition and communication in multimedia can provide a rich language through which collective and distributed agency can be explored contemporaneously as well as diachronically" (Humphreys, Lorac et al. 2001: 11). However, because rich language is open and

unrestricted, it is difficult for people to arrive at shared understandings or interpretations, which strips rich language at times of the ability to communicate knowledge and ideas. It is at Level 5 of the decision spine, where rich language can truly flourish. However, exploring along new pathways can feel threatening to an individual's integrity and lead to *paranoid discourse* where an individual avoids thinking about aspects of a problem or possible solutions. This experience is retained as external knowledge to aid decision-making. Exploring within this paranoid discourse can lead to valuable insight (Humphreys and Jones 2006). As discussed in the previous chapter, the background-of-safety is created through an individual's experiences, which enable them to make sense of the world (Sandler 1960). It is only with the background-of-safety that exploration at this level can be successful. When one encounters instances that fall outside the background-of-safety, paranoid discourse is evoked in order to avoid having to deal with this (Humphreys and Jones 2006).

		Language mode	
		Language of Observation	Language of Action
Mode of Composing in Multimedia	*Restricted:* Written or spoken	Telling about What is / could be	Telling what is / could be done about it
	Rich: Audio-visual	Showing about what is / could be	Showing what is / could be done about it

Figure 3.7: Extended language (Humphreys and Brezillon 2002).

In multimedia communication, "restricted" and "rich" languages do not compete for hegemonic interpretation, but jointly provide extended language that can support innovative decision-making (De Zeeuw 1992). Therefore, restricted language is necessary

to "turn fantasy into real action" (Humphreys and Brézillon 2002: 7). This is where *extended language* comes in. *Extended language* is a combination of rich and restricted language that allows for both creativity and rational analysis. Extended language combines rich language multimedia stories, which allow for innovation, with restricted language, which allows for evaluation and sharing. "Story-composing in rich, audio-visual language, provides innovative knowledge, for content-generation and structuring in restricted language" and takes on the form of a spiral between rich and restricted language (Humphreys and Brezillon 2002: 7). Combining rich and restrictive languages in multi-media has been shown to have an impact on innovative decisions (Humphreys and Brezillon 2002). Humphreys and Brezillon (2002) argue that in order to enrich the rhizome of an organisation and support creative decision-making, communication need to be in rich language as well as restricted language. The theories highlight the importance of using different communication channels. This paper argues that extended language is not only audio/visual, as described by Lorac (2002), but also is art, drama and play. Play can be utilized as a natural and gentle pathway to an inner landscape that can safely be explored in any language (Ward-Wimmer 2003), even a language beyond words.

The whole process in ICE occurs through the extended language, where graphics, videos, pictures, music and diverse tools are used in order to get to the final stage, when decisions are taken. At that time, when a real action plan is defined, the use of the restricted language makes context more comprehensible to participants. These participants have shared knowledge and communicated in a complex way through the extended language provided by the use of multimedia means. Encouraging participants to think and produce in extended language, supports the "generation, exchange and interpretation" (Humphreys and Brezillon 2002: 7) of communication that stimulates creative thinking, enriches the decision-making process and provides new possibilities for exploration of the rhizome.

Although extended language is a relatively new concept in psychology, the basic concepts of "showing rather than telling" have longstanding roots in psychology. Therapy, for instance, uses non-language based communication to enable expressing of feelings in a non-verbal way to promote social and emotional well-being (Axline 1964). Another application, Dale's cone Theory (1969), suggests that people remember more through active learning. This model has been used in education. However, it must be noted that the actual percentage (see figure 3.8) allegedly have been invented by an employee of Mobil Oil Company in 1967, nonetheless, the idea that active learning and doing is more successful than passive does hold true.

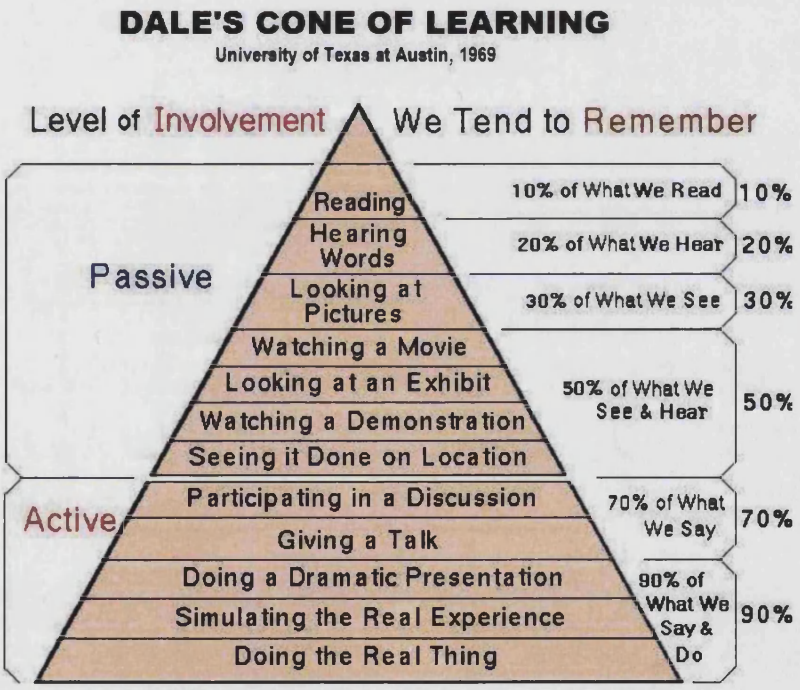

Figure 3.8: Dale's Cone of Learning (Dale 1969)

Mintzberg and Westley (2001) posit another way of looking at the usage of extended language or the learning curve. They argue that the "thinking first" model of decision-making must be supplemented by "seeing first" and "doing first" models (p. 73). The latter two models utilise creative visualisation 'to see' the problems and improvisation to act out

issues. This thesis is aligned with Mintzberg and Westley's thinking that the three modes must come together to enable rich outcomes of decision-making.

3.7 Collaborative Authored Outcomes

Collaborative authoring of outcomes is the collective process through which a decision-making group tries to generate and exchange such communications (Humphreys and Jones 2006). As Humphreys and Jones (2006) suggest, the basic aim of GDACS is to create a dynamic balance between the two different kinds of collaborative authoring of outcomes. One outcome supports the actual making of a decision by spiralling down the decision spine and "pricking the real (Levels 1-3 in the decision spine). The other outcome is to increase contextual knowledge within the rhizome (Levels 4 and 4 in the decision spine). The latter outcome is emphasised throughout this research. When participants engage in activities by working with imaginary ideas and develop a variety of open symbolic representations within a rhizome, the group is engaging in authoring activities (Humphreys and Jones 2008). In collaborative authored outcomes, groups engage in real activities, such as making a skit or preparing communities of interest and construct mediated authored narratives (Imas 2004) in attempting to move through the decision process with the aim of enhancing contextual knowledge. This process allows the group to explore pathways through the labyrinths of options (Humphreys and Jones 2008). Rather than being told a story, which can be likened to prescriptive decision support, the group authors its own story (Humphreys and Jones 2006). Thus, collaborative authored outcomes are aided by rich language. This supports not only decision-making at Level 4 and 5 in the decision spine, but also enables the enrichment of context for future decision-making by nurturing the hedgehog (Humphreys and Jones 2008).

Telling and exchanging stories support the process of spiralling down a spine to 'prick the real', and the interpretation of the subsequent impact of the decision on local reality.

Telling and exchanging stories nurture the decision-hedgehog, as collaborating groups construct maps of potential possibilities and opportunities, thus enriching contextual knowledge. Creative decision-making does not presume the hegemony of either type of outcome in directing the design of decision-making processes and support for these processes. Rather, it aims for a dynamic balance between them, through the manner in which the processes supporting their generation are designed.

The converging processes discussed in this chapter are brought together in GDACS in order to function and produce collaborative authored outcomes. The converging processes in collaborative authoring are a facilitating environment, authoring in rich language, participatory multimedia, exploration of context within the rhizome, decision-spine construction and utilization, group processes and design processes

Figure 3.9: Converging Processes in Collaborative Authoring of Outcomes (Humphreys and Jones 2006)

3.8 Summary

This chapter presents an evolution of decision-making models from DSS to GDACS in order to introduce the decision-hedgehog and concepts related to the model as significant for ICEs. Traditional decision-making models are limited in the extent to which they allow

explorations of ideas. It is through creativity, play and exploration within a background-of-safety that the decision-hedgehog model functions and facilitates decision-making. By nurturing the decision-hedgehog and exploring the rhizome, with the use of extended language in particular, richer and more creative decision-making processes and outcomes are hoped to be achieved in this study aims to accomplish this within Innovative Creative Environments such as the Robinson Room.

4 Context of events: Innovation Creativity Environments

"What's in a name? That which we call a rose

By any other name would smell as sweet."

William Shakespeare - Romeo and Juliet (II, ii, 1-2)

4.1 Introduction

This chapter introduces and explores the context of events and the ideas behind Innovation Creativity Environments (ICEs). These purpose-built spaces hat look to support creative decision-making using technology, support staff and different methodologies. ICEs stress the methodology of play with participants in academic or organisational settings. A variety of Innovation Creativity Environments exists. All of the spaces share certain communalities. They are dedicated spaces created to germinate creativity through playful activities aiding decision-making. However, largely absent from this description are the theories that underlie the procedures that take place in such spaces. This chapter thus stresses the physicality of these spaces to provide a context of the type of spaces that exist.

4.2 Presenting ICEs

This research takes place within an Innovation Creativity Environment (ICE) at the London School of Economics. The space is called the Robinson Room. The events are called Project Dreams and Reality. The concept and context of the space has been utilised in other organisations and other academic institutions and has been given many names by researchers and practitioners. For example, innovation laboratory or iLab (Lewis and Moultrie 2005) describe innovation laboratories as "dedicated facilities for encouraging creative behaviours [...]" (p73). Lewis and Moultrie concentrate on organisational settings

only, whereas this research incorporates academic innovation laboratories. Similar construct include: Accelerated Solutions Environments of Cap Gemini (Jones and Lyden-Cowan 2002), Collaborative Learning Environment (Jones 2004), Flexible Learning Environment (Jones 2005), Future Centres (Dvir and Mitchell 2006), Innovative Learning Spaces (Dugdale 2009), Interactive Learning Environments (Rieber 1996), Learning Hubs (Douglas 2006), NavCentre of MG Taylor (Jones and Lyden-Cowan 2002), and Pods (Phillips 1989). When the projects ran at the London School of Economics, they were referred to initially as a Flexible Learning Environment (FLE), first introduced by Jones and Humphreys (2006). It soon became evident, however, that many practitioners understand FLEs to be most closely linked with e-learning (e.g. Wilson 2005, Khan 2006). Although technical support and IT are essential within innovation labs, this research is about the human factor and human interactions rather than the technological side of collaborative learning. To more accurately explain and incorporate methodologies and frameworks within the construct relevant to this research, the context of this study is referred to as an Innovation Creativity Environment.

A recent trend among organisations and academic institutions is to spend a vast resources to enhance their work environments and engage in a collaborative decision-making within dedicated spaces (Humphreys and Jones 2006). According to Humphreys and Jones (2006), spaces provide a powerful language that enable people to collaborate with the help of multimedia, scribing facilitation and experts. ICEs, like FLEs can be understood as environments that support the decision-making process. Instead of providing answers, they foster creativity and use extended language in order to support complex decision-making. FLE is based on theories of adult learning, which suggests that adults not only gain knowledge through problem solving, negotiating and relevant knowledge through their work, but also by typing into logical, visual, musical, interpersonal and intrapersonal intelligence. It is equipped to accommodate changes in contexts through the use of multi-

media or interactive surfaces for writing and drawing (Jones 2005). Organisational 'innovation laboratories,' dedicated facilities for encouraging creative behaviours and supporting innovative projects, have received scant academic attention despite their increasing popularity with a range of different practitioners

Innovation Labs, facilitating environments, collaboration rooms, creativity labs, etc, are different terms to describe a similar physicality -facilities dedicated to encouraging creative behaviour and supports decision-making. As creativity gains increased attention within organisations, the number of innovation labs has grown within industry. In the early 1980s, MG Taylor was the first to introduce collaborative workspaces called 'NavCentres.' Cap Gemini is probably best known for its Accelerated Solutions Environments (ASE) of which they have seventeen locations listed on their website. Other examples of these spaces that allow for and are specifically designed for collaborative decision-making and creativity support are found world-wide within different domains: commercial, governmental and education.

Domain	**Space**	**Type**	**Location**
Commercial	Skandia FC Ericsson Future Centre Country House FC Edna Pasher & Associates	Insurance Telecom Ministry of Economic Affairs Consulting	Sweden Sweden Netherlands Israel
Governmental	MindLab Royal Mail Innovation Lab	Public sector Postal service	Denmark UK
Education	Firenze Technologia Educore NETI Innovation Lab Innovatika GroupSpace (Stanford) Steam Café (MIT).		Italy Netherlands Portugal Denmark Poland USA USA

Table 4.1: Examples of ICEs world wide

At UK universities, the number of these type of spaces has increased - The iLab at UEA, The iLab Hassenbrook School, International Centre for Digital Content at Liverpool John Moore's University, Southend Business Centre at University of Essex, Innovation works at the University of Reading and as studied here the Robinson Room at The London School of Economics. A more detailed description of some organisational (commercial and government) and academic ICEs follows.

Despite increasing popularity, these facilities have received little academic attention (Moultrie, Nilsson et al. 2007). When referring to the creative environment, researchers typically cite organisational (e.g. Ekvall 1996; Isaksen, Dorval et al. 2000) and socio-psychological (e.g. Amabile 1988; Ekvall 1996; Collins and Amabile 1999; Isaksen, Dorval et al. 2000) aspects.

Important to understanding this research most Rieber's (1998) discussion on play and Lewis and Moultrie's (2005) focus on dedicated spaces in organisational environments. These researchers stress a need for academic research within these spaces. This PhD hopes to fill part of the void of academic reviews of Innovation Creativity Environments, and contribute to learning environments at large. The case study empirically investigates an Innovation Creativity Environment, the Robinson Room. The study includes how the space is prepared, what happens within this particular space during an event and how participants are effected using primary data of observations and interviews and secondary data of the products events, Project Dreams and Reality. While the findings are, of course, specific to ICE at LSE, generalisations may be employed to shed light on other environments with similar endeavours, such as flexible learning environments, iLabs and ICEs in other locations.

4.3 ICE at LSE

In 2004, The Robinson Room Suite was created within the constraints of an existing structure in the place of an old canteen. The three interconnecting rooms support up to 50 people. In a response to changing academic needs, the London School of Economics, including Patrick Humphreys and Garrick Jones created a flexible learning environment / innovation creativity environment to allow for collaborative authored outcomes. The aim was two-fold: to support innovative approaches to teaching and learning in the institution, and to provide a bookable conference and accelerated solutions environment for external clients. Collaborative events and flexible learning environments have a longstanding history at LSE and the Robinson Room is the most recent enterprise to create a flexible learning environment for students. The beginning of my PhD research coincides with the opening of the Robinson Room making the timing of this project ideal for an in-depth evaluation and understanding of the processes therein. Rieber (2001) defines a learning environment as

> "...a space where the resources, time, and reasons are available to a group of people to nurture, support, and value their learning of a limited set of information and ideas. Learning environments are social places even when only one person can be found there. The centre of a learning environment is sharp, clear, and focused, but the edges are very fuzzy." (Rieber 2001: 3).

There are limits to each learning environment, in terms of what can be learned and how well learning can be supported. It is most common to describe a learning environment by the types of resources located there. However, while resources are crucial to a learning environment's effectiveness, their utility is limited by the conditions of access. This is also true of Innovation Creativity Environments.

A key feature advertised within The Robinson Room is the "impressive range of audio-visual equipment" (Information pods, smart boards, video streaming, audio zoning, video conferencing, wireless network, tablet PC bank and recording facilities, wireless connectivity) which constituents the majority of the £60,000 set up cost. Another key feature is the flexibility in arrangement of furnishing and equipment. Walls, tables, touch screens, light weight chairs, kiosk, and storage cupboards are all moveable. The room also benefits from temperature control, three forms of light, audio visual capabilities, projection equipment and magnetic wall surfaces.

	Theatre	Committee	Classroom	Group Work
Main Room A316	50	32	32	32
Breakout 1 A318	30	18	18	18
Breakout 2 A319	30	18	18	18

Table 4.2: Robinson Room student capacity

> "We wanted a versatile space which could be used individually or as on. Where in consecutive hours, the room might host standard teaching break out seminars, interactive learning and evening reception" Chris Cobb, LSE Robinson Room Design Team.

While LSE publicises the Robinson Room as an Innovation and Creativity Centre, it functions beyond an ICE including as a classroom. Even though it was originally designed for facilitating workshops, the university democratic often do not this space to their fullest potential.

Figure 4.1: Photographs of the Robinson Room

4.3.1 Project Dreams and Reality in the Robinson Room

Rieber (2001) notes that student learning seldom reflects devotion, effort and emotion. The current education system tends to stress repetitive top down learning through lecturing. Until recently, students reading for the same degree as the participants in this study, began their dissertation preparation with little guidance on what to write about, or even conceptualise writing such a progressive research paper. Instead, students were expected to identify possible topics independently before seeking expert (supervisor) advice. This learning approach lacked the opportunity to reflect on what they would actually like to write about and investigate what other students write about. This made collaboration and support nearly impossible. Through enabling students to find dissertation topics in the Robinson Room, it was hoped more creative in their approaches would emerge. Project Dreams and Reality is an annual event that takes place in the Robinson room for master students at the Institute of Psychology at LSE with this aim. The full nature of this event is described in Chapter 6.

4.4 ICE outside LSE - Organisational Innovation Creativity Environments

4.4.1 ASE

The Accelerated Solutions Environment (ASE) of Cap Gemini is a successful and well known organisational innovation laboratory. It is "a creative workspace coupled with a unique approach that enables rapid business decision-making and the creation of innovative solutions" (ASE Fact Sheet www.cgey.com). It uses a contemporary approach to Group Decision Support that results in collaborative authored outcomes to accelerate decision-making. The idea for ASE grew out of MG Taylor's 'NavCentres' which were the first facilities to design flexible and innovative environments to support innovative collaboration in the early 1980s (Lewis and Moultrie 2005).

A typical ASE event lasts from 1 to 4 days, and depending on the nature of the event, includes up to 100 people. The physical space must be flexible and accommodate large group activities, small group activities and individual activities. Successful results rely upon strong facilitation and "KreW" – freelance artists, architects, web designers, etc, who work together to ensure process, environment, methods and technologies are appropriately designed to foster creative thinking and collaboration. In ICE, we call the same type of team Crew.

Figure 4.2: Photographs of ASE (CapGemini.com)

The ASE centres are spaces devoted to implementing Design Shops. A Design Shop is generally an intensive three-day session that solves complicated business matters via facilitated "group genius." According to the definition given by Matt Taylor, the creator of the ASE, the group genius is "the ability of a group working iteratively and collaboratively to seek, model and put into place higher-order solutions." Time compression, systemic workflow, dynamic feedback, individual creativity and collective creativity are core features of Group Genius, which is the ability of a group to collectively come up with better solutions. A new way of working emerges that is concerned with facilitating communication, sharing knowledge and finding solutions.

The ASE methodology enhances communication processes at the heart of group decision-making. All ASE events follow a model called Scan-Focus-Act.

Scan: Build the foundation for a high-performance team, explore and understand the facts and implications, engage with industry specialists, create a common language and uncover critical assumptions and issues.

Focus: Conduct scenarios and simulations, test and evaluate hypothesis / alternatives, build, combine and iterate models, uncover and remove barriers to change and clarify expectations.

Act: Create group alignment and intention to act, make definitive decisions, engineer all aspects of the solution through parallel processing and establish detailed short and medium-term action plans.

ASE events provide a creative and learning environment outside the usual confines of the organisation (Jones and Lyden-Cowan 2002). In addition, ASE aims to enhance the communication process, which is one of the most important aspects of group decision-making; it allows participants to use a mixture of multimedia methods, textual and audio-visual, which encourage the use of rich or extended (audio – visual) language as well as restricted (text) language (Humphreys, Lorac et al. 2001). This highly specialised environment is suitable for events with a large number of individuals (50 to 200). It enables the acceleration of a reflexive process; emphasises on exploration of challenges using multiple methods of learning (kinaesthetic, linguistic, mathematical, logical, inter-personal, intrapersonal, musical and intuitive); and allows participants to create their own contexts (Jones and Lyden-Cowan 2002). Unlike the standard Decision Conferencing environment in its physical configuration, the ASE is a very flexible and heterogeneous environment.

4.4.2 Royal Mail Innovation Laboratory (RMIL)

The Royal Mail Innovation Laboratory was conceptualised by Maureen Gardiner, Director of Futures and Innovation for the Organisation when she and her colleagues were looking

for ways to make meetings more productive and realized that this had to start with developing new processes for decision-making (Powell 2009).

The Royal Mail Innovation Lab in London is within the grounds of an 18th century Manor House, opened in 2000. Using advanced technologies and communication to develop ideas. Sessions are run by a facilitator using creative play and discovery, Lego, graffiti and pinball amongst other play objects and activities to encourage different perspectives of business problems and experiment safely, before solutions in pare implemented. The lab advertises ability to test alternative futures, develop new products, problem solve creatively, generate research bids, develop plans and future business strategy, and promote team building. The entrance is and requires five minutes in a mock elevator-type facility to a feeling of time-travel.

Figure 4.3: Photographs of RMIL (source: royalmailgroup.com)

4.4.3 The Shipyard

Van der Lugt et al. (2007) describe the Shipyard in a paper on Future Centres. The Shipyard is part of the Dutch Tax and Customs Administration, a governmental organisation, which is part of the Dutch Ministry of Finance, which has over 30,000 employees in 13 regions across the Netherlands. This Future Centre is a facility dedicated to support creative and strategic thinking processes, aims to provide a creative space for Tax Administration employees to think freely about future improvements and innovations, on both personal and organisational levels. The Shipyard is situated in a monumental building, in which a variety of rooms are set up to support creative and strategic thinking

processes. For example, the Ballroom is a majestic monumental room with a wooden floor, antique wallpaper, woodwork and a painted ceiling where former Queen Wilhelmina attended a dance. Opposite the ballroom is the Study, a small room with a rectangular wooden table and white carpet. Other rooms include the Garden Room, for lunch, the Treasure Chamber, for sharing knowledge, and the Silence Room, one of the most valued and used rooms. The Shipyard is meant for stimulating innovation and mental flexibility by a maximum of 40 people. A facilitator aids workshops. As identified as a major lack within the field, very little is written about how these environments function to support creativity in decision-making. Reading the description of the Shipyard, the facilities sound stunning, but it is questionable how this environment functions.

Figure 4.4: Photographs of the Shipyard (Van der Lugt, et al. 2007)

4.5 ICE outside LSE -Academic Innovation Creativity Environments

Universities generally, and LSE specifically, uses Innovation Creativity Environments for several purposes. First, there are internal uses. The spaces are used to come up with ideas on how to manage the universities better, how to create new courses, how to improve current courses and how to encourage students to be more creative. Secondly, universities use the spaces as links to the local community, allowing the transference of academic expertise and knowledge to local businesses. Classes are taught in the Robinson Room and other ICEs as well. This should encourage instructors to think differently about *where* they teach and *how* they teach and *what* they teach.

Given the advance in technology and learning, it is suggested that teaching no longer requires a physical space (Grauerholz, McKenzie et al. 1999). Innovation Creativity Environments may fill the gap between virtual space and classrooms by emphasising collaboration and creativity as the new gateways to learning.

ICEs are gaining popularity at academic institutions as, recently, environmental psychology has emphasized principles surrounding comfort, communication, aesthetics and information display in education (Chism 2006). Vaughan (1991: 12) states that "good rooms enable good teaching. A rich network of interstitial spaces both inside and out ensures the joy of teaching and learning...curricula can inspire good architecture, but good architecture can also inspire a new understanding of teaching and learning".

Jilk's (1998) characteristics of an ideal learning space include flexibility, interaction support and integration with a wider community of students and learner, Niemeyer's (n.d.) list of design principles focuses on empowering faculty, emphasizing flexibility and expanding connectivity. Dittoe (2006: 3.9) states that "the key, therefore, is to provide a physical space that supports multidisciplinary, team-taught, highly interactive learning... within a social setting that engages students and faculty and enables rich learning experiences." Oblinger (2006) suggests that today's learners are quite social in their personal lives and favour active, participatory learning. This behaviour does not fit well with sitting in a lecture hall, with fixed furniture and one focal point of power. To arouse intellectual curiosity about exploring the relationship of a physical learning space it is important to consider such issues, s physical characteristics of the learning environment effect learners emotionally and have important cognitive and behavioural consequences. All of these characteristics are acknowledged, unified and applied by ICEs across academia.

4.5.1 University of East Anglia, Staff Development Hub (UEAH)

UEA Innovation Lab (iLab) was the first University iLab to be established in the UK with the aid of a substantial grant from the UK Higher Education Funding Council to support staff development. It is based on the methodology of the RMIL discussed but set within an academic setting. The iLab is a dedicated space designed to help groups to think and work together more effectively about problems and issue. The UEAH is part of the library building. The iLab supports thinking fast in more creative and divergent ways, non-hierarchical generation and sharing of ideas, brainstorming, analyzing and evaluating ideas. Events typically last around half a day and support a maximum of 12 participants guided by a facilitator. At the core, iLab functions by bringing together people to work with interlinked computers, large plasma screens and whiteboard walls. Given that no research is published on this space (or similar ones), it is very difficult to give an in depth account of an event within an iLab. The lack of literature or specific description aroused a need for this project.

Figure 4.5 Photographs of the UEA iLab (source:UEA.ac.uk)

4.5.2 BOX

Lewis Pinault originally developed the idea for Box in association with EDS. The space is located at the London School of Economics, Tower 2. The methodology at BOX combines LEGO® SERIOUS PLAY™ (LSP) (www.seriousplay.com) and Contextual Framework Cf©, which captures and displays in visual representation the content of a process or discussion that is taking place among group members (www.grouppartners.net). A BOX event typically last one or two days and it accommodates 10-40 people. One or two facilitators

aid the group (client) in its endeavours. The space is supported by the latest ambient technological effects (birds humming, music playing, lights flashing), emphasises comfort and design (cosy, colourful chairs, cushions, carpet, etc.) and prominently displays the interactive cabinet of curiosity that uses light, sounds and real artefacts to intrigue the individual and encourage discussion and original thinking while reminding participants that they are taking part in a journey. Three rooms form BOX, two of which are interconnected. The third is hidden behind closet doors and serves as an office when events are not taking place. Box was originally run by independently within LSE, but since then has become part of LSE and is bookable for internal and external events and lectures.

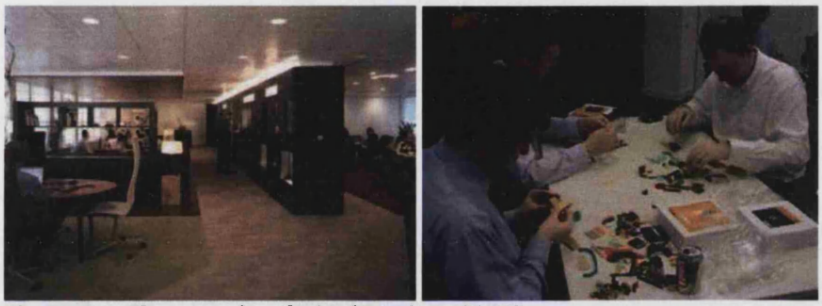

Figure 4.6: Photographs of BOX (Harrison 2006)

4.6 Summary

This chapter presented examples of Innovation Creativity Environments that exist in organisations and academia. The full list is extensive, yet there is no literature to support the theory that these spaces work. Although dedicated spaces for creative decision-making have different names, they do share some common denominators. The photographs of the spaces all indicate fun and quirkiness. All of the spaces are bookable to external parties and support group as well as individual decision-making. All the spaces use elements of play to aid decision-making processes. This research is specific to Innovation Creativity Environments, the Robinson Room at LSE. However, given the aforementioned common elements, these findings are generalised to spaces that also use a playful approach to events within decision-making environments.

5 Methodology

"If we knew what we were doing it wouldn't be research"

Albert Einstein

5.1 Introduction

This research has three aims:

1. Explore and empirically document what happens in a particular ICE.
2. Show how theories of play function as supportive methodologies for creativity in an ICE.
3. Provide an alternative understanding of decision-making using the theory of the decision-hedgehog and the background-of-safety.

In order to fulfil these aims this research utilises a case study approach using primarily interviews, observations as well as documentation and physical artefacts.

5.2 Case studies

A methodological construct was needed that in order to study the events as a whole. According to Yin (1994), a case-study approach allows investigators to retain the holistic and meaningful characteristics of real-life events. This is particularly relevant when the boundaries between phenomenon and context are not clearly evident and one wants to deliberately cover contextual conditions (Yin 1994). Feagin (1991) elaborates on case studies as an ideal methodology when a holistic, in-depth investigation is needed. Case studies are designed to bring out the details from the viewpoint of the participants by using multiple sources of data. They select one or two issues to focus on that are fundamental to understanding the system under examination (Tellis 1997). Case studies are multi-perspective analyses. This means that the researcher considers not just the voice

and perspective of the individual actors, but also of the relevant groups of actors and the interaction between them.

The literature on designing case studies is quite narrow. Robert Yin has written various texts on the case study protocol. Even though critique is readily available, alternative methodologies to doing case studies are virtually absent. The approach to this case study is largely modelled after Yin.

Yin (2003) and Kinsgley and Bozeman (1997) summarise the main advantages of case studies research method:

1. Case studies provide the researcher with a high quantity of data on how and why a process is occurring.
2. Case studies are useful for any stage of research and are strongly recommended for the analysis of new phenomenon as well as for theory building.
3. Case studies are a good tool to learn about a specific phenomenon that is to be analysed.
4. Case study is a very flexible method, as it allows the researcher to change the research procedures along the study, as a result of the interaction with the interviewed.

Generalising across ICEs is difficult as the modules differ depending on the goal of the event, the needs of the client or the requested output. Common denominators to all ICEs are underlying methodology of play, general aims, and the specific role of aiding creativity and decision-making (through psychological safety and exploring the decision-hedgehog). Each event is a culmination of carefully and critically designed modules that allow for play and playful expression. One of the major limitations to case study research is the difficulty

to generalise the results to other populations, even though you can generalise theoretical propositions from it.

Yin (1994) differentiates among three types of case studies: Descriptive, Explanatory and Exploratory. This research follows the exploratory model that answer how and why a specific phenomenon is happening. It is also good for theory building as it allows a high quantity (and hopefully quality) collection of data. In essence, this case study explores how ICE spaces work and how the Robinson Room at LSE successfully allows participants in a one-day workshop to be more creative at problem solving.

Case study methodology is known as a triangulated research strategy. Denzin (1984) identifies four types of triangulation: d*ata source triangulation*, when the researcher looks for the data to remain the same in different contexts; *methodological triangulation*, when one approach is followed by another, to increase confidence in the interpretation; *theory triangulation*, uses several theories in tandem to study a phenomenon; and i*nvestigator triangulation*, when several investigators examine the same phenomenon. This research will employ the first two types of triangulation by observing different events within the same environment, by looking at different theories of creativity, play and decision-making.

Yin (1994: 21) identifies five components as especially important in designing a case study:

1. a study's question
2. its proposition, if any
3. its unit(s) of analysis
4. the logic linking the data proposition
5. the criteria for interpreting findings

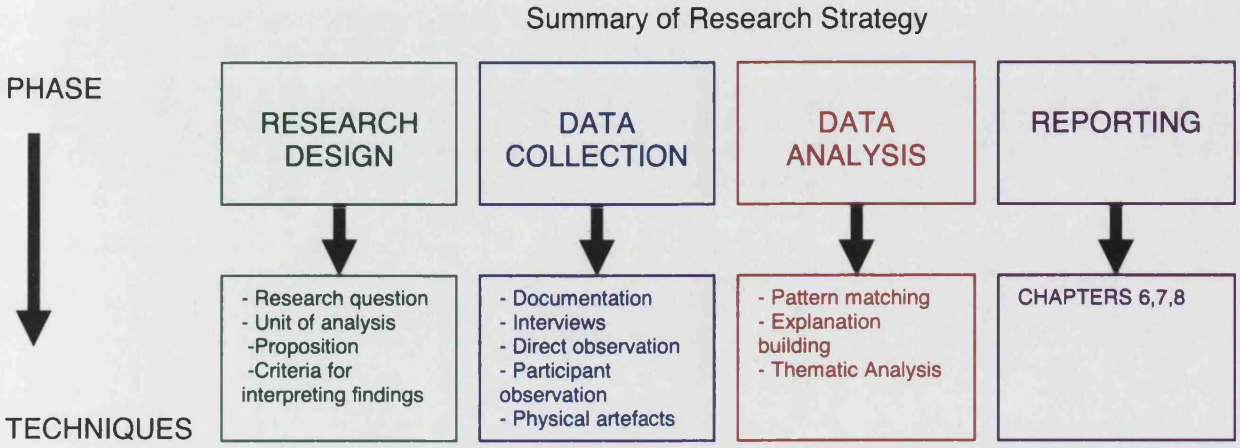

Figure 5.1: Research Strategy

The research design of this case study is two-fold. First, it looks at what happens within ICE. Next it tries to understand the underlying function within ICE. The questions are: how can we create and utilise a background-of-safety and how can we nurture the decision-hedgehog to allow more creative exploration of the rhizome? The proposition is: does the methodology of play enable and support better decision-making? The units of analysis are the overall event, specific modules, productions, groups and individuals. Identifying these components before research design, also forces a preliminary theory construction (Yin 1994).

5.3 Research data

The analysis of this dissertation is based upon four events entitled Project Dreams and Reality that took place between January 2005 and January 2007 in ICE at LSE. 166 MSc at the Institute of Psychology at the LSE working towards their dissertation participated in one of four single half-day events at an ICE on campus. The population was largely female as was representative of the course. In 2005, 36 students in Organisational and Social Psychology attended the event. In 2006, 45 MSc students in Organisational and Social Psychology (January 11, 2006) and 45 MSc students in Social and Cultural Psychology, Social and Public Communication and Health, Community and Development (January 25,

2006) attended the workshop. In 2007, 40 MSc students from Organisational and Social Psychology attended (January 31, 2007). A 6-10 person team, one of which at all events was the author of this dissertation, supported each event.

5.4 Events

The case study is based on four separate events occurring in an Innovation Creativity Environment from 2005 - 2007. Each event evolved with the lessons learned from the preceding one. The first event, which was most groundbreaking in the eyes of the organisers, is depicted in detail below to describe what 'happens' in an Innovation Creativity Environment. Changes, as they progressively occur in subsequent events, are identified and supported. Whereas the first event was an exploration, the second and third events were used as opportunities to improve the set-up. Each event followed a similar schedule: 1) pre-production; 2) production, and 3) post-production. Independent of these three components of each event, research post-production was conducted by exploring participants' retrospective experiences through interviews and analyses of documentation of the events. The focus for this research is to identify improvements for subsequent events and inform a deeper understanding of how play can be utilised to aid creativity in decision-making.

	Date	N	Degree(s)
Event 1	January 26, 2005	*36*	MSc students in Organisational and Social Psychology
Event 2	January 11, 2006	*45*	MSc students in Organisational and Social Psychology
Event 3	January 25, 2006	*45*	MSc students in Health, Community and Development Social Psychology; Social Psychology and Community
Event 4	January 31, 2007	*40*	MSc students in Organisational and Social Psychology

Table 5.1: Schedule of events

Event 4 differs from the other three events in that there was an opportunity to reflect on interviews and findings from the previous events in designing the fourth event. Thus this event differs in it constitution in that I was able to test some of my hypotheses. One question was: what works and what does not? All four events took place on the campus of the LSE within a purpose-built innovative and creative centre called the Robinson Room. As discussed earlier, the Robinson Room is a flexible learning environment that supports interactive events and collaborative learning. The key to successful events within the Robinson Room is the flexibility of the physical space and the infrastructure of supportive staff (crew) that not only helps physical changes, but also shifts psychological and mental focal points of participants.

5.5 Data corpus construction

The data collected for this research comprises four distinctive events. Observational data is analysed for all four events in which 166 students participated. Interviews were conducted with 22 out of 90 participants (24%) from Event 2 and 3 only (2006). These participants volunteered, having been invited to interview in by an email to all event participants. In addition to the interviews, the author observed all events and skits from three events have been analysed for content and affective response. Photographs of all posters, models and participation are taken and archived for future in-depth analyses of all four events. Notes on casual conversation further support all data with participants and crew.

A focus group was conducted with six participants from Event 4. These participants were chosen as they were simultaneously enrolled in a course on decision-making that covered many of the theoretical viewpoints discussed in this research. It was hoped that this would stimulate a more informed discussion overall and identify both what did and did not work well for them. Also, directly after the event a focus group wrap-up with the crew was held.

Immediate reactions to the event were discussed. Two in-depth interviews with crew members training in new skills were conducted post Event 4. Participant observation informed the outcome of the design.

5.6 Data collection

The data was collected using various qualitative methods: observation, document analysis, self-reflection, semi-structured in-depth interviews and focus groups. The author was both a participant in events (as Crew) as well as an observer (researcher and interviewer). This methodology allowed for direct observation of events in the Robinson Room.

A more structured analysis of what happens during events follows through investigation of the documentation (transcriptions and videos). From this, a semi-structured narrative interview was created. Yin (1996) lists six sources of evidence for data collection in the case study protocol: documentation, archival records, interviews, direct observation, participant observation, and physical artefacts. Not all need be used in every case study (Yin 1994). Using multiple resources of evidence ensures construct validity (Tellis 1997). The following kinds of data are collected for this research:

1. Documentation

Documents serve to inform the background information to the case study. The student course handbook provides information about students' prerequisites, classes, deadlines, academic advisors and thesis requirements. The case study event is designed around the information provided by the booklet. The purpose of the event is to help students complete a better Masters dissertation at the end of the academic year by allowing students to collaborate and identify areas of interest (see Appendix A).

2. Archival records

The only type of case study data that not collected are archival records, which could be useful in some studies since they include service records, maps, charts, lists of names, survey data, and even personal records such as diaries. In case of this research, these were not deemed necessary.

3. Interviews and focus groups

Interviews are generally, and specifically to this study, one of the most important sources of case study information as they add elements of objectivity to support participant observations which are largely based on personal interpretation. Albeit, their interpretation and analysis through the subjective view of the researcher. This case study is supported by 22 interviews from participants who attended either Event 2 or Event 3. Each interview lasts 25-45 minutes. All interviews took place within two weeks after the event and investigated participants' reflections of the event. Semi-structured narrative interviews enable an understanding of the study of participants' experiences.

The crux of the findings comes from the 22 participant interviews. Vital insight is also gained from data collection taking place after Event 4, which doubled as a training event for the scribe and facilitator. Both the scribe and facilitator in training were interviewed to gain insight into the training process. Crew also participates in one of two focus groups conducted after Event 4. The other focus group consists of six event participants who were simultaneously enrolled in a class on decision-making. While the individual interview is based upon the subjective, focus groups rely on social interactive processes, thus providing data that would not be accessible otherwise (Morgan 1988). An advantage of this technique is that in focusing attention on the collective, rather than on the individual, a context is created in which participants feel free to express themselves and are stimulated to utter their views (Morgan 1993). The focus groups are mainly useful in answering questions that are still open after data analysis of the interviews and observations.

In summary, 22 participant interviews, two crew interviews, one participant focus group and one crew focus group provide data in this category.

4. Direct observation

The author was present in all four events and able to directly observe participants and crew. However, for analysis, direct observations were made away from the participants and recordings in order minimise influence through participation. Eighteen skits and thirteen community reports are analysed in detail.

5. Participant observation

One of the main tools to analyse participant observation is a continual process of reflection and alteration of the focus of observations in accordance with analytic developments looking at the interpersonal behaviours. Participant observation is a unique mode of observation in which the researcher may actually participate in the events being studied and allows for the study of the phenomenon within real life context. Along with interviews, this is the main vehicle for data collection. The author participates in all events as crew with varying responsibilities. The author also participates throughout in the role of an organiser, with the addition of another role during the events.

Observation can be divided as direct or unobtrusive. It is difficult to precisely categorise the participant observations taking place within ICEs. On the one hand, everything is recorded, activities are continuous monitored and the group observed is aware it is being documented (direct observations). On the other hand, no actual observers are present. Everyone in the room is part of the team (unobtrusive observation). Participant observation allows for immediate feedback on how things progress, what works and what

does not. This contextual data is especially useful to change processes in real time. Participant observation allows researchers to get a "feeling" of the event.

The main goal of participant observation is to create and produce realistic and theoretical truths about human life positioned in the truths of everyday life. Participant observation works well for studying processes, relationships among people and events, and as the organisation of people and events (Jorgensen 1989). According to Bryman and Bell (2004), "the participant observer interacts with people in a variety of different situations and possibly roles, so that the links between behaviour and context can be built" (p. 504). There is an inevitable relationship between researcher (self) and researched object/community (other). The researcher is not a separate entity from the investigative process, rather, she is dialogically engaged with the research participant (Gergen and Gergen 2000). Observations allow researchers to rely on more than *post factum* interpretations of interviews. Rather than listening to what interviewees think is going on, with participant observations, the researcher notes what is happening in the moment.

The main problems with participant observations are objectivity (Yin 1994) and biases. Another complication identified by Yin (1994) is that the participant-observer may get caught up in her responsibilities and not have sufficient time to take notes during the event. This is indeed true for the case studies presented here. However, the detailed documentation by a team (for the purpose of students to revisit the day) has allowed the researcher to revisit all aspects of the day's activities through videos, photos, posters and verbatim documentation, which also serve as physical artefacts.

As part of observations, field notes are commonly utilised to aid remembering of incidents. In this research field the researcher did not take notes as a team dedicated to recording provided the researcher with an in-depth account of the event. A dedicated documentation

team utilising video, image and notes documented the full events. These were collated into websites, PDFs and raw data accessible to the researcher.

6. Physical artefacts

Physical artefacts are physical evidence gathered during a site visit. These include tools, art works, notebooks and computer output. Documents are letters, memoranda, agendas, study reports, or any items that may add to the data base. Documentation and physical artefacts in the facilitating environments are vast and include: scribed boards, web journal, individual giant post-its, video tapes of stories and other activities, photographs and toys. These all contribute to the data for analysis and help the researcher gain insight. Physical artefacts collected for this case study included skits, photos, video and posters. Skits from Events 1, 2 and 3 are analysed using chronological directions and the beginning of the narratives. Additionally, affective response from the audience (e.g. laughter and applause) was used to identify which skits fellow participants preferred. After each event, a web site documents the entire day's events. This website is extremely useful to revisit events post completion. For later studies, this serves as an archival record of the research and an opportunity for students to revisit the day's events. Future analysis may incorporate thematic analysis of content.

One important issue that surfaced during triangulation is the researcher's dual role of being an insider and an outsider simultaneously. This is to be taken into account in the analysis and findings.

Types of data	Strengths	Weaknesses
1. Documentation *MSc Thesis Requirements*	• stable - repeated review • unobtrusive - exist prior to case study • exact - names etc. • broad coverage - extended time span	• retrievability - difficult • biased selectivity • reporting bias - reflects author bias • access - may be blocked
2. Archival Records *none*	• same as above • precise and quantitative	• Same as above • privacy might inhibit access
3. Interviews *22 Interviews +* *2 crew interviews* *1 Focus group – students* *1 focus group – crew*	• targeted - focuses on case study topic • insightful - provides perceived causal inferences	• bias due to poor questions • response bias • incomplete recollection • reflexivity - interviewee expresses what interviewer wants to hear
4. Direct Observation *18 Skits* *13 Presentations*	• reality - covers events in real time • contextual - covers event context	• time-consuming • selectivity - might miss facts • reflexivity - observer's presence might cause change • cost - observers need time
5. Participant Observation *4 events*	• same as above • insightful into interpersonal behaviour	• same as above • bias due to investigator's actions
6. Physical Artefacts *Posters, Photos, Video, Models*	• insightful into cultural features • insightful into technical operations	• selectivity • availability

Table 5.2: Type of data collected (based on Yin, 1994, p. 80)

A note about the fourth event

The fourth event's aim was to train a new crew in specific roles. In order to run a training event successfully, a lot of the same conditions, that are necessary for participants, need to be met. In other words, the participants have to operate in a background-of-safety and the crew must feel safe. The interviews focused on what successfully allowed new crew members to feel safe and their overall experience of the fourth event.

5.7 Data analysis

It has been noted that the analysis of case study is one of the least developed aspects of the case study methodology. Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study (Yin 1994). It is generally acknowledged that in case study inquiry there are more variables that data points (Yin, 1994) and as illustrated above that there are multiple sources of evidence. The strength of the data is that it has been documented by still and moving picture as well as text.

1. Documentation

MSc Thesis requirements are reviewed in order to get a fuller picture of what students' aims should be in order to succeed in their dissertation. Additionally, this information is used to design the event during pre-event set up.

2. Archival records

This data was not collected.

3. Interviews and focus groups

All participant interviews are analysed in Atlas.ti using thematic analysis. Thematic analysis is an inductive technique to allow explorations of qualitative data which can lead to interpretations and explanations (Robson 1993). Themes that emerge from the informants' stories are pieced together from interviews to form a comprehensive picture of collective experience (Aronson, 1994). In thematic analysis codes are derived inductively and organised into salient themes that describe and organise data (Attride-Stirling 2001). Thematic coding allows for returning to the data for re-analysis (Ballinger 2005), which was a necessity in this project. Flexibility in the approach was the major

benefit of using thematic analysis (Braun and Clarke 2006). On the other hand a major criticism is that it is an anything goes technique (Antaki, Billig et al. 2002). Thematic analysis was followed using the six steps prescribed by Braun and Clarke (2006).

Step	Action
1. Familiarise yourself with the data	Transcribe the date, read and re-read the data, note down initial ideas.
2. Generate initial codes	Code interesting feature of the data in a systematic fashion across the entire data set, collate data relevant to each code.
3. Search for themes	Collate codes into potential themes, gather all data relevant to each to each potential theme.
4. Review Themes	Check if themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generate a thematic 'map' of the analysis.
5. Define and name themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generate clear definitions and name for each theme.
6. Produce the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relation back of the analysis to the research question and literature, produce a scholarly report of analysis.

Table 5.3: Thematic analysis

Figure 5.2 presents the analysis of the 22 interviews that followed Events 2 and 3. The bottom level depicts the codes that went into each of the 8 themes. The middle presents the eight themes identified for all relevant codes.

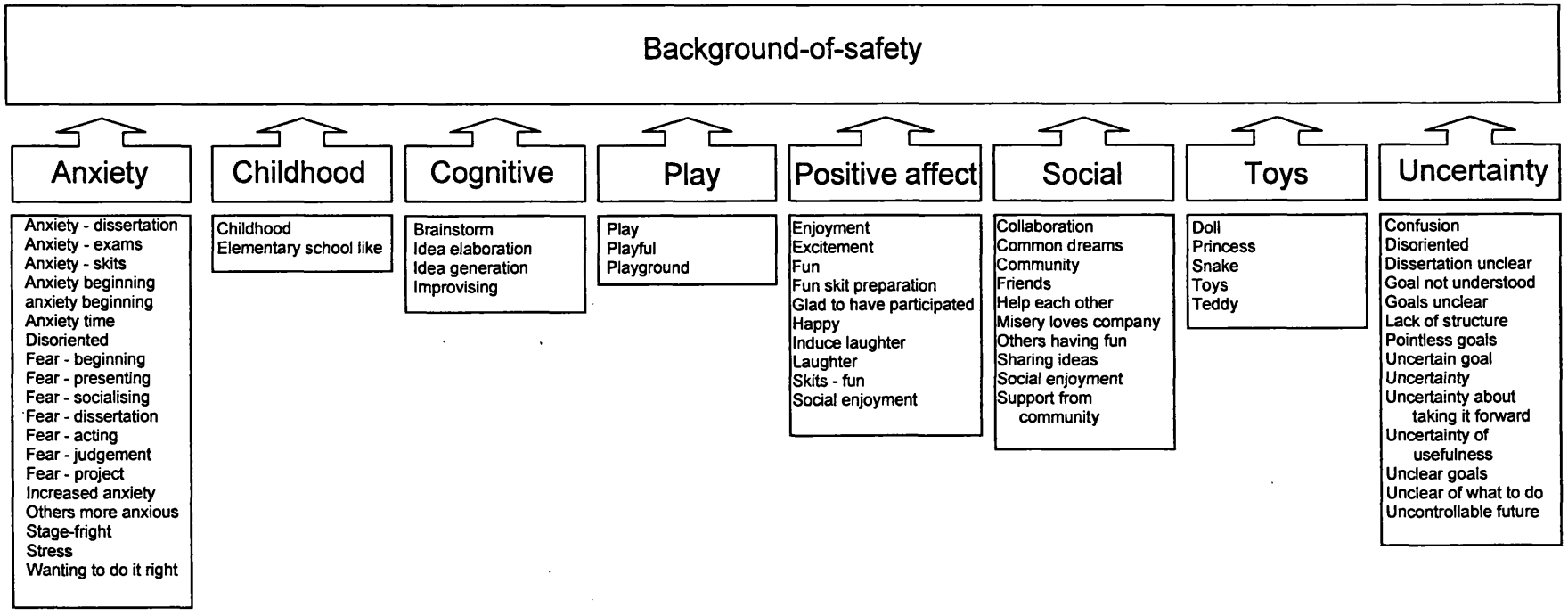

Figure 5.2: Thematic analysis

Focus groups are analysed to answer selective questions after interview analysis in completed to see if the fourth event successfully overcame some grave issues identified during previous analysis. Hence, the fourth case is specifically designed with these specific issues in mind:

1. Improve students' anxiety to perform during skits: by enabling a background-of-safety
2. Help students to get 'unstuck' in their thesis if they are unable to see life beyond (not exploring the rhizome, body of the hedgehog)
3. Students anxiety is high when they leave the event (exploring at Levels 4 and 5 but not beyond models at Level 3)

One of the main concerns is whether the changes implemented to improve safety and nurture the decision-hedgehog actually affect Event 4.

4. Direct observations

Eighteen skits are analysed using a five-point Likert scale on the categories of positive affect, use of toys, response from audience and preparedness (1= low and 5=high). Positive affect refers the display of positive emotion, excitement, laughter and enjoyment the group emanates. The availability of toys enables comparison of the groups' tendencies to use props in their skits. Response of audience is measure by laughter, applause and body language. Lastly, preparedness addresses how much work the group appears to have put into their presentation as opposed to improvising. Furthermore, the themes of each skit are identified and compared across different skits. Skits are also followed chronologically. Instructions for the skit were to imagine looking back at a situation from the future. Groups chose different start and ends for their journeys. Thirteen

presentations are analysed on how well participants were able to form safety within in the groups, take risks and elaborate on ideas in order to nurture the decision-hedgehog.

5. Participant observations

Participant observations in all four events are analysed looking for participants' ability to create safety, or the demise of safety. Similarly, observations to find evidence for supporting the decision-hedgehog is analysed throughout the event. The researcher has the ability to return to all aspects of the events to further observe participants with the aid of documented photos, film and notes.

6. Physical artefacts

Posters are analysed for various creative elements. These include the number of colours used on poster, applications of pictures in addition to written words, and the utilisations of motion and pictorial randomness versus textual order.

	Event 1	Event 2	Event 3	Event 4
Documentation	☒	☒	☒	☒
Participant Interviews	☐	☒	☒	☐
Focus Group (Participant and crew)	☐	☐	☐	☒
Crew Interviews	☐	☐	☐	☒
Direct Observations	☐	☒	☒	☐
Participant Observation	☒	☒	☒	☒
Physical Artefacts (Skits)	☒	☒	☒	☐
Physical Artefacts (Poster)	☐	☒	☒	☒

Table 5.4: Source of Data collection

Case study methodology faces several limitations. By definition, case studies can make no claims to be typical (Hodgkinson and Hodgkinson 2001). Given that cases are not typical,

case studies are questioned, as it is difficult to generalise from them. Case studies rely on personal interpretation of data and inferences, raising doubts of the objectivity of the researcher (Yin 1994). Despite these shortcomings, a case study approach still provides a more detailed investigation then statistical analysis, particularly in situations that are not homogenous, but situations that deal with creativity, innovation, and context (Yin 2004).

5.8 Summary

This research employs a case study methodology to provide detailed information on what happens in ICE events and how these environments function and provide GDACS that facilitate creative decision-making, presenting data collected from multiple methods. The mix of different data allows for a rich picture of what is actually happening during an ICE event. The analyses of different type of data bring forward an understanding of how play functions to support decision-making. The methodological approach of a case study is quite complex. Given the array of factors involved, case studies cannot be perfectly replicated and no attempt to do so was made in this study. However, in order to grasp all the nuances of ICEs, no other research method is as comprehensive as case studies.

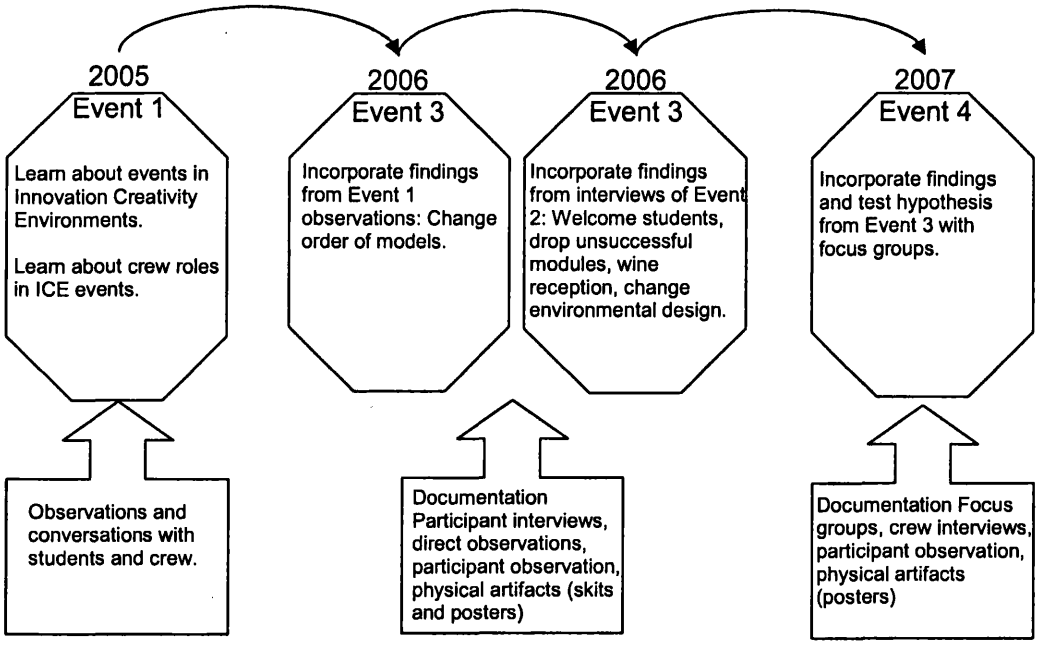

Figure 5.3: Overview of empirical steps

6 Case study description

"If you tell people where to go, but not how to get there, you'll be amazed by the results."

General George S. Patton

Chapter 6 depicts the path of a collaborative event within the Robinson Room. This presents the descriptive part of the case study describing in detail the first event of Project Dreams and Reality that takes place in 2005. In addition to the descriptions of the event, pre and post-event meetings are detailed. Changes from one event to the next are explained. These findings are discussed in depth in subsequent chapters where and theoretical analysis is incorporated.

6.1 Introduction

For completion of the Masters degree, Institute of Psychology students at LSE are required to submit an original research report at the end of their year of study. In previous years, students noted various difficulties in the preparation of their reports, including with content and writing. In an attempt to help students produce better research reports, the head of the department at the time (Patrick Humphreys) introduced a half-day seminar in 2005, to stimulate students' creativity, progression, quality and overall enjoyment of the research report. The premise of the half-day event was to use the Robinson Room, an Innovation Creativity Environment (ICE) to allow students to explore options, including topics, methodologies, supervision, support, etc, as well as encourage students to begin the actual research process. Additionally, it was an opportunity for students to reflect on fundamental decisions regarding their academic, personal, and career lives. This research looks at the first four events conducted over three years. This case study discusses the

design of the event, the event itself and the post-event experience of students as well as crew (event designers). Below follows documentation and analysis of the first four of these sessions. Chapter 6 documents the entire event and answers research question 1: What happens during an Innovation Creativity Event?

6.2 Participants

The participants for the event in 2005 are 36 MSc students at the London School of Economics (LSE) working on their dissertations for completion of a Masters degree in Organisational and Social Psychology. Students are internationally diverse with nationalities including Great Britain, American, Chinese, German, and Greek among others. The event is open to all MSc students within the department and attendance was voluntary. The MSc in Organisational Psychology at LSE focuses on understanding the interaction of organisations and individuals on micro and macro levels. Each student chooses a topic and an academic advisor based on mutual interest. The advisor, and another academic, later grades the dissertation and this count to the overall mark of the MSc.

6.3 Support team (Crew)

In order to help students within ICE, a support team is present at each event. This team, known as the 'crew', comprises of a production team (PT) that initially identifies the major components of the event. However, the outcome is a collaborative authorship itself takes everyone's expertise and ideas into account. During the actual event, the collective crew conducts changes and amendments as collectively identified as necessary. It is important to note, that all for all four events the PT comprised of the same individuals, including the author.

The crew itself, which includes the PT, comprises of one producer, the main contact in organising the crew (scheduling meeting, reserving rooms, answering questions, etc.) and the client, in this case the students. The producer defines the scope of work, puts the team together, co-ordinates the project phases, manages the time-lines, and is responsible for ensuring that documentation and communication meets quality standards. For the events in question, this is the author's role pre-event.

A process facilitator makes sure on the actual day everything (crew, modules, props, etc.) runs smoothly. Except for the first event, where the author was being trained, the author is the process facilitator over the following three events discussed in this dissertation.

An event facilitator runs the event, explains the different modules to participants, encourages participation, and guides the day. This is a very important role as it is the main face for the participants to relate to. The four events had three different event facilitators.

Events 1 and 2: Garrick Jones has a long-standing experience in collaborative events and facilitation. He was a director of Accelerated Solutions Environments (ASEs) for Cap Gemini Ernest & Young before and is the founding partner of the Ludic Group, a Strategic Business Design Group that supports collaborative events. He is a Visiting Fellow in the Institute of Social Psychology at LSE. A Senior Lecturer of Industrial Design & Engineering (IDE) at the Royal College of Art & Design (RCA) and a consultant to the University of Cambridge on Decision Support environments. His expertise is in working with organisations on innovation strategies using collaborative learning and design. He has worked with teams to develop and launch collaborative environments in Europe, Africa, the United States and Asia. He lectures on the MSc course and participates in research at LSE.

Event 3: Paul Ashcroft has a long-standing experience of facilitation and working in collaborative environments. He worked for Cap Gemini Ernest & Young and is a founding partner of the Ludic Group. Unlike Jones, Ashcroft is not associated with the LSE in teaching or research, but uses more business oriented coaching approaches. He also frequently trains new crew members, particularly in the role of facilitation and documentation.

Event 4: Vicky Katsioloudes acted as the facilitator on the fourth event, which simultaneously was a training event for crew. She has some experience in facilitations, and has been part of the crew in different roles on previous events. Her initial training as a facilitator took place in Samos in 2004. The crew there consisted largely of the same people (including myself) as the crew in event 4. Importantly, at both events Ashcroft was at hand to guide the facilitation process and help her when necessary. She completed the MSc on organisation psychology at LSE and was a participant (and interviewee) in the first event in 2005.

Figure 6.1: Photographs of Jones, Ashcroft and Katsioloudes facilitating

A scribe is a trained graphic facilitator who documents the entire event (and pre-session) while visible to participants and crew. S/he creates models, illustrations and visual metaphors that enable groups to make sense and map complex discussions and situations. The effect of bringing artists into processes that attempt to foster creativity has been shown to be very useful in industry and academia (Styhrean and Eriksson 2007).

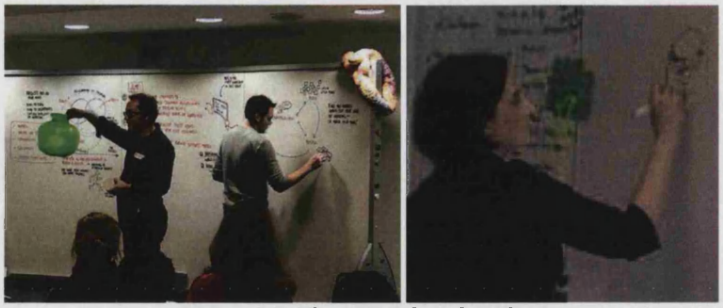

Figure 6.2: Photographs of scribes

The documentation team is responsible for capturing words, images (photo and film) and creating a website for participants to revisit and allow students to continue to nurture the hedgehog long after the workshop is over. The documentation team's output is also a rich source of data for this research.

Figure 6.3: Photographs of documentation team

Finally, the environment team facilitates and enables the flexibility of the space, is responsible for moving furniture, walls etc, to create the 'ideal' space for different modules.

It is essential for all members of the crew to closely work together and communicate about the event throughout. In these specific events, experts are invited (former MSc students and a professor from the course) to talk about their experiences and distribute their relative knowledge. A technical team is also present to aid crew and participants. The primary purpose of the crew is to make the participant experience as smooth, enjoyable and rewarding as possible and enable students to concentrate on the task and allow the participants to express themselves creatively to aid decision-making. The crew's secondary purpose is to document – what they record forms the basis of a forum for

discussion after the event, providing participants, crew and the author with a great resource to refer to and draw from throughout the research and writing. In addition, it is extremely valuable to record the activities taking place in Innovation Creativity Environments, since this record also provides an opportunity to consider ways one may learn in a collaborative environment. Indeed, much of this research has been possible only through revisiting the documentation events.

The crew functions differently from the traditional educator. Crew act more like a coach, mentor, mediator, and resource guide throughout the learning process, and intentionally exposes the students to experiences that will develop them and allow creative expression by supporting and modelling such behaviour. Crew assumes accountability for the role of mediator between the educational experience and the appropriation and development of new knowledge and products in order to achieve learning and flow.

6.4 Before the event (pre-production)

In order to prepare an event, the crew needs to come together and design the day to meet the students' (or more generally the client's) expectations. These are called pre-production meetings and take place is three phases:

- Pre-production 1: One week ahead – attendees: Production Team (Garrick Jones, Patrick Humphreys, Viviane Schwager)
- Pre-production 2: Two days before the event - attendees: Production team, leads of documentation (technical support) and environment, scribe and facilitator (one person may fill more than one role)
- Pre-production 3: On day – attendees: entire crew

Pre-production 1

The first pre-production is the most elaborate as the organisers have to establish the content and context of the event. From then on, pre-production focuses on improving upon previous events, but content and context have been identified. Each of the pre-production meetings is scribed and documented to record the process, sequence of times, and needs of crew in future meetings. This provides important reference material for process of the main event. Furthermore, the documented materials serve as a starting point for designing subsequent events by enabling the production team and crew to revisit pre-production process and how it can be improved. Original documentation helps support the narrative of production.

The first meeting includes only the three members of the Production Team. Each member brings to the team a different set of experience and expertise. All events comprise of the same production team:

1. Viviane Schwager (producer). Previously completed the MSc in Organisational and Social psychology at LSE.. Expertise is in the student perspective and the challenges and needs of writing a Master's dissertation. As Event 1 is my first collaborative event, I shadow an experienced process facilitator to be able to take over the role independently in subsequent events. I act as the producer for the event.
2. Patrick Humphreys (designer and subject matter expert): A professor on the course for the MSc students has supervised dozens of dissertations in the department. As the head of the department, he wants to help students get started earlier and be more organised on their MSc dissertation, a problem identified by many previous MSc students. He has a longstanding interest in decision-making and collaborative events and is one of the driving forces in creating the Robinson Room at LSE

3. Garrick Jones (lead facilitator and designer). An expert in collaborative decision-making, creative and flexible spaces and creative support. He provides essential technical know how.

The first pre-production meeting consists of three people with three varying perspectives on the needs and goals. We bring to the discussion different ideas and different experiences that come together to formulate what they hope should be most beneficial for students. There is some uncertainty and disagreement about what the aims for student achievements should be and how they could be encouraged to achieve them. The first step in the pre-production meetings is to share the common ground for the event aim, which is identified. It is hoped students will be able to better negotiate their paths to the MSc dissertation with the help of this upcoming event. Additionally, even though the Master course syllabus discusses innovation creativity environments and collaborative learning, students had never had the opportunity to experience these. This premises of the first meeting of the planning committee in the Robinson Room is to come together in order to define the aims and purpose of the workshop.

The four aims identified for the first workshop are:

Event 1 Aims

- Introduce PS404 students to collaborative learning environments, creative problem solving and collaborative ways of working.
- Provide opportunity to develop their first ideas and project plan for the research.
- Opportunities for students to develop group support tools.
- Produce filmed account of event for institute site.

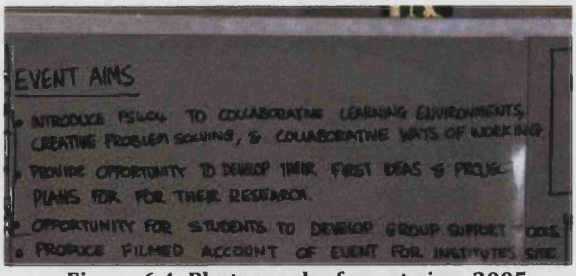

Figure 6.4: Photograph of event aims 2005

Once the aims are identified, the next challenge is to design a process that allows students to achieve the goals identified by the production team. Combining the requirements of a thesis from a teacher's perspective and the needs and fears of students from a student

perspective, combined with the expertise of process design, the following schedule was agreed upon for the first event (see Figure 6.5):

Process Design

1. Introduction and timeline
2. Swarm
3. Take a flip
4. Shift and share
5. Communities of Interest
6. Communities report out
7. Scenarios
8. Scenario report out
9. Process Discussion (circle up)

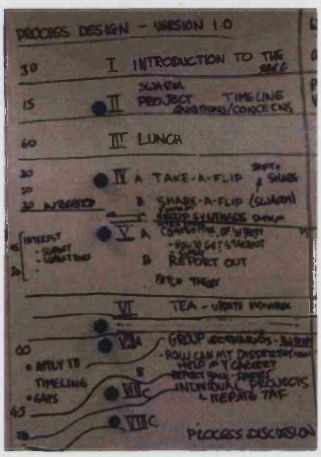

Figure 6.5: Photograph of pre-production process design 2005

Each of these modules is described later in this chapter in detail. What is important at this stage of the design is how the sequence develops. The process is dynamic and interplay of the different expertise of the Production Team is involved. Each person has a different and unique angle on the importance of the process. Students and teachers needs are addressed for content, but also it must be taken into consideration, which processes help to achieve these goals. For instance, it was agrees to have a two-fold introduction – one part to introduce the thesis and another to introduce the environment. Similarly, the timeline goals are two-fold – to present students with a schedule, and to present students with visual stimulation (see module descriptions). The what, where and how is tabled for the next pre-production meeting.

Pre-production 2

The goals of the second pre-production meeting are to set-up the event stage, programme, and method and content of the day and to match the design established previously with the environment. This requires an establishment of resources: who will be doing what before and during the event, who will obtain the appropriate materials needed, etc. In

other words, the schedule is populated and the crew is being build. In addition to the Production Team, the second pre-meeting includes the technical staff, the event facilitator and leads for the documentation and environment teams. The technical team closely works with the environment and documentation team to support their needs. For example, the documentation team identifies at what angle it is best to capture images whereas the environment team decides where chairs and walls are set up. The technical team then enables production. The event scribe is also present to learn about the content of the event in order to be able to project imagery at the actual event.

After establishing the goals and process, this meeting identifies additional experts who are needed to transform ideas into actions. Of particular importance is the technical team that identifies, for example, what type of microphones and how many are needed, where cameras should be placed and ensure that all technical machinery works and is manageable by the crew. In this meeting, all other production tools, such as assignments for student instructions' for modules, pens, magnets, toys, computers, iPods and even lunch, are identified and responsibility is allocated to ensure a smooth running event. Pre-production is guided by eight principles discussed below. These principles are dependant on each other and a change in one will affect change in all others. From these principles, an outline for the actual event is cultivated (Figure 6.6).

At the end of this meeting, everyone need to be aware of their responsibilities, including what s/he has to do before the event, during the event, what tools (e.g. laptop, toys, flip charts) s/he is expected to bring and who s/he is working with during the event. Importantly, the documentation team needs to know what they are responsible for documenting and whom they give their resources to during the event. The documentation runs live and essential for the event to run smoothly.

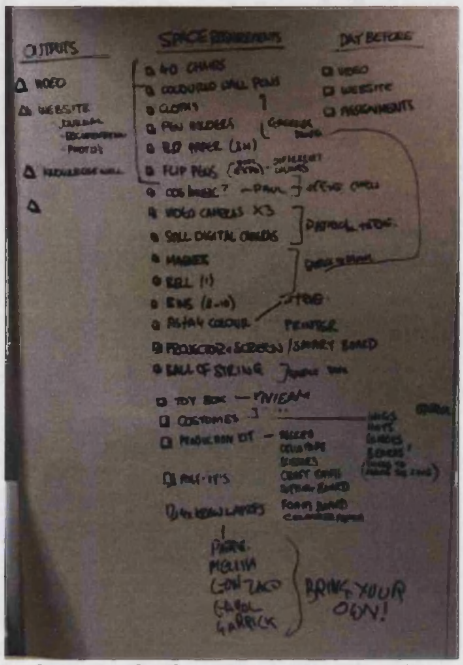

Figure 6.6: Photograph of pre-production requirements 2005

1. Process Design

The process design dictates the actual events and modules on the day. In the first Project Dreams and Reality there are ten process modules that needed to be elaborated: Intro and Timeline, Swarm synthesis, Take a flip, Shift and share, Community of interest, Community report out, Patching-it, Scenarios, Scenario report out and Process discussion (see Table 6.1).

2. Environment Design

The environment is directly dependent on the process design. Indeed, the environment can only be established once the process is in place. If the process design changes, inevitably the environment changes as well. The environment is set up to be most constructive to each of the module. Table 6.1 displays the sample Environmental Plan in process that then gets taken to the event, where it is constantly altered to meet the needs of the current group. Changes frequently include adjustments to timeline, which is visible to Crew on a white board during the event at all times. The benefit of having the plan on a whiteboard is that issues can easily be deleted, rewritten and deleted again, while always accessible to the crew.

3. Production Tools

Production Tools include technological support gadgets for capturing such as two video cameras, three photo cameras and microphones, laptops, iPods and microphones. A minimum of two laptops are needed, one for image downloads the other for documenting the spoken words. An iPod supplies music. Curved white-boards are an essential to capture conversations. Assignments need to be prepared and printed for handouts and posters. Self-adhesive flip charts and pens are needed for take-a-panels.

4. Craft Tools

The Craft Tools including toys (puppets, building blocks, stuffed animals, papers, scissors, etc,) and artefacts are instrumental in creating a playful and safe environment and helping students create the skits. Toys are of outmost importance to create a safe environment (Winnicott 1971). Craft tools are the frame sets that enable problem solving, process design understanding, project management, analysis, visual representation and other functionally specific technical tools (Humphreys and Jones 2006).

5. Feedback System

Feedback subsystems include knowledge bases as well as media-bases, digital asset management and powerful multiple search algorithms to provide platforms for dynamic authoring and collaborative decision-making (Humphreys and Jones 2006). Real time documentation is constantly being fed back into the system.

6. Programme Architecture

The programme architecture describes how to build the programme as discussed in pre-production and lays the framework for the day.

7. Knowledge

Expertise on content is taken into account. This means knowledge from crew, participants and specialists needs to be matched to create new knowledge.

8. Language

A 'language' exists within ICE that first needs to be taught to new crewmembers and conveyed to participants. This terminology include module titles (e.g. swarm); roles (e.g. facilitator), craft tools (giant post-its). Language subsystems refer to the rich language underpinning audiovisual authoring, designs of models and other information visualisation skills. Included are tools that provide easy access to these subsystems enabling rapid editing and production in multimedia, without the steep learning curve that often has been the entry barrier to provision of support using these tools.

Pre-production 3

The final pre-production meeting takes place a few hours before the actual event in the space of the event (Robinson Room) with the entire crew. This is the first time that the entire crew is present, including leads, support staff and experts. They meet to confirm resources and how these will be presented. It is important in this meeting that the entire crew agrees and understands the processes and the 'language' of the event. Often this includes final adjustments of the processes. Crew members are informed of the overall agenda as well as their individual responsibilities. For example, someone responsible for photography is given a camera and his or her contact/lead person is identified. Thus, everyone knows where to go in case one needs help. What is most important for even the most experienced crew, is to constantly communicate with other members throughout an event and that their input is taken seriously and as grounds for change during an event. The event set up is discussed and finalised.

Event 1 consisted of experienced members, and of first timers. Training is a major component of pre-production and production for Event 1, slowing the entire process down. In Event 4, key crewmembers are being trained.

Time	Process	Who	Environment	Crew	Craft Tools	Technical Tools
30 mins	Intro	GAJ	Chairs in rows	Set up chairs	Quotes	Mic, Video, Photo
15 mins	Timeline	PH; VG & RG	Chairs in rows facing opposite way	(student pick up chairs and turn)	Picture of timeline	Mic, Video, Photo
5 mins	Swarm synthesis	GAJ	Empty inner circle	Move chairs out and set up chairs for groups on periphery. Prepare tools and toys to be pushed in on table.		Music (iPod), Photo
30 mins	Take a flip	GAJ	Empty inner circle		Flip charts, pens, assignments	Music (iPod), Photo
30 mins 30 mins	Shift and share	GAJ	Empty inner circle			Music (iPod), Photo
45 mins	Community of interest	GAJ	Chairs in groups in middle	Move chairs into groups	Assignments, Flip Charts, Pens	Mic, Video, Photo
30 mins	Community report out	GAJ	Chairs in rows	Students move chairs in		Mic, Video, Photo
15 mins	Patching -It Theory	GAJ	Circle	Students move chairs in circle	Ball of string	Mic, Video, Photo
60 mins	Scenarios	GAJ	Groups in chairs	Toys in middle on table	Assignments, Toys	Music (iPod), Photo
45 mins	Scenario report out	GAJ	Chairs in arches	Move chairs in arches (quickly)		Mic, Video, Photo
20 mins	Process discussion	PH	Chairs in circle	Move chairs in circle (quickly)		Mic, Video, Photo

Table 6.1: Initial event set up

As the day continues, initial pre-production plans are adjusted and changed to fit the immediate needs of the students. The design is constantly emerging and the crew needs to be aware of the changes throughout. Finally, the room is set up to meet technical, documentation and environmental needs. Music is turned on and the participants are eagerly anticipated. As the first student enters the space, the event officially begins.

6.5 Event – Project Dreams and Reality

Module 1: Introduction

The day begins with the facilitator, Garrick Jones, introducing the space to the students. In his words of the facilitator on the day of Event 1:

"The space everyone finds themselves in today is a space for flexible and creative working. Before January 2005, no space like this existed at LSE. Last year the previous cohort of MSc students participated in an action research workshop in the CGEY/Innovate UK's Accelerated Solutions Environment in central London, and what we learned there helped in designing this event, and contributed to the design of the space you are now in."

Figure 6.7: Photograph of Introduction by Garrick Jones

Jones explains to the participants that various members of the 'Crew' document everything created throughout the day and a web journal of the day would be built and made available to all participants. The web journal will help participants to reflect and go further on issues emerging from the day and serve as a useful resource in future teaching and learning developments, and in planning future events in ICEs at LSE.

He continues to point out that the space looks and feels very different from the traditional teaching spaces in the rest of the building. Both the environment and its processes are based on the 'language of design' that enables events like this to take place. Design components such as planning, investigating and analysing – all of which participants will encounter while doing their MSc project – overlap with each other in iterative ways and are mediated by communication.

Jones explains to the participants that the day is designed to provide the, with the opportunity to work on their own, work in groups, discover what other people are working on, exchange ideas and reflect on both what is known and what had been learnt. The event is set to act as a process of discovery, which would accelerate participants thinking about their work and the development of their projects, and help them find colleagues with similar interests. Failures would be an intricate part of this discovery process. Failure is a way of learning and 'low impact' failures that do not collapse a system are desirable because they lead people to correct their path and allow them to get where they need to go.

Jones concludes by ensuring participants that the day will provide participants with the chance to 'begin', if necessary making the beginning up, dreaming up what they would like to do and thinking about the tools you would need in order to accomplish goals. Finally, they would need to step back, create a 'critical distance' and reflect. This process will be a first iteration and doing an MSc, research project will probably involve many processes like this with much iteration. All the information needed is in the room –individual knowledge, experiences, memories and beliefs and those of your colleagues – and the day is an opportunity to reflect on how the participants can get to their futures from where they are now.

Module 2: Timeline

This is the first time students are asked to observe the scribe working and hence the first contact with rich language and creative expression during an ICE event. At the end of the introduction, participants are immerged in the flexibility of the environment when asked to pick up their chairs and turn them 180 degrees as the next presentation is behind them. Revealed on the other side of the room is a very picturesque timeline, denoting all significant deadlines for the MSc presentation (see Figure 6.8).

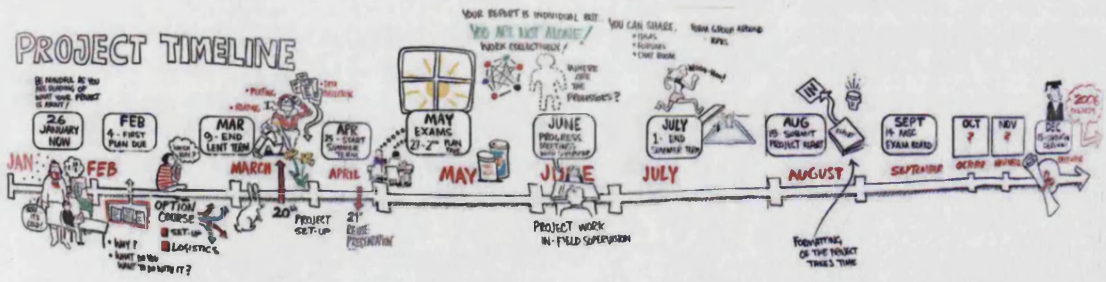

Figure 6.8: MSc timeline

This module is a plenary group exploration of the time line, examining the range of contexts, which need to be explored, and the aspects that may need to be proceduralised in different ways by individual participants to optimally achieve their own milestones. Utilising the artistic translation of the timeline, a professor on the course is the first to discuss the 'ideal' timeline. Next, former MSc students present accounts of how the timeline really worked during their MSc. Anecdotes included late submission, supervisors who 'disappear' and other 'true' experiences of the timeline.

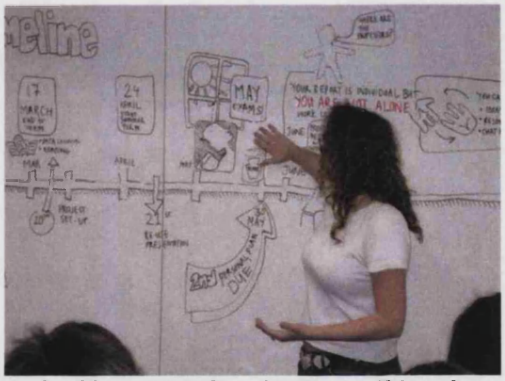

Figure 6.9: Photograph of former student (author) talking about the 'real' timeline

Module 3: Swarm

This phase of the event is probably the most active, intense and energetic. Students are given five minutes to find out as much as they could from as many students as possible. According to Humphreys and Jones (2006), this provided an interaction context to nurture the decision-hedgehog.

Figure 6.10: Photograph of Swarm

Module 4: Take a flip

This module utilises giant post-it notes hanging across the room with coloured pens beneath each poster. Students are asked to approach a 'blank canvases and imagine a year has gone by and reflect on the high and low points of the year long Masters programme. To help students thought process the following statements are posed:

Figure 6.11 Photograph of Take a flip

- what kinds of support did you receive (or fail to receive) from your fellow students?
- how did your project relate to where you want to work in the future?
- what methods of study were most interesting to you?
- which support systems were most beneficial to you?
- how were you able to make the best use of what LSE had to offer?
- did you build any special support groups or networks?

- did the personal timeline for your research work out as expected?
- what substantive areas were you interested in which you were able to build into your project?
- how did you come to discover which area to study for your project?
- what access did you require to conduct your research?
- at the start of the project, what were your worries and requirements?
- what was your general approach?
- how did you obtain contacts and access to carry out your research?
- what three things were the most difficult to overcome?
- how did you overcome them?
- what other questions were you thinking about at this time?

Figure 6.12: Photographs of sample posters

Module 5: Shift and share

Students are given the opportunity to look at all the posters in the room. Presenting in parallel, several volunteers are asked if they would like to share their posters with fellow students. It is not mandatory and no-one is singled out to present.

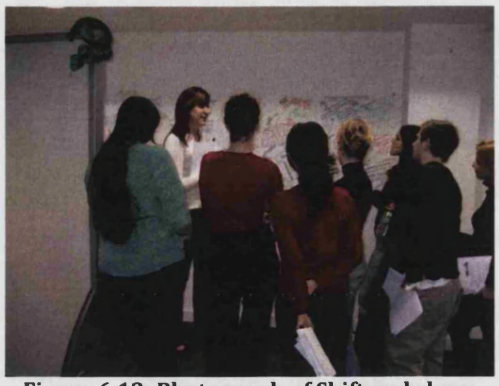

Figure 6.13: Photograph of Shift and share

Module 6: Communities of interest

Students are asked to form groups based on common, theses-related interests. Common denominators are found among theories (e.g. social representations), methodologies (e.g. case studies), contexts (e.g. organisational) and groups form where none of the students have identified their research topics. Together students spend 45 minutes discussing the following issues:

- what support from each other do we need to get started?
- how will we do it in time?
- how can we structure this so that we enjoy the process of conducting our projects and making our project happen?
- what support can we give to each other (group that meets together, communication networks), and what do we need to do to set it up?
- how can we provide or get support for how we conduct our research?
- Can we provide, or get support for how we conduct our research?

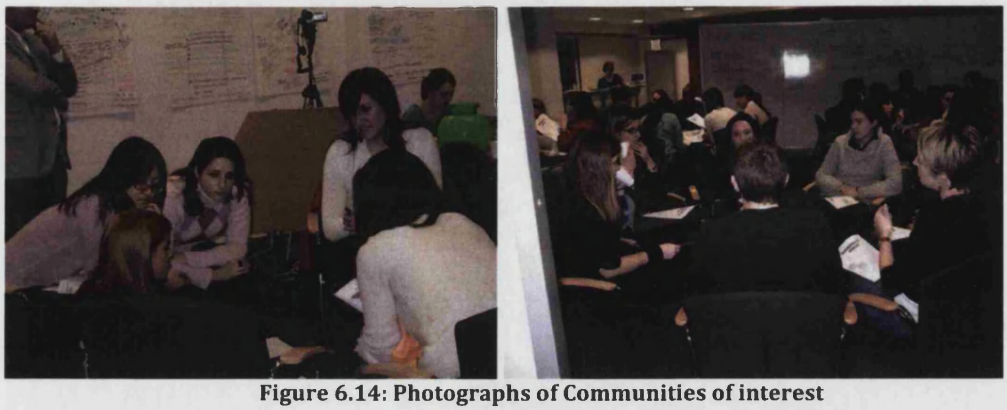

Figure 6.14: Photographs of Communities of interest

Module 7: Communities of interest report-out

Individuals in each group take turns presenting their conclusions to the rest of the class until all groups have presented.

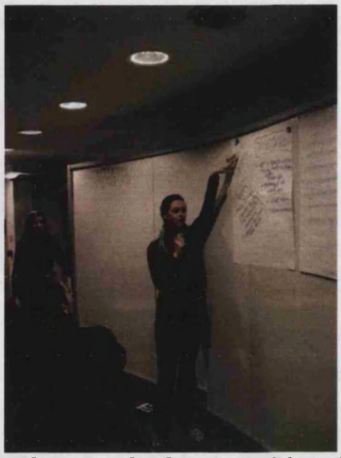

Figure 6.15: Photograph of Communities of interest report-out

Module 8: Patching-it

This activity provides a way for everyone to be connected into a network. A big ball of string is thrown from one person to another person whom they have an interest in knowing something about the other until everyone is connected.

Figure 6.16: Photograph of Patching-it

Module 9: Scenarios

Students are asked to join groups again, with different students from the last exercise (communities of interests). The purpose of the scenarios is for groups to share what they hope to achieve with their degrees once they have successfully completed. This exercise is

an imaginary projection into the future and a retrospective of the experience, thereby allowing a less constricted view of the present. The groups are asked to build a scenario that gave a sense of that they wanted to achieve at the end of their degree, and to map out where they are going. The group once again self-organised into six teams, different from the previous teams. Each group creates, designs and rehearses a five minute presentation that told a story about the journey from doing a successful project to gaining a thriving and enjoyable career. Props and materials are provided, and puppets and toys to help characterise the scenarios. The focus is on enriching and sharing multiple contexts, collectively, exploring and extending the rhizome that constitutes the body of the decision-hedgehog, providing resources for individual career decision-making in future contexts that, at this time, may be enriched but, cannot yet be proceduralised (Humphreys and Jones 2006). The groups have 45 minutes to prepare their pieces and then each performs in turn.

Figure 6.17: Photographs of Scenarios

Module 10: Scenarios report-out

After preparing the skits as a group, they are presented to the rest of the class.

Figure 6.18: Photographs of Scenarios report-out

Module 11: Session round up

Participants sit in a circle with crewmembers and address both the content and process of the event. Content focuses on what people feel they have learned about their thesis and the processes of the event.

Figure 6.19: Photograph of Session round up

Participants' comments on content

- A space for us to get together and organise and share. We don't have a space where we can do this in the Institute. No common room to facilitate the exchange of information.
- Good to have the time to think about the dissertation topic to devote a whole day to only this topic. This is a stress free environment – we do not feel threatened to talk – slow down to speed up. The process helped to get insights about my own work.
- Drawing and acting; it helped to sit back and reflect on experience throughout the year and socially do not usually get the opportunity to talk to people because things/work are very stressful.
- Useful to have to find the people who are interested in the same things – hopefully this will materialise in support.
- As a student at LSE there is a tendency to feel alone and feel afraid to voice opinion and today I realised that everybody is in the same boat and realised that I could actually enjoy doing this project knowing that there were people with the same worries and concerns.

- More reassuring that you guys provided us with a framework – the timeline is helpful for working to the target.
- Networking and getting to know who are in the same field; new possibilities for working on the project (e.g. technical support and possibilities available). Technical stuff becomes more do-able to work like this in a group.
- Reminded me of the fun aspect – realised that I don't want to rush through it and that I want to enjoy my project.
- I'm wondering how it is possible to maintain the positive feeling I'm feeling now keeping the feeling going when you get back into the stress.
- Group work element really valuable – previously I had experienced a lack of interaction.
- Whole idea is good but in the case of forums and chat, it is always us who do the chats and there is no participation from lecturers, it would help with those who have lack of confidence.

Participants' comments on process

- I expected to leave at 2pm but found I couldn't leave.
- This environment is so different and so creative – big room, bright, walls, sound.
- I felt really pampered all day – have not had to do anything – and this gave me a lot of energy.
- Transitions from one phase of the event to the other were very smooth - lots of interaction – a bonding experience.
- I like the scribing.
- It was like a break, not like being in the LSE, like being in a gallery.
- Helpful to have outside supporters here.
- I learned a lot and had a great time doing it.

6.6 After the event (post-production)

Crew circle-up

Immediately following the event, the entire crew sits in chairs in a circle within ICE. This is an opportunity for crew member to discuss what went well and what could be improved for the next event. It is important that every crew member has a voice and that information is shared in order to build on the experience for future sessions. Garrick Jones, lead facilitator of Event 1, summarises the crews' comments for internal circulation. The document is a detailed account of what needs to change in future events.

Website and Online Discussion Forum

Students also have an opportunity to reflect on the event post-production. A website, documenting the events, displaying the posters and skits, allows students to revisit the day. In addition to the website, an online forum enables students to communicate with each other and reflect on the event. The website also allows students to participate in an e-learning environment and foster the hedgehog even after their decisions are made.

To support constant learning, for participant and crew, feedback is immediately taken on board and the events are changed in time for the next set of participants. At the end of each event, the crew gets together to become participants themselves. Their experience of the day is translated into changes and improvements for the next session. Given that these case studies are part of an ongoing research project, some findings of the research are immediately incorporated into the next workshop. These findings and consequential changes are illustrated below.

6.7 Changes from Event 1 to Event 2

A year passes between Event 1 and Event 2. When the production team meets again, it is essential to be able to use the documentation of previous pre-production, production and

post-production. Since the first event, the production team worked together on several other events in the Robinson Room and other ICEs, to train a crew that can work together on various projects. This culminates in much faster and more confident pre-production sessions for Event 2 and a smoother and more confident event overall. In particular, my role of producer has solidified by this point, allowing for better preparation and communication.

In-between the two events students were interviewed about their experience and the information conveyed during interviews is utilised structure Event 2.

The design changed from Event 1 to Event 2. Rather than changing the module design, only the order of the modules is changed. The gravest change occurred by switching the order of the communities of interests and the scenarios modules. While groups are allowed to freely form in both modules, they are expected to form groups with different group members from the last module. This way it is hoped that students will interact with many students. Although in event students are asked to form groups based on a common (academic) interest, friends find themselves to form groups. By switching the order of the modules, friends are choosing to be together in the scenarios module, but during the communities of interest module the students are expected to get together with different peers and are more likely to form based on common academic interests. Overall, this change helps students, as they are more comfortable with the environment and with each other by the time, they formed communities of interest – which indeed may have been the most valuable session for progression on the actual thesis.

6.8 Changes from Event 2 to Event 3

Two weeks after Event 2, Event 3 takes place. Despite the short time period between these events, extensive participant interviews occur during that period. The crew consisted of

many of the same members, with a few exceptions noted below. Small and very informed changed to Event 2 help the event run more smoothly.

Two major changes marked Event 3 for the crew: a new facilitator and Master students from a different degree (not organisational psychology). The new facilitator is more open to immediate crew feedback, and the crew is more experienced in this particular type of event. This allows for better crew interaction and slight improvements in design. For example, Patching-it is spontaneously dropped from the modules as it is discussed during the day that in previous sessions, Patching-it did not allow the group to bond as expected, instead, the group was tired and felt separated. With an increased group size from 2005 to 2006, the experience of Patching-it is a bit chaotic. The room could no longer accommodate Patching-It wit the larger group. With the time saved from omitting Patching-it, it is decided to add and opportunity for students to socialise after the event. This constitutes another change from Event 2 to Event 3. The production team decides to allow students to mingle over a glass of wine after the event in the space. This gave students an opportunity to firmly establish plans.

An environmental design change is introduced in the scenarios. During interviews, students from Event 2 reveal that the toys do not impact them. It is assumed that this may have to do with the layout for the skits. Whereas in Event 2 the toys are in the middle of the room and the students seated on the periphery, in Event 3 the toys are moved to the centre of the room, in hopes of improving the desire of student to use toys. Students are organised in the inner circle, in small groups, and the toys are then introduces as and event in itself. During Event 3, the facilitator introduces the toys and his excitement about the toys is contagious. Students literally storm the table of props and toys to use theses during their skits. The toys are much more visible to student with this arrangement compared to Event 2.

The crew is immediately aware of the impact of introducing a group reading for a different Masters degree. Whereas students learning about ICEs attend the first event, the third group never heard of, or experienced, such environments. Consequently, anxiety and scepticism is elevated.

Event 1 (26.01.05)	Event 2 (11.01.06)	Event 3 (25.01.06)
Introduction Timeline Swarm Take a flip Shift and share Communities of interest Communities report out Patching-it Scenarios Scenario report out Session round up (circle up)	Introduction Timeline Take a flip Swarm Shift and share Scenarios Scenarios report out Communities of interest Communities report out Patching it	Introduction Timeline Take a flip Shift and share Swarm Scenarios Scenarios report out Communities of interest Communities report out Session round up (circle up) and drinks

Table 6.2: Summary of order of modules

6.9 Changes from Event 3 to Event 4

The event in January 2007 is set up as a quasi-experimental design were we try to use what we learned from the previous sessions – from interviews and reflection – and to optimise the student experience. The second objective is to run this event as a training session for crew and extend the background-of-safety and new crew members. A focus group with student participants and interviews with two crew members in training support the findings.

Pre-production

The major findings from previous events are integrated into the design in order to overcome the previous obstacles. The event aims change to crew training and improving processes that interviews revealed as problematic in previous events.

- Skits: students were very anxious about performing, with implications on the background-of-safety,

- Students got 'stuck' in the thesis and were unable to see life beyond, and not able to explore the rhizome and nurture the decision-hedgehog.
- Anxiety was elevated when they participants leave the event

The modules of the event were thus re-designed to change the outcome of the three points identified above (Table 3.5)

The major development in Event 4 is the introduction of building models. Building models are the stepping stones for another research project that grew out of this original research. The models are reconfigured into *Sprites* and *Spritivity.* Sprites are communication mediums that allow participants to express themselves beyond language by creating and utilising fantasy figures. The interesting point is that in the event before 2008, explicit groundings to sprites are not given. Participants are effectively (but implicitly) asked to produce sprites (2006) or 'sculpt' sprites out of their imagination, with no explicit grounding given in the real, world (e.g. photographs taken by participants of scenes of interest, as in the Jubilee School Spritivity Workshop) or in the imagination (i.e., in scary and helping thoughts - labyrinths in respect to the individual's imagination of the context of his or her future career, as in the 2008 workshop). Participants not only have to imagine their own sprites, but also the groundings for those sprites, on an ad hoc basis (and there are no communications elicited between participants to ensure consistently on that those grounding as might be). It is left up to each individual to choose his or her own groundings. This proved to be very difficult for participants. It proved much easier to identify, characterise, and share sprites in 2008, when we started from explicitly recognised groundings (labyrinths). That event is not part of this research, but more information on sprites can be found here: http://www.psych.lse.ac.uk/~patrick/SpritivityLondon-Beijing/index.html.

Module	Environment	Content
Intro	Chairs in arch – facing Vicky (exact chairs)	Introduce space Introduce crew
Timeline	Students turn their own chairs 180 degrees to face Patrick.	Introduce timeline Introduce former MSc students
Project dreams and nightmares	Former MSc students to different corners and will be joined by students: 5 groups parallel groups	Talk about dreams and nightmares and the light at the end of the tunnel
Flip: draw dream and stop demons	Students asked to stand in front of poster and draw/write	Draw dreams and stop demons → about MSc dissertation
Success Stories	Plenary with three speakers. After – move chairs into 6 groups	Marc Damian Melissa
Skits	6 parallel groups – chairs only on outside – toys on table in the middle	Tell your story looking back. Not everyone must present
Report Out	Each group reports out from their area	
Build a bridge	Students at posters Chairs in plenary	How will you get from MSc to future?
Build a model	Tables and kits in back (no chairs)	Support each other
How to support each other better (report out)	Tables with models get moved to front, group presents with poster	

Table 6.3: Event Plan

6.10 Summary

This chapter accounts what in-depth an event in an Innovation Creativity Environment. The modules are examples of a vast variety of options to playfully elicit creative decision-making. They are specifically designed to meet the needs of the clients, who in this case are MSc students working towards their dissertations. The events are unique to the needs of the participants. Different modules are needed to answer different needs. Non-the-less, they are a methodological approach that is used across other events and gives a much needed insight into what a specific event can look like. Chapter 6 hopes to convey an understanding of what happens during an ICE event in response to answering research question 1.

7 Findings and Discussion: Background-of-safety

"Out of this nettle, danger, we pluck this flower, safety."

William Shakespeare – Henry IV (I, ii, 3)

7.1 Introduction

This chapter presents the findings from interviews and observations. Respondents' quotes are presented in italics to support the findings. The immediate reflection and impression upon entering the room sheds the most useful lighting what the space actually looks and feels like to students.

> *"I see that there are a lot of little toys and I like the flexible environment, because it is not like a classroom and you can just relax yourself. If I just enter a classroom with tables and chairs, I would be a little bit nervous. But there, it was like a playground and I like the colours of the room. Because there are a lot of different colours and a lot of different toys on the chair. At first I was really surprised and I asked my class mate: is that yours?"*

The event begins at the moment students enter the Innovation Creativity Environment. Students walk in expecting a lecture theatre or a classroom, but what welcomes them is something they have not experienced at university previously. Interviews reveal that many students thought they had entered wrong room.

> *"At first I thought I was in the wrong room, because of the balloons and the decoration. I thought this was a workshop, I thought it was going to be a serious sort of way, where you just sit and listen to the lecture or something. I wasn't quite sure. And then the girl, was it you? Some one at the door said, you are in the right room, just go in."*

Only when someone on the crew inside the room welcomes them, do they accept that this is the forum of the event. Initially, the set-up of the chairs in the room is not strikingly different from a lecture theatre – but the difference in surroundings is quickly noticeable and impactful.

The chairs are set up, as in a normal lecture, in rows in front of a white-wall. And yet, there is no writing on the white wall, but colourful cartoons. It takes the students a while to realise that the cartoon are drawn as the representing the content of the conversations and dialogues taking place at that very moment. On chairs and furniture, stuffed animals, which some students "adopt," carry around or cuddle throughout the day. Slowly students find their seats. To their amazement, the number of chairs exactly matches the number of students.

7.2 Interview overview

Chapter 7 presents the findings relevant to psychological safety from 22 participant interviews and observations from four events. Following on from Chapter 6, a description of the day's schedule, this chapter delves into the psychological constructs that underlie the visible phenomena within ICE events. First, interview methodology and analysis is revisited. Thereafter, module specific findings are presented as they emerged from these interviews and observations as pertinent to establishing or failing to establish psychological safety.

7.3 Findings on the background-of -safety

The day begins with students walking into the Robinson Room and an introduction to the workshop. The students then proceed through an array of individual, group and class exercises, designed to promote creativity through play and open the students to new ideas, nurture the decision-hedgehog (Humphreys and Jones 2006) and to establish a

background-of-safety as described by Sandler an Sandler (1978). This research hypothesises that establishing psychological safety helps participants be more creative in their endeavours by allowing themselves to 'risk' being creative.

As introduced in the chapter on methodologies, 22 interviews followed Events 2 and 3. Eight relevant themes are identified from the codes (see Figure 5.2). In terms of feeding into the background-of-safety, it is important to refer back to the literature in order to elucidate on the relationships.

1. Anxiety: The terms for analysis of anxiety refer to concepts of fear, stress, unease, and worry about the task at hand. Following this conceptualisation, anxiety is the dialectical counterpart of safety. Unlike Freud who postulates that people seek to avoid anxiety, Sandler and Sandler (1978) suggests that people seek out safety.

2. Childhood: In this category participants made direct links to their experiences in childhood. The notion of a background-of-safety emanates from studies of childhood. In fact, Sandler's original model does not extend beyond childhood drives. Sandler emphasises the crucial importance of the earliest affective interchanges between caregiver and infant.

3. Cognitive: Here, cognitive really refers to cognitive flexibility, which involves brainstorming, idea elaboration and generation as well as improvising. The ability to freely express oneself is fostered by having a background-of-safety.

4. Play: Winnicott's notion of play within transitional spaces is at the crux of this research. The notion of the background-of-safety is in fact based on Winnicott's thinking.

5. Positive affect: Positive affect refers to enjoyment, fun and expression of happiness. Like cognitive and social themes, positive affect contributes to a general feeling of safety and belonging with the background-of-safety.

6. Social: This category incorporates all aspects of social groups and behaviours including collaboration, communalities, support and friendship. The social again contributes to a sense of belonging and safety.

7. Toys: Toys are transitional objects that function in the potential space (Winnicott 1971) enabling the background-of-safety.

8. Uncertainty: Interviewees discuss uncertainty in terms of confusion and disorientation. This insecurity directly obstructs the establishment of a background-of-safety.

In Figure 7.2, the relationship these themes have with the background-of-safety is presented. Even though the relationships are not always clear and are often two ways, the general trend is as follows: anxiety and uncertainty have a negative impact in the background-of-safety, whereas (positive) childhood memories, play, toys, positive affect and social interaction support a background-of-safety. Cognitive expansions appear to be an effect of an established background-of-safety. This is in line with the literature on creativity that states the background-of-safety as a necessary condition of creativity in academia and organisations. The cognitive flexibility that stems from establishing a background-of-safety has great implications for creativity and fostering the decision-hedgehog on Levels 5 and 4.

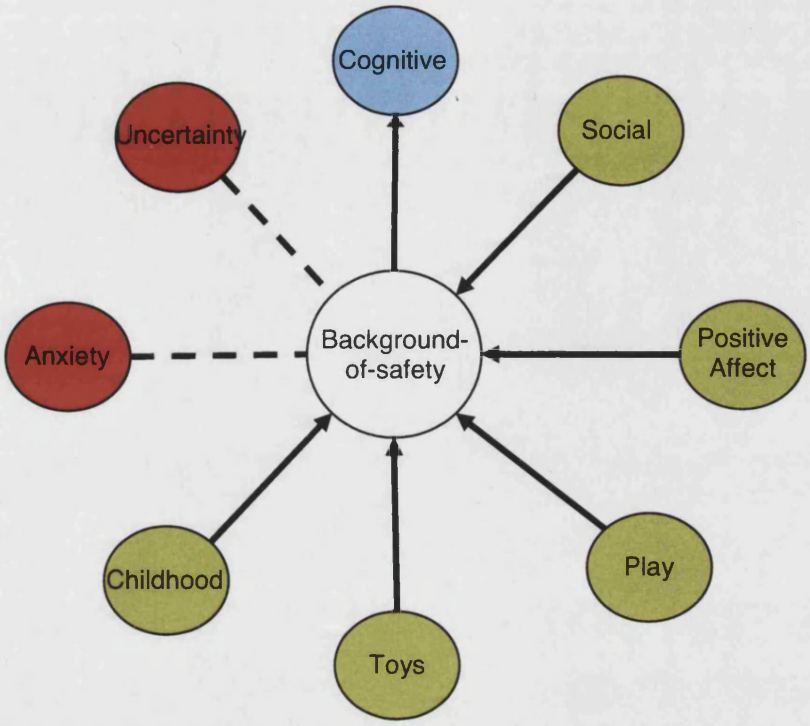

Figure 7.2: Thematic analysis: relationships among themes

7.4 Creating safety

Interviews revealed certain aspects of the event enable students to establish a background-of-safety. Interviewees are positively affected by the playful approach take in all the events. Independent of the modules, and for some students indeed in spite of some modules, the event is discussed mostly positively in terms of toys, music, crew, facilitation and links to a background-of-safety.

7.4.1 Transitional toys

Although most interviewees do not mention attachment to toys as transitional objects, observations during the event show a connection between students and stuffed animals. Students are seen throughout the day wearing snakes as necklaces, saving seats for teddy bears, putting stuffed animals on their labs when sitting down, clutching them when walking around and even becoming slightly upset when someone else takes 'their' animal. . A transitional object, as defined by Winnicott (1971), is an item that serves a soothing

function and provides both emotional and tangible comfort, especially during times of stress. As the theory by Winnicott (1971) suggests, attachment to transitional objects is largely a subconscious development. One would not expect this attachment to be specifically mentioned in interviews. Interviews did specifically mention toys, frequently without mentioning the attachment or safety provided by them, but frequently in reference to others and not the self.

"I saw someone who held a bear and I thought that was a really lovely toy."

Figures 7.3: Photographs of transitional toys

Transitional toys are one way of creating a safe environment and stress can be avoided when play takes place in a safe environment. Within a safe environment, much can be learned through trial and error. Even though some employers encourage employees to try new things, there are often repercussions if employees fail. Similarly, students can not feel safe to take risks if they think failure will be reflected in their grades. Play offers

participants a safe environment in which to explore, risk, try new ideas and make mistakes without the threat of termination or bad grades. It is safe to take risks.

Some students take obvious risks in their performances by choosing topic that may not be appropriate in everyday classrooms. In skits, transitional toys are used to hide the real behind the not real. The topics indicate that students felt safe to take the risk of presenting threatening situations in a playful and humorous way.

For example, future employment is discussed at Monkinsey. Patrick's Search for Kingdom takes a funny look at current academic staff in their research endeavours. Several skits discuss the difficulties of going through a MSc dissertation as well as the difficulties one faces when not finding a job, finding the wrong job, finding husbands or happiness and even spending the final days in AA (Academics Anonymous). Winnicott suggests that the suspension of rules in play makes possible the creation or invention of fresh meanings. Play is linked to creativity specifically via the idea that in play no holds are barred: all rules may be broken, and any new rules may be invented. Reviewing the skits, it is clear that participants' desires, anxieties and fears drive their imagination. One accepts this way of thinking about the motivation of play and the shaping of the imagination, then it suggests that though in one sense twice removed from reality, in another sense play is not removed from reality at all (Pateman 1991). The line between play and non-play can easily be crossed.

> *"It brings you back to a state where you can just play and not worry. Because you are focusing so much on the story, you are trying to represent, that you are actually going through the same story. It is not about you anymore, it is just about the game and enjoying the play. I also like very much that it wasn't competitive. Even though we were working in groups and one group and then next performed, we didn't feel any competition, so much collaboration... It definitely felt safe.*

Using transitional toys, engaging in collaboration, utilising rich language and taking risks, these students perform skits and play with ideas that are of outmost importance. One is free to invent non - existent entities and treat them as existing for the purposes of the play. Participants are free to improvise, using imagination to turn an abacus into SPSS. The pleasure of playing a game and learning through play revitalises a group and builds morale. Pleasure also affects a commitment in the participants to the game and causes them to learn more and retain longer (Prentice 2002).

Playing with transitional objects such as toys then, allows that exploration in a safe manner. They are a "defence against anxiety" (Winnicott 1971: 4) and bridge the external and internal worlds of the child, causing fantasy and reality to be intertwined. Thus even in adults, toys can be used to "compensate for inferiority, assuagement of anxiety, and a transitional device for coping with the world" (Sutton-Smith 1992:5).

Play with transitional objects allows participants to risk communication about how they genuinely feel about their present and their future. It allows participant to take something scary and see the funny. Klein explains that it is only in the depressive position that polar qualities can be seen as different aspects of the same object (Grotstein 1981). Increasing nearness of good and bad brings a corresponding integration of ego (Grotstein 1981). Within these lines of thinking, play is used to get beyond the current state and go to other places. 'Show and tell' also allows one to be creative by providing the tools and permission to do creative things. The use of toys and puppets allows participants to make connections and draw parallels which enable them to make inferences from what the object in their hand actually is to what it could possible (Sutton-Smith 1992). Such objects help cut through the complexity of problem solving by providing participants with the resources to venture into the virtual, stimulating learning and triggering new and creative ideas (Sutton-Smith 1992) enabling more pathways within the rhizome to be imagined.

7.5 Module specific findings

In this section, the general endeavours to create safety as well as those modules that specifically enhance or hinder the background-of-safety are discussed in-depth. It should be noted that while the overall event must attempt to provide a background-of-safety, this varies across modules, as some are more successful than others. Observations are used to further support interview findings.

7.5.1 Swarm

The main stream of interviewees discusses swarm positively utilising codes associated with *cognitive* and *social* attributes. Some interviewees stand out in their description of swarm primarily discussing *anxiety* and *uncertainty.* This module sets the background-of-safety for many, but also established a lack thereof for some others.

Even though the primary purpose of the swarm is to provide an interaction content that nurtures the decision-hedgehog, interviews reveal that it is also the first exercise that addresses student's experience of psychological safety. Those students, who are able to form psychological safety while interacting with other students, also benefit from nurturing the decision-hedgehog through idea exchange. Those students who are not ready (psychologically or academically) to exchange ideas (because they have none worth sharing) this exercise is linked with high *anxiety* and the demise of safety. One problem in confronting students so early on with anxiety is that they find it difficult to form psychological safety later on. In essence, a few students are permanently damaged by this early experience. As discussed later in the section on Flow (Csikszentmihalyi 1997), students begin establishing the appropriateness of the event during swarm.

Students generally greatly enjoy meeting fellow students that they had not previously had an opportunity to *socialise* with as well as finding out about each other's research. This was a largely positive experience for most students, described in terms of *socialising*, support, and *cognitive* idea exchange. Interviews revealed that many students enjoyed speaking to each other. Finding people with similar interests was stated as one of the most important outcomes of the day. This part of the day was described as energising, fun and a great opportunity to meet other students and find support and camaraderie.

"I am not alone!"

Some students, however, walk away from this module expressing great *anxiety*. Students who had not considered their thesis topics are overwhelmed by the thought that other students have already invested in the topic and procedures. These interviewees also express a large concern of *uncertainty* about their topic and how to interact with other students given that they had nothing to contribute to the process.

Students who have not yet spent much time thinking about their dissertations become apprehensive when they realise that other students are much further in their thought processes. Even students who only have inkling about what topic they want to peruse, are able to find others interested in the same topic or methodology allowing them to confirm that their initial idea is worth perusing firm up what they want their research to achieve. They can discuss with peers how they might achieve, find paths that could contribute to more ideas and enrich their knowledge base. This has a very positive effect on many students. The different feelings of prepared and unprepared students creates greater polarisation between this groups, with the latter adopting inferiority.

"Everyone else knows more."

7.5.2 Patching it

Interviews reveal *uncertainty* and some *anxiety* related to the task. Observations show students become increasing disengaged and some even resist the exercise from the beginning. Patching-it as a module is intended to provide psychological safety by inducing a feeling of belonging. This activity provides a way for everyone to be connected into a single network (of string). A big ball of string is thrown from person to person with the idea that they share an interest or know something about each other until everyone is connected. Interviews reveal that rather than bringing the group together, individuals feel they are breaking up the 'group feeling' and ostracising individuals.

> *"The people who know everybody get the ball thrown to them. Literally, I know maybe 80% of the people's names but I cannot throw it to someone whose name I do not know, because of the feeling oh gosh I don't know you. [...] And I have a feeling that some people were like: 'I was one of the last people to get the string thrown to, what's wrong with me, do people not like me...?' "*

Generally, this module also creates some *uncertainty* and confusion. Observing the module one immediate notices an ostracising of task and individuals. The facilitator states in the directions to the task "choose someone who might be useful to talk to" and several students asked to begin react by refusing (literally) to get the ball rolling. The facilitator keeps reminding them *"quickly, make a decision!"* and *"come on!"*. Students respond *"Emmmmm: Emily"* in an attempt to find someone whose name they know. Students point at peers and say *"to her."* The facilitator has to ask the person pointed to *"...and what is your name?"* At the end, those left behind actually look as though they are literally left behind. Also physically, the exercise was disorganised and chaotic and the string keeps tangling in knots. It becomes the researcher's job to get the string to its destination while entangled in a gigantic web. People are unengaged with the occasional giggle when someone gets hit or loses their piece of string. Because this module created separation rather than a common ground for psychological safety, it is dropped from future events.

7.5.3 Communities of interests

Interviews reveal that forming communities of interest elicit *cognitive, social* and *positive affect* as well as *uncertainty.* The task is to form groups based on academic similarities. Some groups devise clever coping mechanisms to establish a group that would provide them with a background-of-safety. Other groups form out of convenience and find similarities ad hoc. These groups have very weak ties as well as less cognitive exchange. This module is discussed in depth in the next chapter, which addresses how successful these groups are at nurturing the decision-hedgehog and idea generation at large. In terms of psychological safety, two groups form not based on ideas, but one based on background and the other on subject of study (there were only a small number of students from this programme). Both groups are very fast to establish a common ground and safety through that. All members of the first group were from China and all members of the second group were MSc students in Health, Community and Development. By finding a solid common ground, they establish a background-of-safety whereas other groups had more of a struggle to find a fluid understanding of each other.

7.5.4 Skit preparation

Interviews show that most students greatly enjoy skits stressing *positive affect, social interactions* and the use of *toys.* Groups form a close bond preparing these skits and managing to solidify a background-of-safety. Two groups differ from the norm, and are addressed later in this paper in terms of emergent leadership and disengagement, destroying the foundations for a background-of-safety.

7.5.5 Skits performances

Here interviewees responses are very divided, discussing anxiety, *play, positive affect, social, toys* and *uncertainty.* Interviews reveal skits performance varied in terms of student

responses. Many students greatly enjoyed the opportunity to express themselves differently.

> *"My favourite part was the skits. Planning them, doing them, watching them, just because it was very light-hearted and very fun."*

Even some of those who love preparing the skits are extremely anxious about the prospect of performing. Two major changes are introduced in order to lower anxiety during skit performances in subsequent events. The first is to eliminate mandatory participation in performances. Whereas initially students are told that they have to act, in subsequent events students are told not everyone has to participate. There is general consensus in the literature that play is a voluntary activity involving active (often physical) engagement that is pleasurable for its own sake and includes a make-believe quality (Pellegrini 1995; Pellegrini and Smith 1998). The problem that immediately arises when play is defined as a voluntary activity is that within facilitating environments play is frequently encouraged and requested within specific sessions. If play is a voluntary exercise, can we ask people to play or does the motivation to initiate play have to stem from within? Is the presence of toys and artefacts and the go-ahead for play, enough to encourage play? Or, perhaps, when facilitators initiate play, is it less genuine, less playful? Caplan and Caplan (1973) present the dilemma that if play is interfered with and manipulated, the freedom quintessential to play is destroyed. From this follows that play cannot be controlled and planned and still be called play. Some students do not see the non-voluntary participation in the skit module as fun or playful. Given the choice to participate, or not, a playful element is reintroduces. Students are less anxious during the presentations.

The second way to reduce anxiety is to remove the stage for the skits. Now, students perform from the same spot where they are preparing the skits. Preparing for the skits is

all-around discussed as the most pleasant experience of the event. By remaining in the same 'safe' space for performance students feel less threatened. Also, the original change to have skits earlier in the event is still more successful in providing a background-of-safety early on.

7.6 Individual anxiety as barriers to psychological safety

Differences exist among individual student's experience of flow, boredom and anxiety, but there also existed a longitudinal effect of anxiety as the day progresses. Three peaks of anxiety are identified (Figure 7.4). The first is when students enter the environment that is new to them. The activities that follow, the music and the design of the space allow student to enter a psychologically safe environment and the activities.

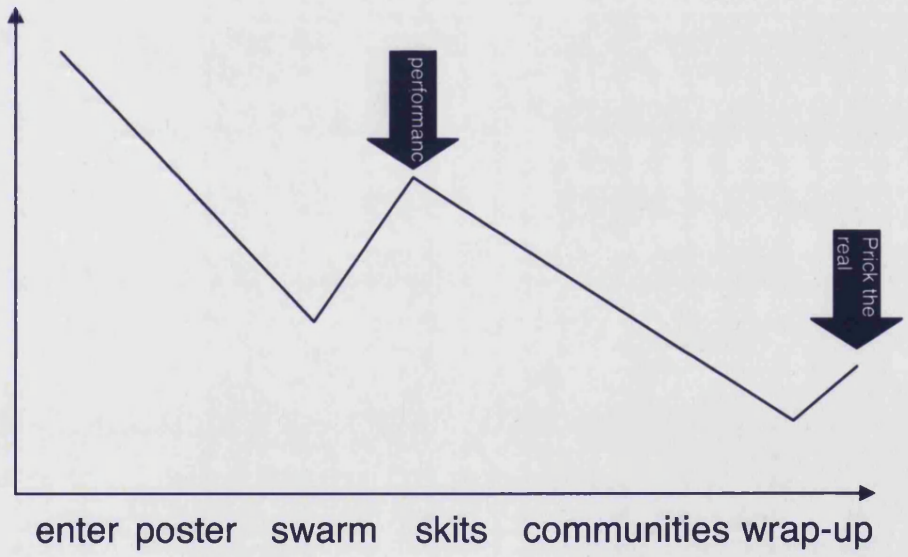

Figure 7.4: Anxiety peaks

Next, stage fright causes students difficulties. This is alleviated as they watch other sketched. A great moment of anxiety is when student actually have to leave the day. After spending a day exploring different levels of the decision spine (mostly Levels 4 and 4), students are leave needing to make decisions (Level 1 – pricking the real). The realisation

that the 'fun' is over and students have to act on their ideas creates anxiety among many. Overall, however, most students experience a sense of safety while in the flexible learning space.

In terms of decision-making, explorations within the small worlds are made within the background-of-safety (Humphreys and Berkeley 1985). A person who comes into a space and is received in a psychologically safe and playful environment may create a more inclusive and comprehensive small world (Greenwood 2003). Bowen and Hosking (2000) recently discussed the need of transitional spaces for organisational learning, identifying that "episodes of change, innovation, conflict and the like, where different parties meet and share perspectives, can be this sort of [transitional] space" (p. 273). They conclude that a relational metaphor of organisational learning can contribute to the creation of such places (Bowen and Hosking 2000). Narrative ways of conveying insight and understanding are the future for communicating knowledge (Czarniawka 1998). This multi-voiced approach, align with the rhizome discussed by Deleuze and Guattari (1988), is supported by ICEs.

> *"There was nothing you could have said that would have sounded stupid. There was space for everything. There was nothing that would be out of place."*

The anxietal peaks are addressed in the Event 4 in an endeavour to extend the background-of-safety of participants and make the overall event more successful in exploring small worlds.

> *"Even though I got a bit stressed with the sketches(skits) I enjoyed watching others perform"*

7.6.1 Addressing individual anxiety

Anxiety at the beginning of the event

In order for students to be less anxious and uncertain when entering ICE, a crew member is assigned to welcome all students at the door. This eliminates students' wondering whether they are in the right space. They may still feel anxious about entering a lecture room that is set up differently, but at least they do not question if it is the right lecture room.

Anxiety during the performance

The anxiety peak experienced during the skit performance is discussed in module specific findings earlier in this chapter. Importantly, crew is able to manage anxiety by changing a few of the parameters, such as location of the performances and instructions to make participation voluntary.

Anxiety at the end of the event

In previous events, students describe that they like the event while within the space, but when they leave their anxiety peaked. They realise that now they have to act, 'prick the real', according to the decision spine. Even though the events are creative, fun and informative, they do not prepare students to take action – nor do we intend to take the students through the entire decision spine as Chatjoulis (2002) describes in her application of the decision spine to counselling. By changing the set-up of the modules, and concentrating on extending the students' background-of-safety, students go down the decision spine to Level 3. As discussed in Chapter 3, Level 3 of the decision spine a framing discourse is employed to develop the structure of the problem (Humphrey and Jones 2006).

> *"I think I learned to be a bit more relaxed, not just about the dissertation, but about work in general. There is a group ,a big community of people out there who aren't just willing to help, but who will help."*

Dealing with the emotion of anxiety that arises from confusion is part of emotional intelligence. Goleman (1996: 43-44) considers emotional intelligence to have several dimensions: knowing one's emotions, managing emotions, motivating oneself, recognising emotions in others and handling relationships. We have to better manage the process of turning anxiety into flow by developing students' emotional intelligence by not avoiding anxiety and depression that can be part of confusion and the flatness of boredom but being aware of these negative feelings, and moving beyond them using awareness of such emotions to help in learning and enter Flow (Goleman 1996). In an attempt to relieve anxiety as students leave the event, a wine reception is introduced at the end of the following event.

7.6.2 In *vino veritas*

Without attempting to encourage alcohol consumption in graduate students, this research did find some positive effects of post event alcohol consumption (hence forth referred to as wine reception). In previous events, students left after the last module. At this moment their anxiety level is extremely high. However, in event four we added a wine reception immediately following the event within the Robinson Room. Interviews revealed that rather than leaving highly anxious, students had the opportunity to socialise, mingle and relax with their peers. The focus group revealed that the students were **not** anxious after they left the wine reception as opposed to the students who left the event in previous years. Observations show that many students do not actively participate in the formal wrap up of the day. At the wine reception, people are much more communicative with each other and even approach crew and academic staff more freely. Despite the casual atmosphere, conversations on dissertation topics occur. Social interaction is freely mixed with intellectual curiosity within a safe environment. Park (2004) looks at negative and positive consequences of alcohol consumption in college students. Whereas negative consequences are usually stressed, Park (2004) is unique in identifying positive

consequences, which include: tension reduction, performance enhancement, activity enhancement, and social lubrication. Important to this research is that Park (2004) identifies that students who socialised with alcohol (as the students post event four) forget their worries, have better ideas, and make friends. Of course, excess alcohol consumption does not support positive outcomes as described above. It may be hypothesised that it is the causal interaction, not the alcohol per se that encourage a continuously safe environment even after the official event has ended.

7.7 Failure of establishing psychological safety in groups

Group work is renowned for producing collaborative results that are more creative than individual efforts as well as for the difficulty individuals have in groups. This section discusses specific incidences where the background-of-safety was hindered by group processes. Team psychological safety involves, but goes beyond interpersonal trust; it describes a team climate characterised by interpersonal trust and mutual respect in which people are comfortable being themselves. For team psychological safety to be a group-level construct, it must characterise the team rather than individual members of the team, and team members must hold similar perceptions of it. In one group, a specific individual was not comfortable, did not respect and did not trust the others, and ultimately takes control of the group.

7.7.1 Emergent leadership

According to Rogers (1961), the conditions for fostering constructive creativity are psychological safety, empathic understanding, a non-judgemental climate that provide a climate for psychological freedom. A creative workspace needs to be a place where hierarchies are ignored, spontaneity rules, and there's no such thing as a bad idea. This defines a non-judgmental space. Group psychological safety is defined as a shared belief that the team is safe for interpersonal risk-taking (Edmondson 2002). Although tacit

beliefs about interpersonal norms are sometimes explicitly discussed in a team, their being made explicit does not alter the essence of team psychological safety (Edmondons 1999). Groups for group-work are by design leader-less and despite the difficulties that holds for general group make-up many groups greatly enjoyed working together experiencing positive affect and fun. Interviews revealed that for many the Robinson Room indeed was such a space. However, at times, individual group members are not able to find safety in a leader-less group and feel compelled to take charge.

> *"I did not want to go out there and do the skit and have it not be funny. And I did not want it wrong or incorrectly. And so, I guess, I have to worry about how people see me."*

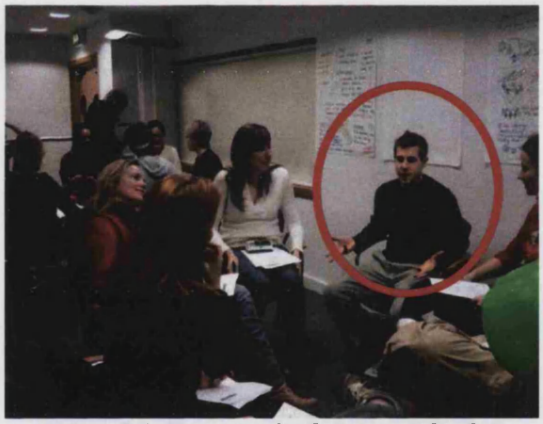

Figure 7.5: Photograph of emergent leader

Fearing he may be judged, this particular student high-jacks the group processes and imposes his views on the rest of his group. Image costs have been explored in research on face saving, which has established that people value image and tacitly abide by social expectations to save their own and others' face (Goffman 1974). People tend to act in ways that inhibit learning when they face the potential for threat or embarrassment (Argyris 1982). Interestingly, this individual still feels creative, but hinders others from feeling creative. He puts himself at the top of the hierarchy as the leader of the group. Consequently, other members in the group are unable to experience the Robinson Room as a safe space, while working with this specific participant.

"What bothered me was it got off in that two people basically said: this is what we're doing."

Team psychological safety is not the same as group cohesiveness. Research has shown that cohesiveness can reduce willingness to disagree and challenge others' views, such as in the phenomenon of groupthink (Janis 1972), implying a lack of inter-personal risk taking. The term refers to a sense of confidence that the team will not embarrass, reject, or punish someone for speaking up. This confidence stems from mutual respect and trust among team members. But in this specific group, there was no mutual respect.

Additionally, the emergent leader is continually judging all members in the group. May, Gilson et al. (2004) suggests that feelings of self-consciousness significantly influences psychological safety. Those individuals who constantly worry about what others think of them are likely to experience less psychological safety at work. They are inhibited when it comes to trying new ways of accomplishing their tasks. Impression management tactics (Schlenker and Leary 1982) may reflect a heightened sense of self-consciousness. This also holds true for work groups in academia.

The interpersonal climate of the group is important and must be perceived as nonthreatening (Argell and Gustafson 1996). This means that each individual, or smaller clusters of a larger group, can try out aspects of solutions and fail without the being punished by the larger group. A feeling of safety in a group also enables exploration of more radical ideas (West and Farr 1990). Further, it fosters exchange of information (Edmondson 1999), allowing the group to explore differences in opinion in a constructive manner, increasing the tolerance for diversity within the group, all of which are decisive elements in enabling creativity and innovation in decision-making (Argell and Gustafson 1996). Psychological safety is thus a precondition for creative exploration and learning (Edmondson 1999). Edmondson (1999) also identifies psychological safety as a belief

shared by team members that the team is a safe environment to take interpersonal risks. Furthermore, the responsibility of the task without control over it leads to stress, frustration and anger (Karasek 1990).

In this context then, interpersonal risks refer to an individual's sense that s/he can express him or herself without fear of negative consequences to his or her individual-collective identity. If this safety is not achieved, as experienced by the group in question, Defensive Interaction Patterns arise, which are defined as interactions that block learning, creativity, innovation, and change (Argyris 1982) and result from a lack of trust within a team. Trust is thus a necessary condition for collaboration among individuals, groups and organisations. Further, trust is necessary to enable effective communication within and between groups (Newell and Swan 2000).

The loss of safety in the group leads participants to experience this frustration or confusion, and they withdraw from a collaborative effort by denying ownership. They look out for themselves and their own interests and concerns by taking control of what they can. That which they cannot fully control is abandoned and left for others to deal with. This destroys true collaboration, and essentially establishes a division of labour, where some people are responsible for making decisions and the consequences of those decisions, and the rest of the people can claim relative levels of ignorance. The group no longer has consensus of decision-making and does not work together to create rules, action plans or the agenda of the skit. Instead, they are following policies constructed by someone else making them less likely to understand or implement the decisions derived by the individual (Lawler 1973). There is no buy in, no satisfaction of working with the group and a general feeling of frustration. Groups end up confused, lacking in communication or worse, ending in miscommunication and faulty decision-making (Dooley and Fryxell 1999).

"But ultimately, unfortunately, what ends up happening, at least what happened in our group, some people would have an idea and us type As, myself definitely included, would say something like ok that's a nice idea, but I think we have a better one that we have already come up with. So people's ideas were not necessarily considered equally."

When ideas are not considered it not only lowers morale of those who feel oppressed by the group leader but the effects on brainstorming and successful decision-making for the group are well documented historically. The suppression of ideas in group decision-making has been linked to group malfunctions such as groupthink (Janis, 1972), social loafing, conformity (Asch 1955), group cohesion and the risky shift (Wallach, Kogan et al. 1964). Ultimately, the lack of consideration of ideas also interrupts the enrichment and nurturing of the decision-hedgehog by questioning the safety of free expression. This group illustrates how inter-personal conflict hinders creativity, flow and psychological safety.

7.7.2 Disengagement from group

One student openly discusses in her interview that she completely disengaged from the tasks during the event in individual and group exercises. This student refuses to participate and her group tries to bring her into group discussions rather than concentrating on skit. The frustration of this is clearly expressed in interviews with the other group members. Psychological safety is theorised to influence the degree to which one engages in his/her role at (May, Gilson et al. 2004). Psychological safety should lead to engagement in tasks because it reflects one's belief that one can employ him/herself without fear of negative consequences. Individuals in these environments should actively engage their interest in their tasks and try novel ways of doing role-related tasks (Amabile 1983). However, individuals perceiving the environments as unsafe and characterised by

ambiguous, unpredictable and threatening conditions, are likely to disengage from their work and be wary of trying new things.

> *"Not everybody was fully there in hearts and minds. Not that everybody was sceptical but there were times, some people were like: Oh, I don't like acting" and some people said:, "Oh, what's the point?"*
>
> *"So, I probably felt more frustrated working in the group. "*

When engaged people employ and express themselves physically, cognitively, and emotionally during role performances. In personal disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances (Kahn 1990).

> *All the other people said let's do this and let's do that....Probably I'm a very practical person and if I don't see the point of something I just won't do it, I won't make an effort because why do it?*
>
> *"I just didn't see the point of it. I though: what are we doing here, this is the waste of time."*

The interview reveals that the student hindering the group did not consider the task meaningful and affects the experience of all involved in her group. The psychological condition of experienced meaningfulness has been recognized by researchers as an important psychological state (e.g. Hackman and Oldham 1976; May, Gilson et al. 2004). Indeed, Frankl (1992) has argued that individuals have a primary motive to seek meaning in their work. Meaningfulness is defined here as the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Hackman and Oldham 1976; Renn and Vandenberg 1995). Lack of meaning in one's work can lead to alienation or 'disengagement' from one's work (Aktouf 1992).

7.8 Trust

To counteract the risks faced with ICE, students must be able to trust each other and the facilitators. Humanists also believe that students learn best in warm, trusting classroom environments where they are given choices and allowed to express their creativity. Building trust may be an important ingredient in creating a climate of psychological safety. Although building trust may not necessarily create a climate of mutual respect and caring, trust may provide a foundation for further development of the interpersonal beliefs that constitute team psychological safety (Edmondson 1999).

In psychoanalytical theory, Erikson (1968) identifies basic trust versus mistrust as the basic construct of infancy. During the first or second year of life, the major emphasis is on the mother and father's nurturing ability and care for a child, especially in terms of visual contact and touch. The child will develop optimism, trust, confidence, and security if properly cared for and handled. If a child does not experience trust, he or she may develop insecurity, worthlessness, and general mistrust to the world. Adults who do not experience trust also develop the symptoms mentioned here. This is particularly true in group work were team psychological safety is defined as a shared belief held by members of a team that the team is safe for interpersonal risk taking (Edmondson 1999). "Trust can lead to cooperative behaviour among individuals" (Jones and George 1998:531).

Trust is a relationship marked by mutual respect and holding true to one's word, particularly in a collaborative environment. Most relationships involve some form of trust. Some risk is involved in trusting relationships particularly when it is thought of in terms of "a social relationship in which principals— for whatever reason—invest resources, authority, or responsibility in another to act on their behalf for some uncertain future return" (Shapiro 1987:626).

7.9 Crew and psychological safety

The facilitation team itself play a vital role in creating psychological safety within the decision support environment that helps to foster creativity. The crew is responsible for the smooth running of the event, moving furniture, providing instructions, structure, feedback and so forth. However, a good crew is essential for providing psychological safety to the participants. If participants do not trust the crew, feel they are being judged or are suspicious of the crew's motivation, psychological safety cannot be established. If the leadership and crew act in authoritarian or punitive ways, participants may be reluctant to engage in the interpersonal risk involved in learning (Edmondson 1999).

Not only must the facilitation team be trustworthy, they must also spread this trust and safety beyond themselves. From the first point of entry into the space, members of the facilitation team welcome participants, emphasising a friendly, open and safe atmosphere. The facilitation team also help and orient the participants while they are in the space and point out things that may be familiar to them to alleviate stress or anxieties. Lessons from the first event show that students must be welcomed the moment participants enter the space (at the door) to avoid a rise in anxiety level that cannot be dealt with later on. Another important part of creating a safe environment is conveying that in this designated space it is ok to fail. Fear of failure hinders creativity. The ethos conveyed early on is: "Try again. Fail again. Fail better." (Beckett 1984).

So, if crew is supportive, coaching-oriented, and has non-defensive responses to questions and challenges, members are likely to conclude that the team constitutes a safe environment (Tyler and Lind 1992). Supportive supervisor and rewarding co-worker relations have positive relations with feelings of psychological safety (May 2004). Interviewees discussed in depth the role of crew support during the event and in particular references to the facilitator providing a safe environment.

"He (Paul / facilitator) was really open and just really friendly, the way he spoke to us was just, oh jeez where I got to get a job, but you know what I mean, he kind of put you at ease."

"I really liked the way Garrick spoke to us. Even the way he was dressed was casual. He was very casual but yet there was a little bit of flair. There was a little bit of a trendy flair that I personally liked that you didn't feel like it was just like sometimes you can equate academics with being like sort of old and grey, but this was not that way. It was like this new media way of doing things. I felt it was cool."

7.10 Safety for Crew

In order for the crew to successfully provide safety for the participants, they themselves also have to feel safe and supported. This is particularly true for Event 4 in 2007 that doubled as a training event for new crew members. Two major roles trained were the facilitator and the scribe. Both roles are under constant scrutinising by participants and crew. Mistakes are quickly noticed and successful behaviour and performance of these two crew members shape the event. Interviews after the training event with the new facilitator and with the new scribe revealed that senior members of the crew are instrumental in helping them establish safety and the ability to perform. Importantly, both members discuss their own mistakes and how other crew members allowed them to correct these mistakes without interrupting the process. In fact, students did not even notice some of the mistakes as other crew members are quick to cover them. Once these crew members realise that they could make mistakes, they relaxed and blossomed in their roles.

Crew are therefore no different than participants in that they need to be in a safe environment that allows for failure. Interviews with the two inexperienced crew members (or rather inexperienced in their specific role) indicate that much of the safety comes from other crew members. The crew on Event 4 has worked together several times and is familiar with each other, like each other and like to work together. Crew members respect

each other and value each other's input. When crew do not trust each other and are able to rely on each other the environment can become very stressful. More research is needed on how to best train crew and create a team best able to help participants and create Flow.

7.11 Flow

Interviews revealed that certain modules of the day were more enjoyable than others. Furthermore, the overall event had different impacts on different individuals. Some students greatly enjoyed the experience, and some did not. Of those who did not enjoy the event two reasons why emerged. Some students were bored and others became extremely anxious in the discussion of the thesis.

> *"And you saw all these people who kind of knew what they were doing and it made me feel even worse because I don't know what I am doing."*

Overall, students who experience the event can be divided in three categories depending on their efforts in their dissertations at the time of the event:

1. Students who have not thought about their dissertation at all;
2. Students who have begun conceptualising their dissertation; and
3. Students who decided their dissertation topic.

These groups have very different experiences during the event. The majority of students have begun, but not finalised their dissertation topic, and these students enjoy the event. Students who have not thought about their dissertations experience high anxiety and students have decided on their topics feel largely bored. Neither of those two groups enjoys the event as much as the second group or sees the full benefits of the event. The experience of all three groups can be explained by Csikszentmihalyi (1990) theory on Flow. Mihaly Csikszentmihalyi (1990, 1997) uses the term Flow to describe a state of consciousness characterised by feelings of deep enjoyment where our usual measures of time lose meaning, and we experience a sense of control and mastery that results from

focused attention on the challenge at hand. Flow theory (Csikszentmihalyi 1990) suggests, in default state, consciousness is filled by numerous stimuli that compete for limited attention resources. When attention resources are withdrawn from other stimuli and become fully invested in the task at hand, individuals experience a focused state of consciousness comprises one or more of the following elements: a clear goal, a balance between challenges and skills, immediate feedback, a merging of action and awareness, intense concentration, a sense of heighten control, forgetting one's self; forgetting time and an activity that becomes autotelic (Csikszentmihalyi 1996). Creative productivity seems to flourish during flow. These creative moments seem to occur when there is a suitable ratio between the complexity of the activity and the skill level of the actor. Flow marks a state of consciousness where fears and anxieties about the unchangeable past and the unpredictable future are banished by an immersion in the present. The pursuit of achievable, yet challenging, goals lends order to consciousness, strengthens the self through frequent and regular successful experiences, and establishes conditions for the increased complexity that marks psychological health and development.

During interviews, participants who have thought about their dissertations, but not decided on a topic at the time of the event, discuss flow. For them, the challenge of thinking about their dissertation comes at the right time.

"I wasn't forcing myself to focus and I definitely felt free."

For the students who already know what to write about the event do not offer enough support, they experience boredom. Students who had not at all thought about their dissertations are overwhelmed and anxious.

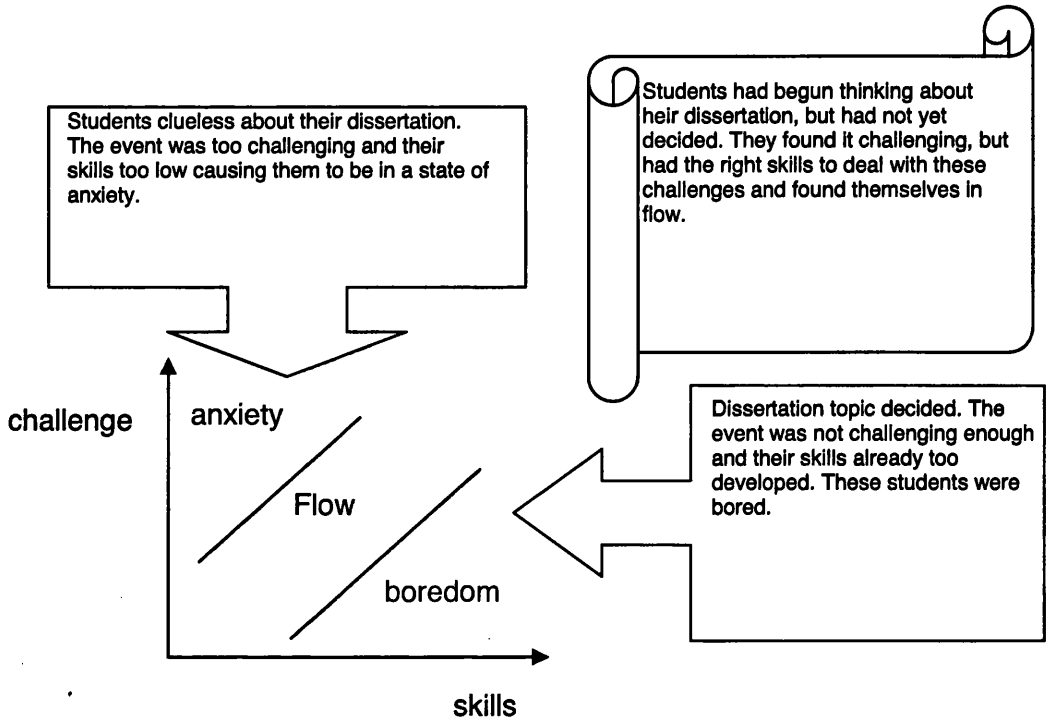

Figure 7.6: Flow

The theory stresses *finding* flow. This implies that flow is something that is found by journeying and working on the problem rather than being self-present at the start of a process (Csikszentmihalyi 1997). As flow is not achieved instantly when faced with the challenge of a problem, students find flow as they progress throughout the day. If students never find flow, their lack of flow translates to a state of confusion and anxiety. Flow occurs in the delicate zone between the anxiety of confusion and the un-interest of boredom (Csikszentmihalyi 1997).

On the opposite spectrum of anxiety, we find boredom. Strong, Silver et al. (2003: 24) assert that "boredom...occasionally haunts almost any sustained act of learning." Some students talked about the boredom they experienced. A state of boredom means that the challenge is not high enough in relation to the level of skills according to Csikszentmihalyi (1990). However, one of the benefits of boredom can be the development of creativity according to Buzan (2001) as the reactions to boredom such as day-dreaming, doodling

may enable people to make creative links in their minds that they may not have otherwise made. This understanding of boredom links with Csiksezentmihalyi's (1986) idea that flow occurs in the delicate zone between anxiety and boredom.

Prior to Csikszentmihalyi's work on flow, Goffman (1961) focuses on balancing social skills with challenges. In order to achieve the correct balance, Goffman (1961) acknowledged the role of the physical environment in engrossing people's attention. Tension that arises when there is a discrepancy between the world one embraces and the actual world (Henricks 2006) results in social awkwardness and anxiety.

> *"...because I was surprised to discover that most of the people really have a pretty good idea about what they want to write their thesis paper about, which only stressed me even more because I didn't – I still don't know."*

> *"And I think it was probably just the right timing for me, because I had already been thinking about what I want to and I talked about it already. But I need to focus, I need to figure out the theoretical, but I have the area which I feel comfortable with."*

> *"And then I didn't even think about food, because usually I'll like to think about food right way, like what am I going to eat or should I eat that. I always think what I should be doing. I didn't think about it once. It's okay, it's there, I was like so, I guess I was definitely, I'm trying to think of the word, completely engaged. I understand what engage means now."*

The notion of engagement is closely associated with flow (Csikszentmihalyi 1990). Csikszentmihalyi (1975:36) defines flow as the "holistic sensation that people feel when they act with total involvement." For Csikszentmihalyi (1975), flow is the state in which there is little distinction between the self and environment. When individuals are in a 'flow' state, little conscious control is necessary for their actions. Individuals narrow their attention to specific stimuli. They lose a sense of consciousness about their 'selves' as they meld with the activity itself. Csikszentmihalyi (1975) notes that such flow conditions are most readily experienced in certain activities, such as games and creative activities in art

and science. The concept of engagement (Kahn 1990), differs from the concept of flow in that flow has been conceptualised and measured primarily as cognitive involvement with an activity and represents a unique 'peak' experience of total cognitive absorption. However, Kahn (1990) theorized that individuals vary in the degree to which they immerse themselves in their roles.

It is important to note here that those who experience overload tend to withdraw or disengage from work, perhaps in order to replenish their resources (Ganster and Schaubroeck 1991). Some students are more engaged than others, some love the experience some thought it is interesting. However, disengagement is a problem for a few individuals in the study and as mentioned above causes disruption to all students. It is hypothesised that students who find flow, are safe to explore. This means, in addition to finding a background-of-safety, they are able to nurture the decision-hedgehog. Anxious students do not feel safe. This hinders their ability to nurture the decision-hedgehog.

7.12 Summary

Individual safety in decision-making is important as it attenuate risk taking. Only if one is safe enough to fail can risks be taken. The importance within decision-making is apparent. Decision-making is the process of reducing uncertainty and doubt in order to make a choice. However, the risk of failure can only be reduced and not eliminated. Decision-making is then about information-gathering and enriching the rhizome at Level 5 before eliminating all choices for a decision at Level 1. Very few decisions are made with absolute certainty because complete knowledge about all the alternatives is seldom possible. Thus, every decision involves a certain amount of risk. Risk involves a degree of separation anxiety (Harris, 2009), the anxiety you feel whenever you are removed from something that makes you feel secure. The way to overcome separation anxiety is to build a bridge between the familiar and secure and the new. For that reason transitional objects are

comforting in risky situations. Trust is essential to proceed. The background-of-safety needs to be established in order to then nurture the decision-hedgehog. Effects on decision-making and nurturing the decision-hedgehog in order to make better decisions are discussed in Chapter 8.

8 Findings and Discussion: Nurturing the decision-hedgehog

"If you have an apple and I have an apple and we exchange these apples, then you and I still each have one apple. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas."

George Bernard Shaw

8.1 Introduction

The previous chapter looks at how play helps decision-making in the Innovation Creativity Environment by looking at how participants form a background-of-safety. This chapter looks at how participants nurture the decision-hedgehog through play. Play is important as a part of the decision-making process as it can aid navigation trough the rhizome by allowing the safe exploration of alternative pathways. Miller (1973) writes "play is not means a without an end; it is a crooked line to the end; it circumnavigates obstacles put there by the player, or voluntarily acceded by him" (p. 93). Play can voice the inarticulate (Cohen 1996). Like navigation through the rhizome, play activities frequently involve uncertainty (Callios 2001) that makes it difficult to predict what happens next. This leaves a sense of unresolved possibility (Marotto, Statler et al. 2003) that can result in paranoid discourse if not stabilised by a background-of-safety. Essentially, play helps navigate through the rhizome and nurtures the decision-hedgehog only if the background-of-safety has been established.

8.2 Findings on the overall event design

The first step in analysing how to nurture the decision-hedgehog is to look at the event design and how the parameters are mapped onto each module. In essence, an explanation is needed of the intended purpose of each module and identify where students go down the decision spine and when they need to go back up. As discussed, going up the decision spine means going into the decision-hedgehog and exploring the unthinkable. Going down the decision spine brings one to a point of action. The use of rich language in play allows participants to nurture the decision-hedgehog. In other words, using rich language and play allows for idea elaboration, trial and error, and exploration within the paranoid discourse. Traditionally, decision-making only focuses downwards – on making a decision – rather than looking at how content can be opened up. The dilemma for the decision maker at all times is how to proceed:

1. To aim for immediate decision taking (action) by spiralling down a decision spine, with the aim to 'prick the real'.
2. To nurture the decision-hedgehog's body-without-organs by telling and exchanging stories which nurture the decision-hedgehog's rhizome, increasing its semantic diversity and intensity of connections.

Telling and exchanging stories supports both aspects of decision-making. It aids spiralling down a spine to 'prick the real.' Telling and exchanging stories also nurture the decision-hedgehog, as collaborating groups construct maps of potential possibilities and opportunities, enriching contextual knowledge (Humphreys and Jones 2008). By creating events that allow participants to experience movement up and down the decision spine (explorations and action)it is hoped that a balance is found that allows students to come up with novel ideas but also to make some decisions. Having said that, this paper looks

primarily at Levels 4 and 5 of opening up and only Level 3 as direction intent to make a decision. Actual decisions (Level 1 and 2) are not investigated.

At Levels 4 and 5, the event is designed for participants to interact within the small groups (e.g. communities of interest) and the large group (e.g. swarm), to use play and playful approaches to generate new ideas through brainstorming, to facilitate conversation and exploration and sharing of ideas, shift mindsets to help see things differently and inspire debate among participants. All these nurture the decision-hedgehog, open up the possibilities, and allow for idea generation and elaboration.

8.3 Module specific findings

This section addresses specific modules of the event and how they enabled nurturing the decision-hedgehog by allowing for cognitive flexibility, idea elaboration and managing expectation.

8.3.1 Timeline

The students, first exposure to extended language occurs when they see their deadlines visually displayed on a whiteboard. In order to bring this drawing to life, the academic head and two former students discuss points on the timeline. As expected, the academic and student realities of the timeline differ.

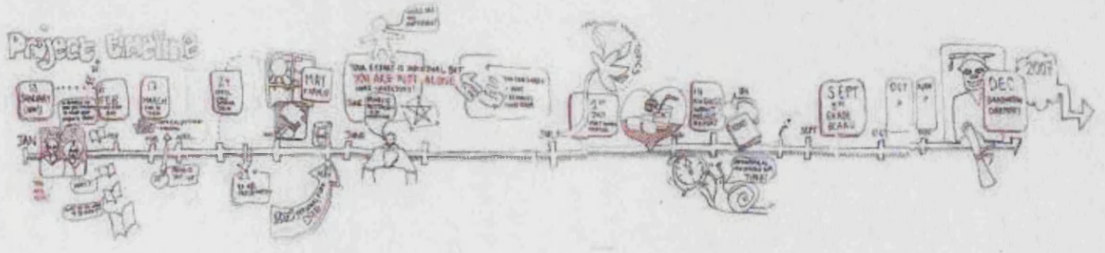

Figure 8.1: Timeline

Interviews reveal that students find this an extremely useful resource in preparation for their dissertation. They for the first time exactly what is expected from them (time-wise) from a professor. Former students also tell them that it is a "doable process." Some possible hitches are identified. The timeline can be an intimidating concept for anyone working towards a deadline. During ICE events, a scribe presents the timeline in pictures, which brings it to live and differs from threatening, traditional charts. According to Gardner (1999), some students are not reached by the more traditional linguistic or logical ways of instruction. This visual-spatial representation of the problem at hand, had a much stronger impact than the previous only verbal-linguistic representation. It is also a prime example that not all intelligences are necessary to convey a broad understanding but simply diverging from the traditional model enabled students to see what the possibilities are. This is the students' first experience of opening of content. The main messages conveyed to the students are "it can be done" and "get started."

> *"The timeline inspired me to the point where I started doing my own and it made me see what I obviously was already thinking before [...]. I was trying to figure out a timeline for myself."*

Using extended language to inform the decision-hedgehog, allows students to utilise the combination of rich and restricted language for both creativity and rational analysis. In other words, while the rich language allows student to see beyond the dates indicating deadlines and seeing opportunities, restricted language brings students back to reality and the realisation, this must actually be done by a deadline. In terms of decision analysis, rich language is the process of going up the decision spine and nurturing the hedgehog, and restrictive language of going down the decision spine towards action.

One shortcoming of the timeline is that it terminates with the end of the MSc. Students can not fully imagine themselves beyond the end of the MSc. In the past, students are unable to

see the larger significance of both the course and the dissertation. In order to get students to identify issues and life beyond the dissertation deadline, a new module is introduced in 2007. Entitled "success stories," three former MSc students are invited to talk about their current careers. In the "swarm" that followed success stories, students were asked to talk about their future ambitions, in addition to their dissertation topics. The focus group conducted with decision-making students, who also participated in the Project Dreams and Reality event after these changes were implemented, reveals that this change encouraged the students to think about their futures and incorporate this thought-process into their posters when "building a bridge" (Jones and Lyden-Cowan 2002) even though students could not necessarily fully relate to the three overly positive presenters. In other words, students are able to further explore the rhizome as their background-of-safety is expanded to allow them to venture beyond their dissertation topic. This allows students to see beyond the decision horizon (Humphreys 1978).

8.3.2 Swarm

Swarm is an opportunity for individuals in the group to gather information from as many people as possible. By finding out about other students' topics of interest, methodology and even personal information, an interaction context (Humphreys and Jones 2006) is created that by definition opens up the rhizomatic pathways and nurtures the decision-hedgehog. Decision support environments need to incorporate a space and time for people mingle and interact. Even in the short period of five minutes, this diversity of people and interests adds to the richness and quality of social interaction. Through this interaction, different skills and ideas can intersect and contribute to the formation of creative and new ways of thinking.

8.3.3 Take a flip

Many students rate this module as their favourite activity. This module marks a first time opportunity to actually express oneself in rich rather restricted language by putting one's thoughts down on a giant post-it note. While considered the most useful, it is also considered the most creative. Students thrive on the opportunity to use multi-coloured pens, to draw and to write down their ideas. A large proportion of students mention that they never felt this creative. Many students opt to take the charts home. However, not everyone likes this session. Some students were too intimidated by the open-ended question and by 'creative' task. These students uttered phrases such as *"I'm just not a creative person."* They tend to wait for their colleagues to begin the posters and hesitantly began their posters, inspired by others' drawings, not their own thoughts. In terms of the decision-hedgehog, students successfully go up the decision spine to open content, but are also able to go down the decision spine to narrow q possible decision. They create and open up. They revisit posters because they have come up with more contextual context or have been able to identify better solutions. Students are able to revisit and rewrite their posters at various points throughout the day. In observation, it is evident that students emerge themselves in the creative task.

> *"So for me, getting something on paper artistically was great, because I actually like drawing and sketching and all that. So that's the way I express myself and having that actually as a resource and given to me as an opportunity to express myself that way just made the experience overall more overwhelming and at the same time, this defines the whole process, because you're looking to the future and the process of you going to your graduation day."*

Students find great satisfaction in expressing themselves pictorially. It allows them to access different ways of thinking and idea elaboration. Students are excited by the opportunity of showing rather than just telling about their dissertations.

"You can show your ideas to other classmates, I liked that very much."

"I felt more creative than with other opportunities to write down ideas on the board thing on the wall. That was more of a creative thing because it was easier, it was on my own, I didn't have to rely on other people, and then just get on with it."

Whereas note taking is a largely linear activity, the posters designed by the students have a more narrative, circular and colourful approach. Using rich language in this exercise proves powerful as the exploration at Level 5 was balanced with an actual action plan that could lead people down the decision spine to Level 1 and up again when new ideas arose. For many students this is their first time expressing their ideas in a new way (not restricted). Making the poster carries great impact for most students. Seeing other people's posters further nurtures the decision-hedgehog (opening up of content).

"You know, seeing other people's drawings and everything, what they want to do and everything was giving me ideas as well."

However, the process does not open up content by exploration in extended language alone, it also forces participants to make some decision as to what to include in their poster. This means spiralling down a decision spine to commit to an idea on paper. However, these ideas can be revisited at any time and the processes are never completely closed as students can open up and close on different decision spines.

How much participants are able to open up content and be playful and creative during the poster exercise is strongly influenced by the openness, creativity and ease of the facilitator. An analysis of the poster in 2006 and 2007 found some striking differences in approach. Even though most modules are continuously improved with upcoming events, in this module in particular instructions and facilitation styles greatly influenced results.

Instructions in 2006 stated "Imagine we are in the future! It is 15 December 2006 – your Graduation Day. You are surrounded by your friends/colleagues. It has been a tough year but now is the time to reap the rewards. As you look back on the year, you find yourself reflecting on all it took to enable the success of the project – the high points and the low points." Contrasting, in 2007 students were invited to present their dreams and demons on the posters and literally used this dichotomy to present their thoughts. The difference in the richness used to make posters is monumental. It must be taken into further consideration, that both events in 2006 were run by highly qualified and experienced facilitators whose imagination and enthusiasm further inspired students to be creative. In 2007, the event was simultaneously run as a training exercise for new crew members. Although the facilitator was very effective, her inexperience was associated a few difficulties. The facilitation team, with particular emphasis on the facilitator, enhances the use of rich language amongst participants through assisting them and modelling creative behaviour as well as instructing them in the use of communication tools and technical systems. This ensures that participants can create their own pathways into the rhizome, neither hampered nor limited by lack of skill or enthusiasm. Students of all ages learn through modelled behaviour (Bandura 1977). The facilitator was less confident as previous facilitators and modelled a less open and creative approach, which is then adapted by the students who were subsequently less open and creative when approaching the first independent task using rich language to create posters. The facilitator also presupposes that the participants know the 'language' of the event. In some of her instructions, she utilises terminology that is unfamiliar to the participants and they are unsure of how to proceed.

In 2006, most posters include images that are circular and colourful. Rich language is maximised to convey messages. Only 9 out of 95 documented posters in 2006 are written in a linear, 'traditional' fashion. In 2007, however, 45 out 49 documented posters linear

using the dichotomy of demons versus dreams as a literal guide rather than the anecdotal instructions in 2006.

Figure 8.2: Sample posters 2006

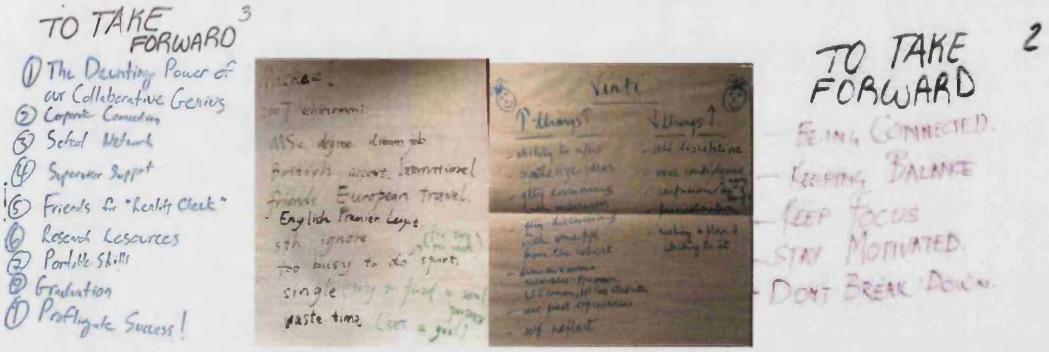

Figure 8.3: Sample posters 2007

N.B.

Looking at the posters as product, speaks against the process definition of creativity used in the beginning or this research document. However, the use of colours and the use of pictures is actually the process of making the poster, but as limitation to a process definition predicted, the outcome cannot be ignored.

8.3.4 Shift and share

This module intends to allow some students to share their posters with the rest of the class in small group presentations. By seeing and hearing what others have to say students can get an idea of other ways of doing research and different topics of interest. Even though several student interviews pointed to the fact that exposure to other peoples' research is helpful and interesting, this module is not as successful as intended. Many students are

uncomfortable sharing their posters because they considered them private, or are embarrassed to talk in front of their peers. Furthermore, some students are confused as where to go as the logistics of this module does not function well. The instructions and the physical environment obstruct the experience. Although several different ways of sharing are tried throughout the events, none are truly successful. This module is dropped in Event 4.

8.3.5 Communities of interest

The module Communities of interests aims to cluster students together by area of interest. By identifying common interest, it is hoped that the collaboration would go beyond the event and students would support each other throughout their dissertations. Interviews reveal that this specific module is the most relevant to directing one's thesis if an appropriate group was formed. Students are able to successfully identify common interests, plan future collaborations and support each other through the dissertation process. Some groups do not have strong common denominators (especially in Event 1) and in such cases, the module is less successful. The main problem in forming groups is the warm-up to the exercise in the Event 2 in 2006. The facilitator first suggests forming random groups, and students do not return to academic subjects in group formation. In the Event 3 in 2006, group formation is far more successful. Here, groups do not feel they have enough time to submerge themselves in their topics in the time frame provided and interviews suggest more emphasis and time should be given to this module. However, timing is actually designed to leave group discussions incomplete so that students would have to seek out each other outside of the event.

The assignment asked, "What is the best support environment you need to be successful in your project?" In the first event of 2006, plans were vague and students did not follow through. Beneath follow group description of Events 2 and 3 in 2006.

Event 2

Group 1 describes its ideal community of interest to support their research. This included the following variables: technical knowledge (e.g. methodology), emotional support, and contacts to help access companies, who have knowledge about companies as well as active listeners and contributors.

Figure 8.4 Photograph of Communities of interest 1 (Event 2)

Group 2 tires to create the ingredients for a group for right now. They want to knowledge-share across the whole course by asking everyone to place their essays in a central data space. As they approach the dissertation, around February, they recommend dividing into groups based on topics, for example internal communication people. These topic groups would then exchange references, have chat forums and share contacts. Jones notes that technical support is accessible for students who want to set up online forums.

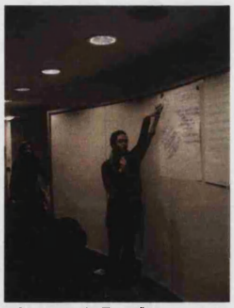

Figure 8.5: Photograph of Communities of interest 2 (Event 2)

Group 3 wants to create the best environment for sharing knowledge. They discuss the following variables: electronic resources such as email and Web CT, use of the psychology workshop and audio equipment, study groups and contacting alumni.

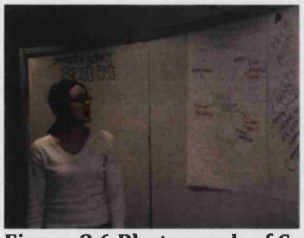

Figure 8.6 Photograph of Communities of interest 3 (Event 2)

Group 4 looks to the future to envision a successful group. The path to success includes meeting up regularly, including people who have work-experience, people with other types of experiences, and helping each other out of 'sticking' points. Student questions included: "can you do joint/shared research?" Patrick answered yes, but you must submit your own report, it must outline what you have done and the interpretation must be unique to you.

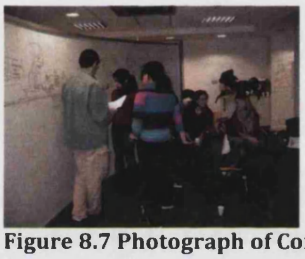

Figure 8.7 Photograph of Communities of interest 4 (Event 2)

Group 5 talks about the creation of shared knowledge database to collate and share articles, research papers etc. Knowledge sharing includes identifying individual strengths and making this public. It is noted that old dissertations are available on Web CT.

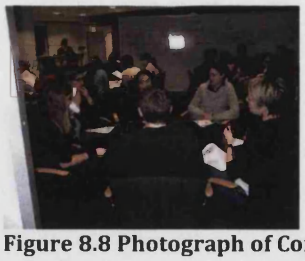

Figure 8.8 Photograph of Communities of interest 5 (Event 2)

Group 6 reiterates many points made by previous groups. They split the variables into people, technology and space. Each variable provides opportunities for sharing and supporting. Ideas include, using people networks, making technology useful and creating the right physical and emotional space to get the work done.

Figure 8.9 Photograph of Communities of interest 6 (Event 2)

The groups participating in the first event in 2006 (Event 2) are unable to provide concrete ideas. Concepts were expressed in general terms. "We could do this or that." In essence, they do not create a group, but an agenda of what a group would look like if they were to create it. Specific plans, such as creating folders with essays and papers, are not successful as only a few students contribute all the information to these folders.

In the second event of 2006 (Event 3), the facilitator is more successful in getting students to exchange useful information and nurture the decision-hedgehog by initiating this module by asking people whether they had already thought about whom amongst their colleagues they might like to work with.

The participants are first asked to form communities of interest based on holiday preferences, next they chose between wealth, wisdom or power. Finally, participants are asked to spend the next session forming groups around similar research interests. The assignment asks, "What is the best support environment you need to be successful in your project? Working as a group, take the time to discuss and plan what needs to be done in order to create the best possible support environment." This time, students create plans that they could (and did) use in writing their dissertations. The difference in instructions and build-up to the event allows many of these groups to identify research themes they have in common. This shoes that the importance of instructions cannot be underestimated.

Event 3:

Group 1 identifies a number of common values around the importance of political engagement within their research, the need of research for change and the importance of focusing on engaging with others. They also feel that qualitative data could be the basis around which broader analysis support groups could be formed. The research theme that unites this group is political engagement, emphasising research for change.

Figure 8.10 Photograph of Communities of interest 1 (Event 3)

Group 2 identifies a common interest in corporate communications and knowledge exchange between organisations. Coming form outside of the UK, they find getting access to organisations difficult. They feel that regular study groups, including psychological support, social interaction and study timetable would enhance their research process. They also identify study location as important, noting that working outdoors could actually prove conducive. The research theme that they have in common is cooperate knowledge and communication and the ability to help each other gain access to organisations.

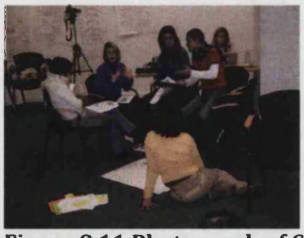

Figure 8.11 Photograph of Communities of interest 2 (Event 3)

Group 3 finds a common focus in looking at systems of out-sourcing in companies. They identify three kinds of support that could help them in their quest. First, they feel the need for theoretical support, ideally on an individual basis directly from a supervisor. Secondly ,they hope to share support, particularly when approaching companies. And finally, they recognise a need for technical support, not only for IT but also with regard to legal advice

on accessing data and issues surrounding copyright. They main research interest is change in organisations.

Figure 8.12 Photograph of Communities of interest 3 (Event 3)

Group 4 is interested in the themes of identity, empowerment, stigma and participation. They want to discuss these themes within a well-structured framework therefore avoiding too much solitary time in the library. They also advocated a 'happy hour' approach to shared time off. In terms of research, they need to develop a methodology collaboratively to apply it as a shared endeavour with focus groups. They also believe that reading each other's papers would be a useful enterprise. Finally, they feel the need to access tools and technology for example easy transcription tools and so on. Their main research theme is identity and participation.

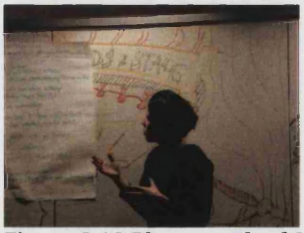

Figure 8.13 Photograph of Communities of interest 4 (Event 3)

Group 5 states that qualitative methodologies are their key concern. They feel that sharing references, forming a review and editing co-op, assisting and facilitating each other with focus groups would be of great value. They also feel they would benefit from brainstorming, which forms part of a strong team for collaboration. They do not identify a research theme, but shared methodology (qualitative).

Figure 8.14 Photograph of Communities of interest 5 (Event 3)

Group 6 wants to refine topics and reflections on research, lectures and sessions with supervisors, contact through e-mail to accommodate different work timetables, make sure to offer emotional support to each other. The group has no specific research aim. This group consists mainly of members undecided on a research topic. Individuals in this group do not experience flow during the event and express confusion.

Figure 8.15 Photograph of Communities of interest 6 (Event 3)

Group 7 has shared interests in Africa and Asia. All plan on travelling as part of their research. This kind of international research requires a specific kind of support. They feel they would benefit from co-designing their reading schedules, and taking the time to identify the attributes of different members of the group, to better use each other's strengths and support each other's weaknesses, to better motivate each other. Their research interests are NGO case studies in Africa and Asian. It turns out this particular ends up working together successfully throughout their degree.

Figure 8.16 Photograph of Communities of interest 7 (Event 3)

Group 7 (Event 3) reveals to be by far the most successful in terms of psychological safety, support, commitment and engagement. Studies of work teams in a variety of organisational settings have shown that team effectiveness is enabled by structural features such as a well-designed team task, appropriate team composition, and a context that ensures the availability of information, resources, and rewards (Hackman 1987).

One group formed based on their programme. This group was eager to contribute during the event and after the event by volunteering to be interviewed. Four out of five people from this group volunteer to interview as they are eager to share their experience. The strengths of this group lie in identifying a common interest, making concrete plans for future collaboration and support.

In stark contrast is a group that formed on similarities in cultural background (Chinese). Cultural similarities do not enrich the rhizome, but rather stifles all progress. In this group, there is no common interest, no common theme and no initiative. No-one takes charge, no-one really understands the goals. They are desperate for more structure and a more traditional teaching approach. They cam not break free as they are collectively trapped by a traditional approach. Interviews reveal that they idealised other groups

> *"It's really interesting, and I wonder how can my classmates have such a great idea. And it's really creative."*

Establishing a background-of-safety takes precedence over the opportunity to nurture the decision-hedgehog. This means that students come together in friendship rather than interest groups. According to the instructions, the communities group must differ from the skits group. It is decided to swap the order of these modules so that skits would precede communities. The idea being that if groups decide to form based on friendship, they do so in the first group activity, leaving them no choice but to form a group with different

members in the communities exercise, allowing them to actually form based on interest and cerate the opportunity to explore the rhizome, generate and exchange ideas relevant to their theses.

8.3.6 Scenario preparations

As discussed, these groups had to constitute different members than the communities groups. Interviews disclose that students greatly enjoyed preparing for the skits. This is described as a period of laughter (*positive affect)* and *social interaction.* However, some groups experience disruptions due to malfunctioning group processes. In one group, an authoritarian leader emerged who dictated to the group how they would run the skit. This leaves very little room for discussion. During interviews, several of the fellow group members mention this and the "leader" himself acknowledges that he takes charge of the situation. His reasoning is that he wants to deliver an amusing skit that would receive positive feedback. His fear of judgment gets in the way of collaborative endeavours.

In a separate group, one member disengages completely. The group spends much of their time trying to convincing this person to get involved and too little time preparing. Overall, the outsider's actions greatly inhibit group collaboration and enjoyment.

Another group forms on cultural similarities (as in communities). This group comprised of Asian students. Interviews reveal that this subgroup found the days activities very difficult overall and specifically in the skit module. No leadership or direction emerges and the group is not able to progress. The goals are not clear to the group. All group members interviewed mention the need for more structure in future events. Members all agree that they wished someone could have helped them to be more creative. This group is in need of either more support or more diversity. Their sketch is monochromatic and less creative than the other sketches.

Successful group work is also dependent on the group formation, which Guattari calls the group-subject (*groupe-sujet),* where the group is able to question the goals, producing transitional fantasies. Rather than receiving direction and determination from other groups, the group-subject can break free from traditional hierarchies, roles and concepts (Bouge 1989). This contrasts with the subjected group (*groupe-assujetti), which* does not question institutional objects and forgoes the ability to explore the rhizome by accepting determination from other groups. Scenario preparation is an opportunity for groups to open up in the context of decision-making models introducing ideas and generate creatively to nurture the decision-hedgehog.

8.3.7 Scenario report-outs

This is an opportunity for students to come together and express their concerns in rich language through a rehearsed play (skit). Drama and improve is a prime example of adult play as it can be used to elicit creativity during the preparation as well as performance stage. Students choose mostly themes very relevant to their experience of the MSc and thereafter.

8.3.7.1 Obstacles

Figure 8.17: Photograph of scenario Obstacles

This group explores 'obstacles to success'. Their key questions are 'what will be the obstacles we face and have to overcome between now and until we're happy in a job?' Their objectives are to stay healthy, to go to the gym, to take breaks, to enjoy cultural

activities and to form a study group. Furthermore, the group addresses how to combat disorganisation, see your supervisor, talk to people, and remember what you've achieved already and addresses self-doubt and lack of confidence. They suggest to keep deadlines are under control, to job search by reading the paper, to contact former employers and to network. The question how to deal with rejection, self-doubt, and work on confidence and work satisfaction. They note that the path to true happiness is long and hard. The cast consisted of one leader as the main character supported by others.

8.3.7.2 Ms OSP

Figure 8.18: Photograph of scenario Ms OSP

This group questions life after LSE. Their scenario revolves around the example of the woman who gets a consulting job, but then decided to return to study. The cast includes one narrator with all other students manipulating toys and puppets. Their toys include a princess puppet to present Ms OSP (Organisational Social Psychology), blocks that build the path to the future, a dinosaur for the scary things one faces in the future and a teddy bear as the fiancé of Ms OSP.

8.3.7.3 Friends reunited

Figure 8.19: Photograph of scenario Friends reunited

This group portrays a group of LSE friends in a ' Friends Re-united' scenario. They picture their activities ten years after graduation. Five friends from LSE meet up again and compare what they have done since choosing a topic at university. The group looks at how the choice of topic and process could influence a future career. Each friend had chosen a different track including a dissertation that allows its instigator to develop an expertise leading to a consultancy role, another that allows a diversification from previous study and a third that forms the basis of a PhD enabling a route into academia. The cast consists of one student as a talk show host and all others as guests. They use a toy snake as a boa to show how posh one graduate has become.

8.3.7.4 Two sides of the same coin

Figure 8.20: Photograph of scenario Two sides of the same coin

This group tells a parable of the two sides of the same coin. Two students bound together with strings as complete opposites from each other illustrate two perspectives: sometimes confident, sometimes worried and perplexed. The student who works hard is rewarded with a distinction while the student who parties barely passes. What do they do next? The woman who works hard immediately gets a job in a big firm, but is overworked and in need of some fun. The second woman is unhappy that she can not find a job and starts to work harder until she eventually does. The cast consists of two students tied together to represent two versions of same person. The rest of cast plays supporting roles. They use bottles and signs to support their narrative.

8.3.7.5 Network central

Figure 8.21: Photograph of scenario Network central

This group tells a networking tale. They explore the importance of networking and keeping in touch after college is over. Two of the students have a hard time after graduating. They have each other's support and decide to set up a company together. They recruit from within their circle of colleagues in the LSE, each of whom has developed new skills in different areas since leaving LSE. They go on to develop an extremely successful business with their friends and colleagues. Each person presents his or her story.

8.3.7.6 I love her school

Figure 8.22: Photograph of scenario I love her school

The scenario is an interview situation in 2007 with a LSE graduate and a non-LSE graduate with has more experience. The LSE graduate effectively communicates her skills, personally and professionally. The managers discuss the candidates, with differing views on stipulating if qualifications are better than experience. The cast consists of two interviewers and two interviewees.

8.3.7.7 Women on top

Figure 8.23: Photograph of scenario Women on top

An all female 'musical' troupe present an affluent and successful future scenario. These women are at the top of their game but they are not 'getting enough satisfaction.' Reaching a breaking point, they feel the need to initiate change in their lives utilising their networks. This is a story of how achieving financial success does not automatically amount to 'social capital'. These dynamic young women demonstrate the value of network participation as a means of empowerment. All students participate in singing and use toy blocks as instruments.

8.3.7.8 Reality check

Figure 8.24: Photograph of scenario Reality check

At a puppet show graduation ceremony based in 2006, Patrick Humphreys commends his students for their efforts. However, the 'real' world interviews do not go as smoothly. Is being a student, especially a female student a disadvantage or an advantage? And is a social psychology MSc really what employers want? Or is it all about being positive to get the work you want?

8.3.7.9 Fantasy channel

Figure 8.25: Photograph of scenario Fantasy channel

Fantasy channel features a night at 'The Martins' – an award ceremony named in honour Martin Bauer, 'a most prestigious man' (and a professor of Methodology on the course), where awards are given to recognise academic brilliance. The nature of the awards recognises the different approaches to study. A last minute count of the votes reveal that 'the-last-minute-dot-com' award goes to a graduate who recognised the valuable role 'Starbucks' played in their success as well as the importance a good supervisor. The key theme of the story identifies that while some study topics are specifically career focused, others are more about a deep personal interest but this diversity of approach is worthy of recognition and encouragement. The students use bricks as trophies and dress up in costumes.

8.3.7.10 Academics Anonymous

Figure 8.26: Photograph of scenario Academic anonymous

AA provides an environment for retrospective confessionals, reflecting on the stress of being an MSc student. One AA member confesses how her ambitions to make a difference led her to end up working for an NGO. Another describes how the process of working through her initial doubts about her topic of study ended up enriching her life on a personal as well as professional level. Another member looks back on how the kind of

'confusion' she experienced as an MSc student five years previously ended up being a huge asset in her current work. The last member reflects on how her thesis provided the backbone of his subsequent financial success. The key theme of this narrative was that regardless of where one start from with a topic of study, the process of 'figuring it out' is worth the effort.

8.3.7.11 Pirate ship Beaver

Figure 8.27: Photograph of scenario Pirate ship Beaver

In 2006, a pirate ship sets off into the last three months of thesis-on-the-high-seas: the forecast seems stormy. Before long, land is sighted and the ship's crew disembark to conquer new territories and exact radical changes. Worthy and inspired, their journeys take them to locations as diverse as Greece and Canada. All changes are strongly social, although there are still some crew remain on the ship to find themselves shipwrecked on PhD Island. After escaping a few years later, the remaining pirates go on to achieve huge social innovation on a global scale. This scenario illustrated that everyone is on the same ship of study, and although the course of the ship may span many lands and different (career) outcomes, teamwork is critical in this part of the journey.

8.3.7.12 DEDS - Dreams End Dramatically Sometimes

Figure 8.28: Photograph of scenario DEDS

Does everyone around you know what he or she is doing? After a series of fruitless interviews, our puppet protagonist struggles to find work. Changing her approach from a shy and stumbling cry-baby into a dynamic and assertive go-getter, success in interviews eventually occurs. The key theme of this story is the fact that triumphs can often be followed by failures and that persistence is the key to success. Students use a variety of toys including masks, dolls, bricks as instruments and a dinosaur as the interviewer

8.3.7.13 Life is a never ending game

Figure 8.29: Photograph of scenario Life is a never-ending game

A teddy bear looks back on the 'snake' of his LSE career and reflects on the barriers he encountered on his journey. The themes of the story are the importance of over-coming obstacles, and valuing this part of the process as much as the outcome.

8.3.7.14 The path

Figure 8.30: Photograph of scenario The path

This skit presented with the aid of building blocks, marionettes and stuffed animals tells the story of a young woman and her journey from a great Master's experience, initial failure to get a job and final success in her dream job. Symbolically, the play used a dog to represent security and a snake to represent the fears and anxieties of the real worlds.

8.3.7.15 Dreams do come true

Figure 8.31: Photograph of scenario Dreams do come true

This skit uses the actors as the narrator's alter egos and explores the various paths and choices available to them as they think about their research choices. The 'pulls' of the glamorous movie star, the mother Teresa figure and the academic expert are juxtaposed seamlessly. The narrator concludes that multiple and flexible identities are possible. They use costumes to dress up.

8.3.7.16 Circle line

Figure 8.32: Photograph of scenario Circle line

Taking its name from one of London tube's oldest line, this skit journeys through experiences of a Masters course, feelings of being lost and confused and the dissertation (in the guise of the grim reaper) are mediated through the white mask of tragedy and comedy. They use self-made masks and a monster to present the dissertation.

8.3.7.17 Patrick's search for his kingdom

Figure 8.33: Photograph of scenario Patrick's search for kingdom

This is fairy tale about conquering the castle of academia, staring a little bear called Patrick and his friends Garrick and Gaskell ('Patrick' Humphreys, 'Garrick Jones' and George 'Gaskell' are associated with the course). The friends stick together overcoming obstacles and eventually conquering their research problems with one of the becoming the head of the department. A teddy bear represents Patrick Humphreys (head of department) and a puppy Garrick Jones (facilitator). They use many toys to support their story.

8.3.7.18 KMPG

Figure 8.34: Photograph of scenario KMPG

This is an allegorical skit involving the adventures of two friends, a monkey and a pig, seeking ways to survive. The monkey has to feed his family. The pig is trying to avoid being turned into a sausage. The skit includes cameo appearances of some recognisable consultancies ('Can't Produce More Growth' and 'Monkinsey and Fowl') and Patrick Humphreys as a genie that brings along SPSS (in form of an abacus). The students dress up and use toys to aid their story. They also convince Patrick Humphreys to join the skit as himself.

8.3.8 Anxiety to perform

Students find this the most anxiety-provoking module. The main fears are stage fright and fear of judgment. Some students are unable to deal with presenting in front of a group and completely detached themselves from the process (see analysis of module 6). Students state that watching other students perform is their favourite and the most fun activity of the day. Interestingly, in most interviews participants disclose that they feel the other

groups are more creative than their own. This is true even for those groups who others saw as very creative.

The discussion of anxiety to perform is so prevalent in the interviews that immediate action is taken to alleviate it in time for the Event 4. In subsequent events, we adopted the "golden rule" of the Sesame Approach: 'You do as much or as little as you want'. Whereas students had to participate in the first events, they had the option to participate in the fourth event, eliminating feelings of pressure.

The "Sesame Approach" to drama therapy is a symbolic approach placing emphasis on the creative and expressive use of the imagination within the safety and containment of the art forms (Pearson 1996). Based on philosophies and theories by Jung, Laban, Sladea and Lindkvist, it places an emphasis on the creative process that working through drama and movement affords. In particular, the approach draws on Jung's ideas of the self-regulating psyche, the psychological value in play and the symbol-making function of the psyche (Tuby 1996).

In the theory, each person is encouraged to be fully responsible for what they contribute. However, unlike in theory where the client is never judged by the quality of their contribution as the work is not geared towards performance, in this context, it actually is a performance. At this junction problems occur. Given that it is not a therapeutic relation ship, the performer is judged and fears judgement

"I was scared of what others think..."

In line with sesame art therapy, students playing an improvised role can distance themselves from their own experiences and project those onto the art form. This helps

students to increase their awareness of self and others and to cope with difficult experiences. It is an indirect method of allowing the unconscious mind to give vent to its energies in a safe and contained manner.

8.4 Creative experience at Level 5 of the Decision Spine

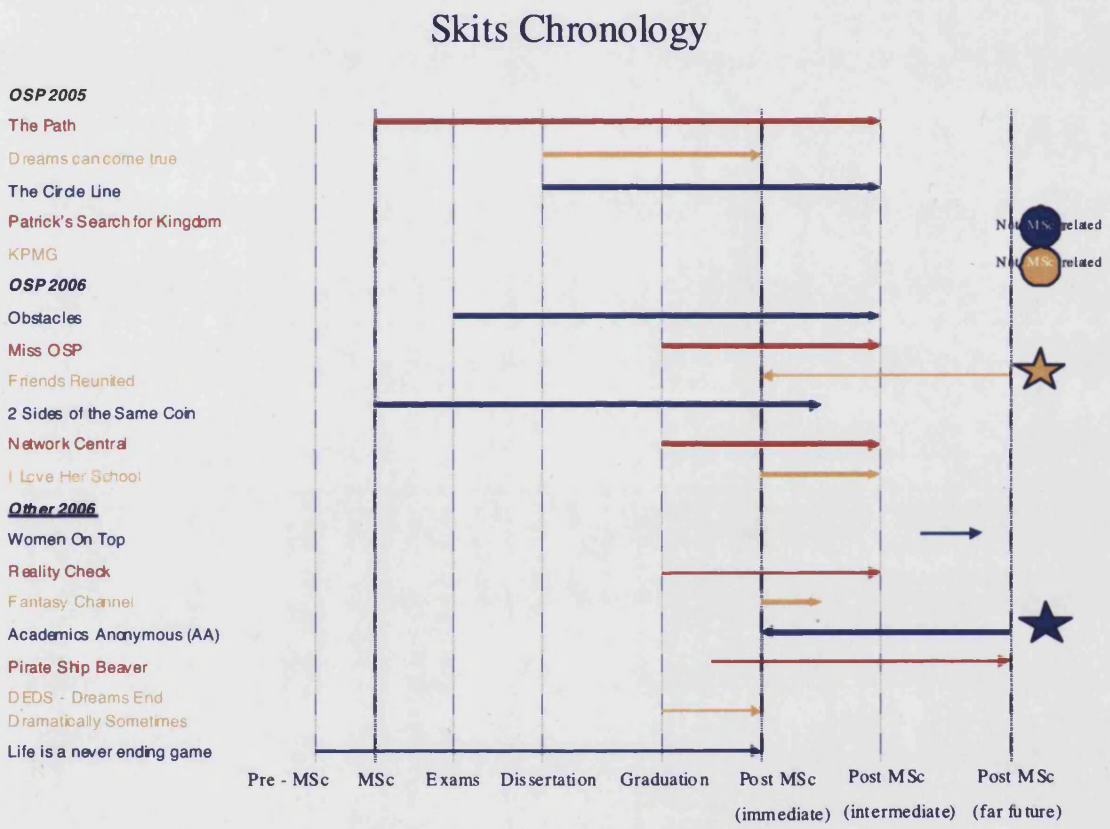

Figure 8.35: Chronology of skits

A closer look at the 18 sketches performed by students an interesting pattern occurs. The narratives students present can be chronologically presented (Figure 8.35). Different groups mark different beginning (e.g. before the Masters programme, after handing in dissertation, etc,) and similarly end at a specific point in time. As discussed, the assignment asks students to imagine they have reached a point after the Masters programme and are looking back at their experience. Most groups depict the journey forward through time. However, two groups project themselves into the future and then

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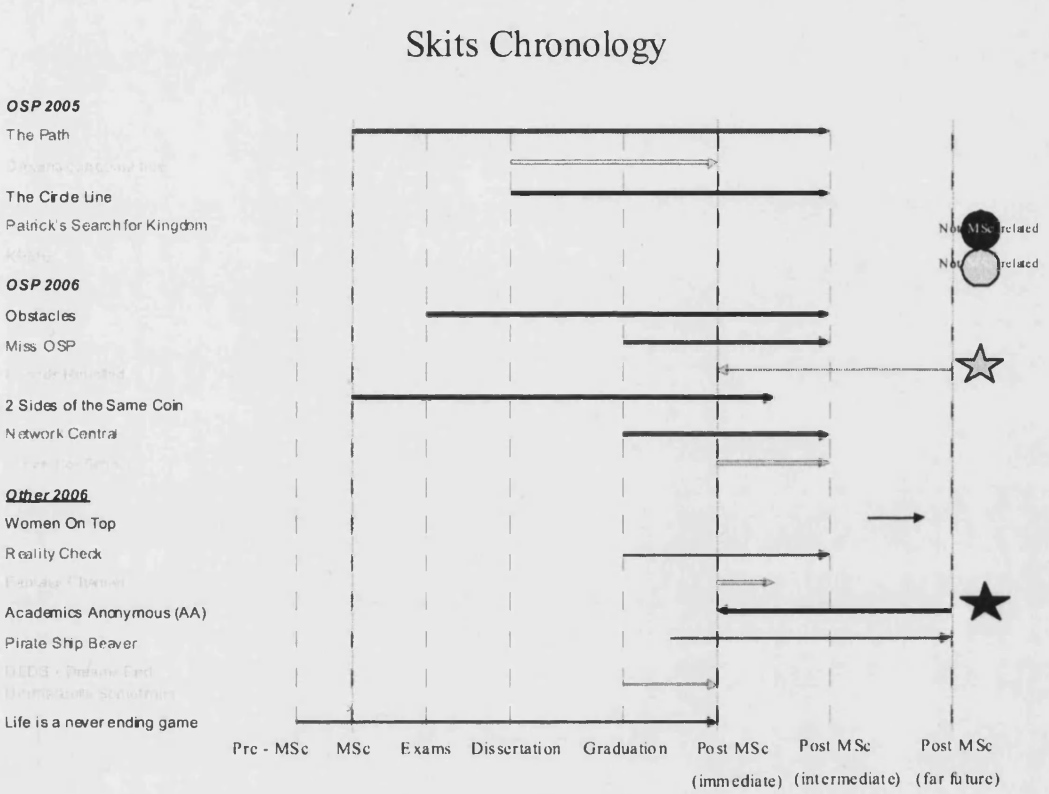

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travelled backwards in time. Essentially they place themselves beyond the decision horizon (Humphreys 1978) to look back at the decision-making process as a past and completed event. This allowed them a certain degree of separation from reality and thus to explore the roots of the decision problem as *imagined* through explorations through the rhizome carried out within the 'small world' (Savage 1955; Toda 1976) allowing these particular students to explore within the background-of-safety (Sandler and Sandler 1978). There narratives were 'different' and more creative. Students display higher levels of positive affect and the audience reply was higher affect (laughter) and enthusiasm (applause). Students in these two groups successfully use the environment and tools to express themselves more freely and creatively. Interestingly, idea generation, preparedness and the use of toys appear to have no obvious bearings on the outcomes.

	Positive Affect	**Use of Toys**	**Response from audience**	**Prepared-ness**	**Number of ideas**
Obstacles	4	2	5	4	21
Ms OSP	2	5	3	2	9
Friends reunited	5	2	4	4	13
2 sides	2	2	3	3	17
Network central	3	2	4	4	25
I love her school	1	1	2	2	15
Reality check	2	5	3	3	10
Fantasy channel	3	4	4	5	16
Academic anonymous	5	1	5	5	25
Pirate ship beaver	2	1	3	4	18
DEDS	4	5	4	4	18
Never ending game	2	3	1	1	18
The path	2	4	3	4	14
Dreams do come true	3	3	3	3	15

Table 8.1: Coding of skits

8.5 Effects on decision support

Traditionally decision support enables people to go down the decision tree and move to the best decision. Decision Conferencing typically works backwards along a single decision-spine from an understanding of collaborative models to define the tasks leading to construct the reality (Phillips 1989). One of the major problems of decision-making within the more traditional model is attempting to support decision-making in unstructured situations with conventional problem solving methodology. It is difficult to match problem frames to situational cues within a single decision-spine before trying to solve the problem within the spine (Humphreys and Berkeley 1985; Nappelbaum 1997; Humphreys and Jones 2006). What is largely ignored is the enriching of the decision process to make better decisions. Given the multiple spines of a decision-hedgehog, however, pricking the real (making a decision) is not the final step in this GDACS model. Instead, there is he opportunity to revisit other levels on the decision spine or even embark on a different spine and come to a new, more informed and hopefully even better decision. In these events, crew has to help decision makers to go down the decision spine, but also go back up to enrich the context when necessary. The ability to go up as well as down a single as well as multiple decision spines is what gives this decision-making model a new insight.

> *"Before the workshop, I seldom talked to some classmates; but after the interaction, I find I can talk with them. And it's really good for me."*

8.5.1 Enabling Collaborative Authoring of Outcomes

Humphrey and Jones (2006) suggest that collaborative authoring of outcomes places the broad based construction of narrative at the centre of GDACS. Stories are built in order to both create and navigate the rhizome that constitutes the body-without-organs of the decision-hedgehog. Decision-making is evolving from spiralling within the structure of a

single decision-spine to become a continuous process of collaborative authoring – growing the decision-hedgehog (Humphreys and Jones 2008).

Collaborative authoring of outcomes provides us with the opportunities to craft narrative structures through the collaborative creation of multi-media artefacts (Humphreys and Jones 2005). We engage our broader communities and environments in complicit and critical activities in co-authoring the broader and multi-levelled narrative Thus the fundamental aim of storytelling that nurtures the decision-hedgehog is to enrich contextual knowledge for decision-making through authoring of narratives within the rhizome.

8.5.2 Learning

Some students found it difficult to appreciate that learning within ICE is a culmination of their own efforts. Several students mention that they were expecting more guidance, more concrete help. Some students feel it difficult to participate freely in discovering the space, the toys, the professors and to simply play. When questioned about learning on the day they felt that even though it was fun, hands-on 'teaching' applications are not provided.

> *"I would have liked some more sort of hands on participatory tools around the thesis process itself, you know, like how do you tackle this problem."*

> *"I was expecting that the professors might talk about their interest"*

The learning that takes place during ICE events can be best described as constructivism (Piaget 1962) or discovery learning (Bruner, Jolly et al. 1977). The later refers to the process of obtaining knowledge through one's own efforts. In the classroom, discovery learning often occurs though structured or directed activities that require students to manipulate, investigate, and explore materials that may lead them to discover important principles or relationships (Schunk 2000). Learning is a journey and students are not

simply presented with concepts and ideas in their final form, but rather are required to formulate them for themselves. Constructivism holds that meaningful learning occurs when students construct and give their own meaning to knowledge based on their prior experiences and background knowledge (Fosnot 1996).

Students are used to a more traditional model of learning, such as reception learning, where a teacher presents structured information (Ausubel, 1963). Rieber notes that in his vast experience as a teacher and researcher, after university, students are still influenced by the way they were taught. Whereas discovery as learning may be appreciated, it is at times too different to be embraces immediately. Students acknowledge that they would like to experience this type of environment and learning again, especially that they now know better what to expect.

Interviews revealed that many students were uncomfortable with a lack of clear structure during the event. They were disappointed that professors did not attend to tell them exactly what needed to be done to write an excellent research report. The problem lies within the traditional curriculum where teachers give students information. If a course or indeed curriculum is to encourage and foster creativity, then it must relinquish responsibility for learning to students, (Elton 2007) which students and faculty find difficult. Students need to be supported by their teachers who become 'facilitators of learning' (Elton 2007).

Play is an intrinsically engaging mechanism (Karaliotas 1999) that allows safe exploration of non-traditional approaches to learning that allow the learner to decide what and how to learn rather than the teacher dictating what is to be learnt. Decision-making is in the hand of the end user (student) not the facilitator (teacher). With play, learners are free to move up and down the decision spine exploring a plethora of possibilities. Learning is part of the

process at all ICEs, regardless of location (university or organisation). Providing a rich context in which participants can explore, capture and feed back information and ideas through both restricted and rich language enables them to find their own way through and into the rhizome. By allowing learning through Multiple Intelligences (Gardner 1999), participants learn to voice their thoughts in a mode that they are comfortable with.

8.6 Summary

This chapter identifies how play functions to help nurture the decision-hedgehog by opening up and closing down opportunities for exploration by increasing contextual knowledge. Using playful ways of expression, such as painting, drama and collaboration, students navigate though the rhizome to find possible pathways that may not have been available to them through restricted language alone. Play successfully allows participants to delve deeper into their decision-making processes through experimentation, collaboration, participation and idea generation against the background-of-safety.

9 Conclusion and implications

"Begin at the beginning and go on till you come to the end; then stop."

Lewis Carroll

9.1 Introduction

This thesis is unique in providing a detailed case study of events within a purpose-built space that supports decision-making. It provides an in-depth account to answer the research question: What happens in an ICE event? Furthermore, this research investigates and documents how play functions by providing a background-of-safety and expanding contextual knowledge in dedicated spaces to enhance creativity in decision-making, answering the research question: how do these environments function to provide GDACS that support creative decision-making? Largely, events in ICEs are structured around play. The modules are designed for participants to play with toys, art, theatrical performance, ideas, with each other and alone. Professionals with experience in designing events, develop these modules intuitively. They do not address what it is about play that allows more creative decision-making support in ICE events. Creative, or pretend play, allows individuals to imagine their own worlds, in which they can explore possible scenarios. When individuals play with others, share toys or take turns in an activity, they participate in cooperative play. People engage their imaginations during dramatic play or role-playing and often take on the persona of a different character. Play that takes place with others and may include toys, dolls or even imaginary friends, is sometimes described as dramatic play. Through these different types of play, a background-of-safety is created and contextual knowledge, which nurtures the decision-hedgehog, is increased.

9.2 Summary of findings

9.2.1 What happens during an ICE event

Innovation Creativity Environments are abundant in academia and organisations. Missing from the academic literature are descriptions of what happens during events in ICEs or other flexible learning environments. Documentation is largely limited to samples from popular literature that describes the spaces for clients (e.g. RMIL, ASE). Chapter 6 presents an explicit description of the space, the people and the activities of an event within an ICE. As this research urges that extended language paints a more complete picture of any story than restricted language, in addition to written words (restricted language), the description of an event also draws on photographs (rich language) to convey the nature of the space and the event. Chapter 6 describes the event's design, the event itself and what happens after the event. Additionally, it illustrates what changes are made within and between events, to optimise experience. Beyond addressing a gap in the literature, Chapter 6 contributes on a functional level useful to people interested in facilitating or employing these types of events and spaces. A starting point is presented for creating events, based on the template of the modules, the crew and the overall event design created in this thesis. This template must be adjusted to fill the aims and specific goals of the participants.

9.2.2 The role of play in enhancing decision-making

My contribution to the literature is guided by decision-making as a two-part notion. Firstly, making a decision implies that there are alternatives to be considered, and the more alternatives one can identify the better the ultimate decision will be. Secondly, once many alternatives have been identified, decision-making is the process of reducing uncertainty to allow a reasonable choice to be made among these (March 1994). In other words, making decisions is about gathering information about a problem, coming up with alternative solutions, reducing these alternatives and finally risking a decision. This

research contributes to new knowledge by showing how play provides a background-of-safety to enable risk-taking and facilitates an increase of contextual knowledge to inform alternatives for decision-making.

As shown in Chapter 7, only if one is safe enough to fail, can risks be taken. Decision-making is the process of reducing, but never eliminating, uncertainty and doubt, in order to make a choice. In terms of the decision-hedgehog model (Humphreys and Jones 2006), decision-making is about information gathering and enriching the rhizome (Level 5) before eliminating all choices for a decision (Level 1). Very few decisions are made with absolute certainty because complete knowledge about all the alternatives is not possible.

Chapter 8 shows how participants increase contextual knowledge in the decision-making process using play. It is in particular the use of extended language within play and social interaction of play that helps individuals think beyond the expected. Relying on restricted language alone can hinder the creative thinking process. Forms of play, like drawing and skits, are utilised as different focal points to inform possible alternatives. Play also helps participants to think laterally, an ability which is characteristic of creative individuals (De Bono 1968).

9.2.3 The role of play in finding a background-of-safety

Participants in the Project Dreams and Reality workshop are encouraged to create a background-of-safety through varying forms of play. Chapter 7 presents various successful and some less successful attempts to create a background-of-safety.

Play and transitional objects

Many individuals cannot resist playing with, hugging and carrying around stuffed animals. These toys become transitional objects that provide emotional and tangible comfort,

security and safety especially in early stages of an event when stress levels are high. Transitional objects enable exploration by providing a safe space within the unknown. In addition to stuffed animals, marionettes and puppets used in skits also become transitional objects in the hands of the acting participant. Here the role is not to explore a safe space, but to experiment with possible selves and future scenarios, as an opportunity to hide the real behind the not real. This in turn allows for the safe exploration of otherwise unsafe content. Topics that may be considered inappropriate to discuss with professors or employers become safe for exploration in playful and humorous ways. While the toys connotate a pretend situation, real problems can be safely discussed under the pretext of such toys. Since safety emerges through play, threats and taboos can be explored using transitional objects. In terms of decision-making, transitional objects create a background-of-safety in which the decision-maker can risk making choices safely and also explore ideas beyond what he or she otherwise may have been willing to think about.

Play and trust

People develop empathy, compassion, the capacity for intimacy and trust through play. Play builds solidarity and ties between group members (Locke 1989). By interacting with others in fun activities, individuals build trust. Building trust is an important ingredient in creating a climate of psychological safety (Edmondson 1999). The easiest way to build trust in these groups is through a shared background. In this research, the two groups that easily established a background-of-safety, were those who formed based on commonalities. One group shared a common research objective; the other came from a common country. All were immediately comfortable and trusting with others in their respective groups. However, building trust and a background-of-safety alone is not a sign of better decision-making. In line with research on group-think (Janis 1972) this type of homogeneity may endanger creative thinking processes.

Play and social interaction

Play is a catalyst for positive socialising, which causes identification with others. By identifying with each other in play, a background-of-safety is established. This is particularly true when there is a common goal, such as a skit to be presented or a similar research topic. When playing with others, people develop a background-of-safety as they realise they are not alone in the 'world' (or in their current endeavours). Effectively, utilising social interactions enables free communication and experimentation with possible selves within a background-of-safety. Play also creates this background-of-safety by being fun. Fun creates positive affect, which in turns facilitates a background-of-safety. Sharing joy, laughter and fun with others promotes bonding and strengthens a sense of community as one becomes part of a group. There are several opportunities to socialise and interaction during an event in the ICE. Having a common space where people can interact is vital to successful events. In an effort to further support casual interaction to avoid anxiety, a wine reception is added at the end of the event, to extend the safe environment beyond the space to the people.

Play and Crew

The role of the crew in providing a background-of-safety to participant is instrumental in the event design. These individuals must be non-judgmental, supportive and provide an appropriate balance of guidance and independence. The crew has to successfully work together for participants to feel, as though they are in control. Crew is the face of ICE events. Participants take their cues from and model their behaviour after the crew. In addition to providing safety to participants, crew must find itself a background-of-safety. A positive relationship amongst crewmembers, helps create an environment in which both the crew and participants flourish. More research into the specific roles of crewmembers, training methods, and how they affect the participants, would be helpful in designing crew teams in the future.

Play and flow

Flow theory (Csikszentmihalyi 1997) is very useful in explaining, why play helps form a background-of-safety for some but not others. This is understandable considering that flow situations have mainly been noticed and studied in play or artistic creation (Rieber 1996), and are defined as states of happiness and satisfaction that arise in automatic, spontaneous activity. The appropriateness of the task is an integral aspect of event design. In terms of this specific case study, students who have begun to think about their dissertation topics, but not yet made a final decision, find themselves in an overall state of flow. These students are able to create a background-of–safety while in flow, aiding their exploration. Students who already know their topic are not challenged and even the playful and fun approaches, cannot relinquish their boredom with the aim. Students who have not engaged with their dissertation topic at all are in a state of great anxiety, unable to establish a background-of-safety throughout the event. For event design, this means producers have to be extremely well informed about the aim of the event and the exposure of the participants. The objective and expectations should be clear when participants are invited to events. It should be stated in the invitation to the events what is required of participants. In this particular instance, it was taken for granted that by January (when all events took place), students would have given their dissertation topic some thought. This was not the case and hindered flow in some participants.

Keeping within flow, from a psychoanalytical perspective, the 'handling' of the participant should neither inhibit creativity by oppressing expression, nor be perceived as too negligent to promote anxiety. The organisation or academic institution must make sure its employees or students do not feel oppressed or anxious, but rather feel free to experiment. In terms of collaborative events, the key is to find a balance of challenge and safety, or, to be more precise, to challenge within the constraints of safety. By trying out what works

and what does not, individuals can learn from their mistakes and act accordingly the next time. People need to not fear mistakes for this to occur.

9.2.4 The inability to establish a background-of-safety

The research shows how play allows participants to establish a background-of safety and indicates when participants are unable to do so. As mentioned, flow theory indicates why some participants are unable to create a background-of-safety. It is in the early Swarm module that participants begin to find flow, or not. If they are not cognitively matched with the majority of students, they become bored or anxious. In addition to overall goals that are too high or low, other specific incidences can obstruct a background-of-safety within group processes. Problems occur when participants feel ostracised instead of part of the group. Emergent leadership and disengagement of an individual group member hurt the group process and hinder safety.

As the ICE event is annual, this research is able to test some hypotheses when safety fails. One way of addressing failure is to simply drop the module from the event. Other ways of overcoming safety discussed in this research are tested with focus group. The research indicates how entering and leaving the event creates participant anxiety and that small changes to the event design enables more participants to feel safe during an ICE event.

9.2.5 The role of play in nurturing the decision-hedgehog

This research is embedded in a particular decision-making model, the decision-hedgehog (Humphreys and Jones 2006), which positions decision-making through the construction of narratives where the rhizome constitutes the body of the hedgehog whose fundamental aim is to enriching contextual knowledge and creativity for decision-making. Play allows participants to delve deeper into their decision-making processes through experimentation, collaboration and participation. This research indicates that play

functions to nurture the decision-hedgehog through two main approaches: extended language and sharing of knowledge.

Play and extended language

Extended language is utilised in various forms within the ICE. Essentially, extended language is the process of expressing oneself in forms other than written or spoken words. Extended language incorporates showing what could be. This research argues that play is a form of extended language. Examples include using toys in skits, playing with colours, shapes and images in creating personalised posters and instructions incorporating images, music and various forms of narratives. By using extended language, participants are able to utilise play and extend what they feel safe to think about, which in turn allows for a broader scope of what to include in the decision process. Also, pictorial expression allows participants to access different ways of thinking, make new connections among ideas and elaborate on existing ideas.

During skits, play functions through extended language by utilising objects, such as toys, masks and puppets to represent what could be. This type of pretend play allows participants to experiment with potential selves (Ibarra 2003). Here, extended language allows participants to remove themselves form reality and explore the roots of decision problems as imagined. In terms of the decision-hedgehog, with extended language, participants can explore Level 5 of the decision-spine and face paranoid discourse rather than attempt to avoid it.

The utilisation of extended language is not only active, but also passive, observation of extended language helps participants nurture the decision-hedgehog. Instructions by the facilitator take advantage of images (by the scribe), possible futures (directions to modules), physicality (turning chairs) and music (when music begins, so does the task).

This type of instruction goes beyond linguistic tuition (Gardner 1999) and utilises extended language to access different intelligences including spatial-visual, body-kinaesthetic and musical. Watching skits performed by other students allows participants to experience what others see as potential futures, enriching contextual knowledge of both the actors and the audience.

Play and sharing of knowledge

The sharing of knowledge is an ongoing endeavour within ICE events. As much as the models are designed for play and fun, the *sine qua non* is sharing of knowledge. This sharing of knowledge is not always overt, but occurs nonetheless through social interactions and play. A strength of the decision-hedgehog is that it utilises many decision spines. It functions under the notion that every problem solved, can be solved again, in a better way. Playful engagement allows participants to revisit problems, to gather more knowledge even after a potential solution has been identified. For example, the Take a flip module enables participants to return to and add new knowledge to their original ideas after they have interacted with other participants. In this way, play increases contextual knowledge and creativity feeding into the rhizome.

In some modules, play with others creates stronger cognitive links and common goals, which allows more exploration (i.e. Communities of interest). New ideas stem from other ideas and new solutions from previous ones. Similarly, two or more existing ideas may be combined into a third, new idea. Listening to others' points of view and incorporating them into imaginative play and idea generation, further nurtures the decision-hedgehog. In these ways, participants can refine ideas and make decisions with better solutions. Importantly, common goals should be cognitively aligned and not describe a homogenous group. Different perspectives are needed to expand existing ideas.

In addition to sharing knowledge and building on existing ideas, participants can engage in collaborative-authored outcomes which create narratives that enable navigation through the rhizome. Rather than being told a story, which can be likened to prescriptive decision support, the group authors its own story (Humphreys and Jones 2006). This supports not only decision-making at Level 4 and 5 in the decision spine, but also enables the enrichment of context for future decision-making by nurturing the hedgehog (Humphreys and Jones 2008).

9.2.6 The inability to nurture the decision-hedgehog

This research identifies how to nurture the decision-hedgehog, but also recognises when this process fails. Specific incidences can be identified, particularly within group exercises, which hinder participants to nurture the decision-hedgehog. Dogmatic leadership within modules infringes on the groups and individuals' capacities to enrich contextual knowledge by restricting which ideas are acceptable. This contradicts creative approaches to enrich the decision-making process. Similarly, processes of enriching contextual knowledge are hindered, when all efforts are invested towards a specific individual contributing to the idea generation. If individuals do not think of themselves as creative, they may refuse to participate, preferring to conform than create. Rather than explore divergently to solve their problems, groups cite various reasons why the disengaged person should participate. This distraction from the task stops the group from exploring possible futures. It would be useful, in future events, to stress the importance of brainstorming and voluntary participation in tasks. However, disruptive individuals may likely respond similarly in any case. One way to help control malfunctioning in group processes is to install crewmembers within each group, to aid in such situations.

Failure to nurture the decision-hedgehog is also identified within the overall design of the event. In early events, the physical space gets in the way of modules (e.g. Patching it, Shift

and share). These physical inhibitors are either dropped or redesigned for subsequent events. Knowing the environment well helps identify earlier how feasible certain modules are within the limitations of the physical space. Experienced crew can avoid some of the pitfalls that impede idea exchange. The quality and experience of the crew is essential in creating safety and nurturing the decision-hedgehog. Modelling behaviour that is not in line with increasing contextual knowledge and creativity, as occurred in Event 4, can cause participants to be less creative, prohibiting an increase in contextual knowledge.

9.3 Implications and directions for future research

9.3.1 Academia

Some authors incorporate Winnicott's (1971) concept of potential space in their description of how education facilitates professional transition (Ibarra 2003; Kets de Vries and Korotov 2007; Petriglier and Petriglier 2010). This research continues this stream of thinking by showing that play can successfully create such a transitional space in academic institutions. Universities and other academic organisations should become more serious about play (Kane 2005). In executive education, there has been a recent trend to create transitional spaces, where exploration is supported in order to create transformation programmes that require positive reframing, encouragement and rehearsal of difficult situations (Kets de Vries and Korotov 2007).

Learning in the ICE context, particularly when based within a university, must also be discussed in terms of teaching. The events taking place at the Robinson Room are not confined to the type of events presented in this research. The Robinson Room can bee booked as a 'regular' teaching room. Even as a 'regular' teaching room, the physical components of ICE are still available for use. Crew, however, is not available when the room is booked to hold lectures. Although there is a trend for instructors to utilise the room to foster creativity, these attempts are largely unsuccessful. While such events, as

the one described in this research, are beyond the capacity of a single teacher, this is not the reason that instructors have failed to make creative impacts. Most instructors are able but unwilling to utilise more playful and creative approaches to teach, even within the Robinson Room, which was purpose designed with creativity in mind.

Creativity and creative learning are considered essential for students in the information age (Craft 2001; Hargreaves 2007). Creative learning, however, is much more feasible with creative teaching. Jackson and Shaw (2006) highlight the importance of developing students' creativity in higher education for personal gain, personal satisfaction, well-being and self-identity as well as the social and economic reasons of adapting to and imagining changes in society. The lack of creative teaching stems from the rigid structure of academia, where creativity is rarely an objective (Elton 2007). Casual conversation with staff from the Teaching and Learning Centre, as well as with professors supports this finding. Educators are not willing to divert from the traditional teaching model. Traditional teaching complies with a deductive model of learning where the learning process is determined beforehand by the professor (Renzulli and Reiss 2008). In this model, the role of the teacher is to instruct or transfer the knowledge. The curriculum in this model is fixed and the objectives are content-driven (Garcia-Cepero 2007). Although the digital age requires high levels of creative thought, educational systems are still encouraging processes that result in a less creative graduates (Woodman, Sawyer et al. 1993). In order for academic institutions to succeed in preparing graduates' for the professional workforce, a pedagogy of induction into disciplinary knowledge needs reworking into a pedagogy in which teachers and students work as co-creators and co-assemblers of trans-disciplinary knowledge (McWilliam 2005).

As such, the inductive model of teaching does not have a prescribed single solution set out by a professor. The content evolves with the students as they co-create knowledge. This

process is easily supported within ICE, but it needs instructors willing to let go of the deductive model. It is likely that the source of the problem stems from the inability of teaching staff to break away from the norm, as they feel neither safe nor supported to do so. Future research needs to look at how to create a background-of-safety for professors and educators in order to successfully divert from the traditional model. Higher education needs to start emphasising creativity and its role for preparing people for an uncertain and ever more complex world of work, a world that requires people to utilise their creative as well as their analytical capacities (Jackson and Shaw 2006). Academic educators need to spend less time explaining through instruction and more time in experimental and error-welcoming modes of engagement. Academic institutions need to provide support for educators for this shift to happen. Traditional teaching models no longer suffice and ICEs could provide the necessary support to shift teaching modes. It is not enough for students to want to be more creative. The educator and intuitions are required to instil and support creative thinking. A first step may be to created classrooms that foster these.

The physicality of classrooms, as architectural embodiments of educational philosophies, is described by Monahan (2002) in terms of "built pedagogy." Accordingly, spaces themselves contain values that fall on a continuum from discipline (desks bolted to the ground) to autonomy (open classrooms), with the concept of built pedagogies in the middle. Even though spaces can always be reconfigured, overcoming physical and pedagogical barriers for changing the use of the space often requires significant energy from multiple actors. One suggestion he offers is to designers to create spaces that require reconfiguration so that students take an active role in designing their learning space. Flexibility is key to the framework of emerging hybrid spaces.

9.3.2 Organisations

Psychological knowledge about individual creativity is influenced by two axioms of human behaviour (West and Altink 1996). Firstly, human beings are motivated to explore and manipulate their environment in ways that are essentially creative (Nicholson and West 1988). Developmental research suggests that exploratory behaviours, such as curiosity, reflectance and mastery, are motivated by the relationship with the environment (West and Altink 1996). Secondly, humans are driven by a need to be free of threat and to create a sense of psychological safety. Creativity is inhibited when people feel unsafe – at home, in schools and at work. This is evident in Ainsworth's (1974) research on attachment theory, where children who have close bonds with their parents are more likely to explore unknown environments. It is also apparent in Winnicott's discussion of potential spaces, where exploration depends on good-enough mothers. In therapy, it is noted that patients who feel safe are more likely to explore their past (Rogers 1961). At work, people will be more creative if they feel safe enough to take risks and explore.

Indeed, university graduates are likely to and in the work-force 'creatives' (Florida 2002) within organisational contexts. Even if students are not 'creatives,' they will likely be part of the organisational task force that is becoming more creative. Yet, organisations like academic institutions, cannot expect people to be more creative unless they provide an environment that fosters such behaviour. To be creative, people need to perform work that is much less focused on routine information-seeking, executing transactions and routine problem-solving and more focused on building relationships, tackling novel challenges and synthesising 'big picture' scenarios (Pink 2005).

There has been a shift by organisations to move on from simple problem-solving to problematising the notion of problems (Landry, Pascot et al. 1985; Chia 1994). Decision-making is moving away from management centrism, where the fate of an organisation lays

in the hands of a select few. When organisations decide that decision-making should be part of a wider community, they need to provide the infrastructure to enable collaborative decision-making. Using play during ICE events may be a possible solution for these organisations. ICE may also enlighten office design in organisations.

When offices are designed as potential spaces, exploration is allowed and encouraged (Kets de Vries and Korotov 2007). Attributes of space are also important as creativity thrives on the free flow of communications and interactions among diverse members of an organisation (Heerwagen 2002), which are sometimes constricted by the physicality of the structure in place. Haner (2005) follows the interaction model of Woodman and Shoenefeld (1990) revealing the "organism-in-its-environment" (p.10) including the physical environment as a contextual factor. Haner (2005) identifies location that allows for face-to-face interaction, attractive style of work environment (similar to Amabile 1996), as well as building and layout of work environments that allow convergent and divergent behaviours to sustain individual and group creativity. Lewis and Moultrie (2005) address how space should be designed for successful learning environments. They take into consideration the benefits and detriments that come with a purpose built infrastructure.

9.3.3 Physical spaces

This research emphasises events within ICEs, but at its most basic construct, an Innovation Creativity Environment is a space. Research has paid limited attention to the possible contributions of physical space to creativity (McCoy and Evans 2002). Recent articles specifically address the influence of the physical workspace on group creativity (Kristensen 2004; Haner 2005; Lewis and Moultrie 2005). Kristensen (2004) declares that companies can generate more good ideas if they make better use of the physical environment. There are few empirical studies that link space with creativity or play. And

yet, creativity does not exist in a vacuum and the influence of space on creativity is an integral relationship that must be reviewed and further investigated to fully comprehend how creativity can be fostered and encouraged. In order for play to enhance decision-making, the physical environment should be taken into consideration.

Individuals have agency and take actions that shape their environments (Gioia and Pitre 1990), making the interpretation process inherently dynamic. According to Oldham & Cummings (1996) person-by-situation hypothesis, individuals whose dispositions make them more likely to be affected by a favourable work environment are more creative, but a supportive environment raises the creativity of all individuals. For creative ideas to flourish there must be an environment that is supportive and rewarding of such ideas (Sternberg 2006). Neither creative processes nor creative persons can prosper without the psychological and physical support of the space. This research addresses some of the psychological aspects of support, but more research is needed on physical support. The physical space, as this research shows, can impede on the background-of-safety. Amabile (1989) gives an account of creativity in the work environment. An extension of this is needed in future research that to take creative decision-making within organisations into account.

Future research that looks at physical space and creativity in decision-making should incorporate the notion of heterotopias. Michel Foucault (1967) employs the term heterotopias to describe "different spaces" marking a sharp distinction between them and utopias, which are defined as spaces of idealised consensus of homogeneity or reduction to the same. Foucault uses the example of a mirror as a kind of heterotopia that exists in reality, as physical and tangible. It is through the contesting nature of heterotopias that the participant is able to remove him or herself, dwell in an abstract or virtual space of infinite connectivity, exercise agency in reconstituting him or herself from that position

before returning onto him or herself changed without ever physically having moved at all (Foucault 1967). Environments that contest what people are used to, disturb their expectations and cause disorientation and tension. By breaking out of the familiar and allowing things to be different, creativity is free to emerge. Heterotopias can enhance creativity by being a special space, as well as a special time (heterochronies). Like play, heterotopias provide an opportunity for participants to break away from traditional conceptions.

Also of interest is Victor Turner's (1969) anthropological view on space, referred to as liminality, which offers a more social understanding of space and creativity. The concept of "liminal space," suggests feelings of ambiguity and ambivalence. This in-between space should allow active exchanges of ideologies, concepts and methods to work. There is an indication of a transition from one state or space to another, an on-going search for answers, yet the end might not, or need not, be defined. This space parallels many aspects of play and playful exploration. The 'liminal space' might be read as a metaphorical realm where ideas and concepts: artistic, political, cultural, social or otherwise, are in constant states of contestation and negotiation.

9.4 Conclusion

This research presents an in-depth description of how play enables creative decision-making utilising psychoanalytical insight as well as advanced models of decision-making. The research is not without limitations, and these have been identified in the relevant section (i.e. difficulties with definitions, case study construct). Another difficulty with this research is the plethora of concepts that inform the literature review. However, given the exploratory nature of the study, a general understanding of these is needed. In summary, creativity is defined as the ability to break free from expectations and the process of coming up with different ways to problem solve, emphasising play. This opens up the

choices within decision-making model, increasing contextual knowledge and nurturing the decision-hedgehog. If the decision maker is embedded within a background-of-safety, he or she can think about aspects of problems or possible solutions that otherwise fall within the paranoid discourse. When many, creative options are identified within the decision-making process, the next step of decision-making is to eliminate choices. A background-of-safety helps the decision-maker to risk making a decision. The main play pathways to provide a background-of-safety and nurture the decision hedgehog are extended language and social interaction. Both are supported in Innovation Creativity Environments enable creative and playful decision-making. Descriptions of events within these spaces are lacking in literature. This research attempts to fill this gap and provide an in-depth account of play during ICE events.

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11 Appendices

Appendix A: MSc Dissertation guide

AIMS, TIMETABLE AND GUIDELINES FOR THE MSC RESEARCH REPORT

MSc Organisational and Social Psychology (PS434)

Aim

- To conduct an investigation of an issue relevant to the programme content under the supervision of a member of staff.

Objectives of the Research Report

- To construct a plan for research.
- To review specific literature on the selected issue.
- To identify relevant research questions.
- To select and justify an appropriate research design to investigate these questions.
- To select and employ suitable methods/techniques to investigate the research questions.
- To write a report addressing relevant literature, the research questions, providing an explanation and justification of the design, conduct, analysis of the research, and a discussion of the findings in relation to the research questions, context and background literature.

The Supervisor

Following the submission of the first research report plan a supervisor will be allocated to each student. Students can expect to see their supervisor four times by term. The role of the supervisor is to advise on all aspects of the research including:

- the topic area and relevant literature
- the feasibility of the topic
- the time scale of the research
- the specification of the research questions
- the design and adequacy of methods
- sources of data and access to fields of observation
- analysis and interpretation of results
- Structure and style of reporting [see MSc handbooks for evaluation criteria: content, presentation, critical judgement].

Research Plan Format

Each research plan should be about two pages long, in a standard format, comprising a summary of the proposed work, its rationale, objectives and likely methodology.

Contents

1. Research report title. Date. Plan number
   (The version of the report due on Friday 4 February is plan number 1).
2. Key words: 2 on concepts, 2 on methods, 1 on the field of observation.
3. Short summary/abstract (100 words)

4. The field and how to gain access, contingency plan in case it fails.
5. Outline of Methodology to be employed
6. A time schedule
7. Preferred supervisor (and other members of staff with whom the research report has been discussed).

(**NB.** Do not put your candidate number or student number on the plan. Instead, put your name and the name of your agreed or preferred supervisor at the top of page one.)

Research Report Milestones

11 January 2005 PS404 flexible workshop learning environment workshop on "Project Dreams and Reality" for all MSc Organisational and Social Psychology students (Robinson Room, 3rd floor LSE old building 11-am 6pm - refreshments and lunch for participants will be supplied free or charge). Participation in this workshop will help with preparing the your project research plan, and the subsequent activities involved in developing your project work.

6th February. Two copies of the first version of the research plan should be submitted to the Institute of Social Psychology General Office. Research report supervisors will be allocated and students should arrange an early meeting with their supervisor. The preferred supervisor will be allocated where possible, but, in cases where the preferred supervisor already has assigned many students, another supervisor will necessarily be allocated.

End of Easter vacation: Complete first draft of literature review and research report design

Late April/Early May 2005: Research Report presentation seminars (for MSc Social Psychology and MSc Organisational and Social Psychology – exact date and room to be announced)

All students will present a short account of the research background addressing four issues. The research questions, the concepts, the proposed research design and methodology, and field of investigation. OHP slides or PowerPoint may be employed, but the total presentation time is limited to five minutes.

Late May/Early June 2005: Progress meeting with supervisor.

Discuss with supervisor progress on data collection, analysis and the structure of the report.

30th May 2005: 2nd Research Report Plan. Two copies of the second version of the research plan should be submitted to the Departmental Office. This has the same format as the initial research plan but with updated content. In addition section 7 should include a short account of the progress to date.

Late June 2005: Progress meeting with supervisor.

14th August 2005: Submission of two copies of the research report plus electronic copy.

The research report should be type written, A4 double spaced, and must include a full set of references (bibliography) and an abstract. You are also required to submit an

electronic copy of the research report, which should be in a single file, of either word or (preferably) pdf format.

Guidance Notes on the Writing of the MSc Research Report

Reflecting the vast majority of MSc research reports, these guidelines assume that the report has an empirical focus. However, under the guidelines for the MSc in Organisational and Social Psychology a theoretical report (with no empirical component) is acceptable. The appropriate structure for a theoretical report will be different from the outline below. Students intending to conduct and submit a theoretical report should discuss the structure and timetable of their report with their tutor before submitting the 1st Research Plan (6th Feb).

As in other forms of assessment it is the written text that is evaluated. However much time and effort has gone into the research work, the assessment stands or falls on the quality of the report. To this extent the structure and clarity of the report is crucial. There is no one right way to write a dissertation because each research report is unique and a body of research results is polysemic, inviting a variety of different interpretations. That said there are ways and means of writing a good report and the following guidelines set out a template of the broad structure of a typical research report, together with other considerations to be taken into account. Please note that the template given below is only a guide. You are welcome to vary the name of section headings in your report, or the length of text in each section. Your aim should be fo a structure – marked out bey the section headings which is clear, concise and consistent throughout., but please try to keep within the overall word limit (which is for words in the main text of the report, including footnotes but excluding references and appendices

1. Introduction (circa 4000 words)
The introduction sets the scene. Whether the research is inspired by a social or organisational issue or by a problem in the literature, it should be grounded in its broader conceptual and operational contexts, and the potential contribution of the proposed research explained. The directly relevant research literature will be critically reviewed, leading to a specification of the research questions or hypotheses.. A particular skill is to determine what is the relevant literature, and what is not so relevant. Thus a judicious selection must be made, highlighticonceptual context for the research should be intersected with a short account of the operational context of the issues studied (local situation, emerging/anticipated problems in the organization, etc)

2. Statement of research questions (circa 300 words)
Here the objectives of the research are stated clearly and concisely. In this section the rationale for the research should be explained and its potential contribution outlined. In other words, what is the research focus, how will this research contribute to the social psychological understanding of the phenomenon and go beyond what is already known?

3. Research design (circa 700 words)
Here the research strategy is outlined and a justification presented for the particular approach selected to investigate the stated research questions. If an experimental design, or a content analysis, or qualitative interviewing is used this should be justified. On what criteria was the method used considered to be appropriate, why were other approaches rejected? One can think in terms of the indication of the method in the same way that medical interventions are more or less well indicated for different illnesses. An aspirin is good for headaches but not so good for other ailments.

4. Methodology (circa 1000 words)

While the research questions are normally of a general nature, in order to conduct empirical research these need to be made concrete and amenable to investigation, the process of operationalisation. There are two issues here:

The sampling of respondents and corpus construction.
Whether the design involves an experiment, a survey or a set of qualitative interviews the issue of sampling needs to be discussed in detail. On what basis was the sample selected and why? For experiments and surveys this involves sampling respondents from some population, while for qualitative interviewing the issue may be one of sampling significant currents of opinion. For corpus construction using media or documentary material the procedure for selection of materials from a sometimes-unknown population should be described.

In the context of an MSc research report it may be helpful to outline the ideal strategy that which one might employ without time constraints, and then to state how the actual method was selected and what limitations in terms of data quality this more feasible and practicable strategy entails.

Design of research instruments.
Research instruments refer to questionnaires, topic guides for research interviews, and coding frames for the analysis of interview transcripts or a corpus of documents, photographs or video clips, etc. Whatever research instrument is employed or developed, it should be fully documented and developmental/pilot work briefly reported. For a content analysis an inter-coder reliability test should be mentioned here.

5. Procedure (circa 500 words)
The procedure is the recipe for conducting the research, after all the ingredients are assembled. How were the interview conducted, were they recorded and later transcribed? Was an experiment carried out in a laboratory or in the field? Who carried out the coding of the corpus?

6. Results and interpretation (circa 4000 words)
There are different ways of presenting quantitative and qualitative findings.

6.1 Quantitative Research.
Results
Here the main results tests should be reported supported by summary statistics, appropriate graphics and significance as appropriate. These will specifically address, and perhaps develop research questions as specified earlier in the report and state whether any relevant hypotheses have been corroborated or not.

Discussion
Here what has been empirically investigated and observed is set in the context of the research objectives and design and in relation to the broader problem area. Hence in the discussion the findings are interpreted in the light of research questions, and then discussed in the context of the literature reviewed in the introduction. Explanations for disconfirmed hypotheses should be offered, and reflective comments on the research design and methodology given. Finally the implications should be discussed and further research outlined.

6.2 Qualitative Research using Interviews
In qualitative research the results and interpretation often go hand in hand, but in some cases it may be possible to offer results and discussion separately.

For the latter case one might for example present the key findings from a set of interviews in an N-by-N tabular form. Here the topic guide issues would be the column headings, and in each row correspond to one interview. The relevant cells of the table would present a short summary of what the interviewees said on the particular topic guide issue. This could be based on the outcome of a manual analytic procedure or taken from the output of one of the computer packages for textual analysis e.g. Nudist or Atlas. Having completed this basic summary of the material the analysis stands back from the individual transcripts to identify and interpret the commonly occurring themes relevant to the broader research questions. This could be summarised in a second N-by-N table in which the columns represent the broader research questions, the rows the different interviewees, and the cells presenting the commonly occurring themes.

In discussing and interpreting findings from any analysis a prose account is constructed capturing the insights achieved from the research. This is where social imagination is employed to go beyond what is said to the deeper level of meaning and interpretation. Selected quotations from transcripts might be used to illustrate key thematic elements. The reader can then refer back to the table of results presented to check the interpretation.

Where the results and the interpretation are reported simultaneously, as is often the case with qualitative research, it is advised to move directly to the commonly occurring themes, again illustrating these with direct quotations from the transcripts. An explanation should be offered as to how the quotations were selected and the basis on which these are judged to be of importance. Thus one might say, "In four of the six focus groups the issue of X was discussed in terms of Y, here is a typical comment from Group 3".

Discussion
As with quantitative research the discussion will review the key findings and set these in the context of the research questions, the situation of the research, and the literature outlined in the introduction. Explanations for surprising findings should be offered, and reflective comments on the research design and methodology given. Finally the implications should be discussed and further research outlined.

7. Abstract (300 words)
Although the abstract is placed at the beginning of the report it should be revised on various occasions and finalised as the last piece of the report. The abstract will succinctly review the research questions, the design and methods and the key findings. In a final sentence the main conclusion of the research will be given.

8. References
All references in the text should be fully cited in alphabetical order in a references section at the end of the report. Consider using the "Endnote" bibliographic software available on the LSE network at an early stage in the research report work.

9. Appendices
The appendices should include only data, statistical tables or transcripts that are judged to be essential in the evaluation of the main text. It is probably not necessary to provide raw data if summary statistics have been reported in the body of the report, but details of complex statistical procedures and relevant outputs, coding frames, code book, questionnaires and transcripts of interviews should be included.

NB. You must keep all of your raw materials until you have received official confirmation of your degree result, in case the examiners request to see any of it.

9. **Timescale**

You should plan carefully how your research will be conducted in relation to the time you have to do it. It is a good idea to construct a timescale diagram marking clearly how you intend to fit the particular requirements of your individual research in the research report milestones. You should update this diagram and include the current version in your research plan submissions. While the milestones are non-negotiable, inevitably there are variations across research reports. Think of this task structure and time allocation as an "ideal type" and as you depart from it, by intention or by force of circumstances, discuss the changes with your supervisor.

Patrick Humphreys
January 2005

Appendix B: Invitation

INVITATION

MSc Organisational and Social Psychology students

are invited to a special PS404 workshop on

Project Dreams & Reality

Experience a

Flexible Learning Environment

Date: 11th January, 2006

Time: 11.30 for 12 noon (prompt start) – 6pm

Location: Robinson Rooms suite,
3rd floor LSE Old Building
(Lunch will be provided free of charge)

Event designers: Garrick Jones, Patrick Humphreys,
Viviane Goldenberg

Event Aims:

1. Introduce MSc Organisational and Social Psychology students to collaborative learning environments, creative problem solving, and collaborative ways of working.
2. Provide opportunities to develop your first ideas and project plans for your MSc research report.
3. Offer an opportunity for you to develop group support techniques, and use group support tools which will be useful both during your project work and afterwards.

module two

take a flip

process This is an individual assignment. Find a flip-chart on the wall and use it to comment (in words and/or pictures) all or some of the questions below. Use any form that you choose. For example - draw, make notes, create a mind-map, create lists – a picture may be worth a thousand words!

date It is 15 December 2005 – your Graduation Day at the LSE. Imagine we are in the future!

assignment It is your Graduation Day. You are surrounded by your friends/colleagues. It has been a tough year but now is the time reap the rewards. As you look back on the year, you find yourself reflecting on all it took to enable the success of the project – the high points and the low points.

- what kinds of support did you receive (or fail to receive) from your fellow students?
- how did your project relate to where you want to work in the future?
- what methods of study were most interesting to you?
- which support systems were most beneficial to you?
- how were you able to make the best use of what LSE had to offer?
- did you build any special support groups or networks?
- did the personal timeline for your research work out as expected?
- what substantive areas were you interested in which you were able to build into your project?
- how did you come to discover which area to study for your project?
- what access did you require to conduct your research?
- at the start of the project, what were your worries and requirements?
- what was your general approach?
- how did you obtain contacts and access to carry out your research?
- what three things were the most difficult to overcome?
- how did you overcome them?
- what other questions were you thinking about at this time?

time Approximately 45 minutes.

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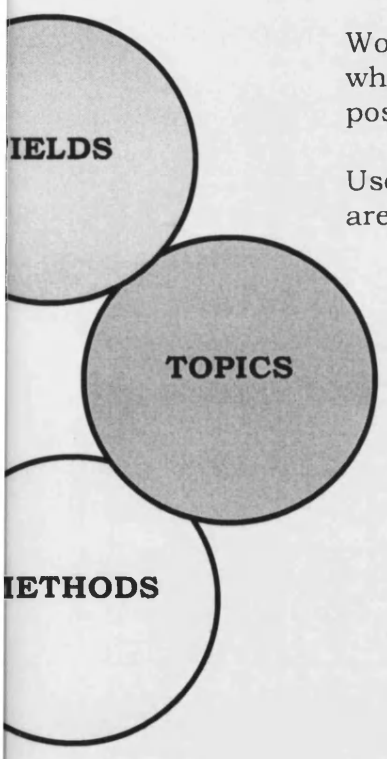
communities of interest

process

This is a group assignment.

assignment

What is the best support environment you need to be successful in your project?



Working as a group, take the time to discuss and plan what needs to be done in order to create the best possible support environment?

Useful questions which you might want to think about are:

- what support from each other do we need to get started?
- how will we do it in the time?
- how can we structure this so that we enjoy the process of conducting our projects and making our project happen?
- what support can we give to each other (group that meets together, communication networks), and what do we need to do to set it up?
- how can we provide or get support for how we conduct our research?
- Can we provide, or get support for how we conduct our research?

time

Approximately 45 minutes.

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scenarios

process

This is a group assignment.

All the world's a stage,
And all the men and women merely players:
They have their exits and their entrances;
And one in one's time plays many parts...

William Shakespeare

As You Like It *Act 2 Scene 7*

assignment

Create, design and rehearse a five minute presentation that tells a story about the journey from doing a successful project and gaining a successful and enjoyable career (you can tell it as an allegory if you wish, with obstacles as well as achievements along the route).

You are free to set your story at any point in time.

You may present your stories in any medium that you choose.

There are props and materials in the environment. There are supporting crew with diverse talents who are available to assist. You may use any of these however please note that they will need to be returned in their original form.

time

You have approximately 45 minutes to create, design and rehearse.

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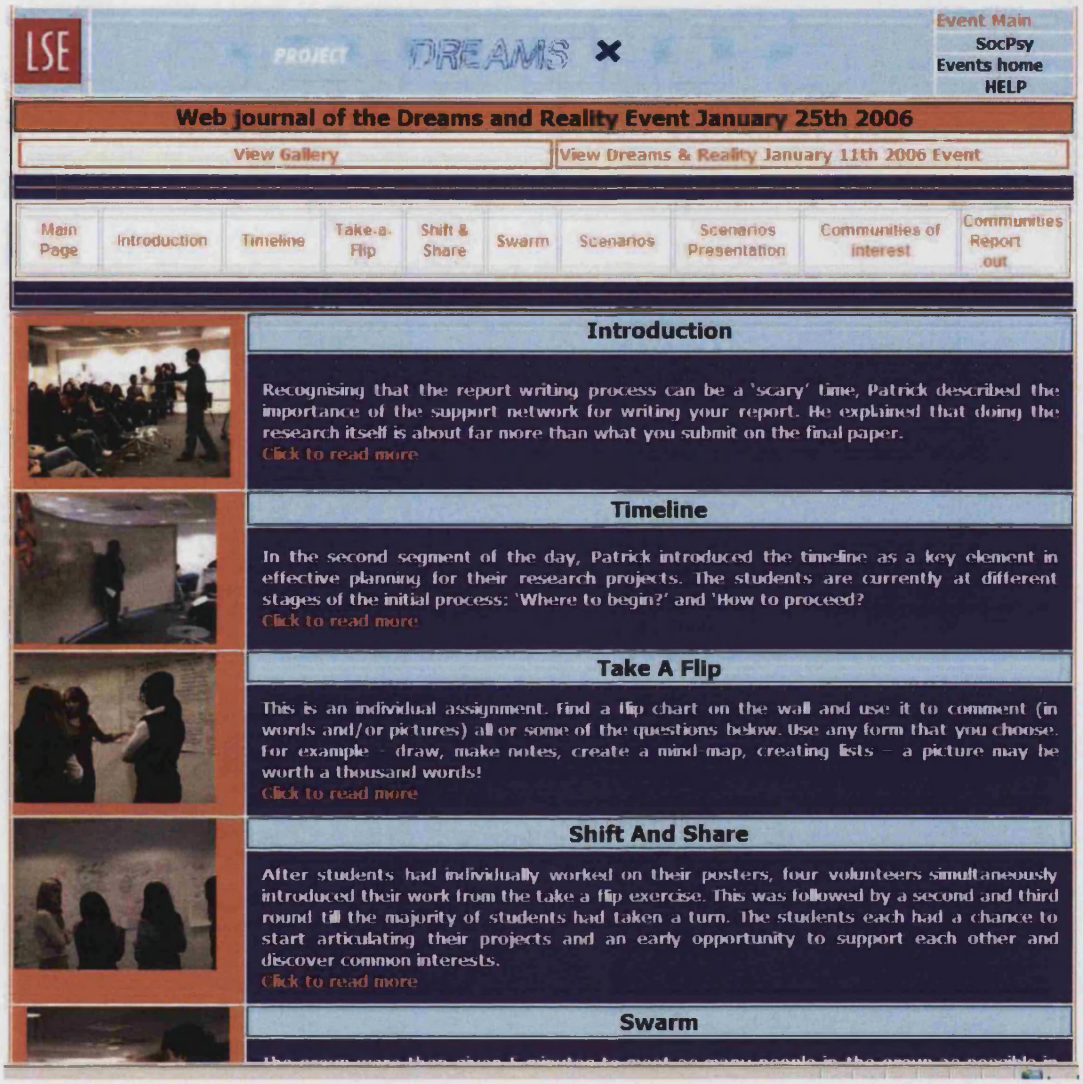
Appendix D: Sample Crew

CREW 25.01.06

Environment (PF) (Photo)	Viviane
Environment	Mira
Environment (Photo)	Cathy
Environment & Timeline	Andrea
Environment & Timeline	Vicky
Facilitation & digital assets drop-off	Paul
Intro & Photo	Patrick
Text Documentation	Harriet
Technical Genius	Steve B
Scribe	Suzi
Video	Ly
Video	Steve G

Appendix E: Sample of web journal (2006)



Appendix F: Topic guide for interviews

Thank you so much for taking time to talk to me. I am going to ask you about your experience of the event Project Dreams and Reality...

1. You decide to go this event, you open the doors to the Robinson Room and then...?
    a. First impressions?
    b. Feelings?
    c. Thoughts?
    d. Design?

2. Tell me more what happened on the day.
    a. Specific activities
    b. Crew

3. What was it like to prepare the skit in your group?
    a. What was different about this group work?
    b. How did people in the group work together?.
    c. What was your role in the group?
    d. Did you feel creative? More creative than usual? Why do you say that?
    e. Was the group creative?
    f. Did you approach and solve problems differently than you would normally?
    g. How did the group prepare?
    h. Which props did you use? How did you come to use those?
    i. What was like to play?
        i. Feelings.
        ii. Thoughts
        iii. Other people
    j. What did you like most, specifically for the skits?
    k. What would you change about the group work?
    l. How successful was your group in reaching its goal.

4. What did you think about the other group presentations?

5. What do you remember about the environment?

6. What did you learn in the event?

7. What did you like most?

8. What could be improved?

9. Would you like to experience this again? Would you recommend this to others?

10. Plans for future collaboration and implementation?

Appendix G: Interview Schedule

1.	12.01.06	Ben Gotzel
2.	12.01.06	Kozell Williams
3.	14.01.06	Yi
4.	14.01.06	Jacki Cohen
5.	14.01.06	Ai Yu
6.	14.01.06	Najung Kim
7.	16.01.06	Han-Hui, Tsan
8.	16.01.06	Suzanne Henfrey
9.	16.01.06	Sharon Mermelstein
10.	16.01.06	Nina Skapin
11.	16.01.06	Peter Nyitari
12.	16.01.06	Xaviera Kouvara
13.	18.01.06	Kaja Ystgaard
14.	18.01.06	Jonah Ben Taylor
15.	18.01.06	Patricia Graham
16.	20.01.06	Despina Tsalavoutis
17.	27.01.06	Fouzel Abbas
18.	27.01.06	Justine Benoit
19.	30.01.06	Kate Parsley
20.	30.01.06	Threlles Thoran
21.	30.01.06	Chi Nguyan
22.	01.02.06	Mobie Sosan

Appendix H: Sample Interviews

WS_20005-1
Name: Nina
Skit: Ms OSP
Nationality: USA

Interviewer: Yeah... this is a topic *[Inaudible]* again.
Interviewee: Am I close enough?
Interviewer: Yeah. I think so. Okay. So on Wednesday you had this event, you walk in the door and then what happened?
Interviewee: Walk in the door, everyone was sitting down and the first thing that I noticed were all the visual drawings and I was ... I couldn't ... that was I thought was the coolest part of all the whole thing. Uhh, the visual drawings and the timeline, I immediately said it like... it inspired me to the point where I started doing my own and it made me see what obviously like what I was already thinking before and I was already being [complicated] person that I am. I was already trying like figure out a timeline myself and that is basically like ... it basically just stamped what I was already formulating in my head. And I almost was like, I had a hard copy of it. But it makes me want a hard copy of the timeline.
Interviewer: Yeah, you should print it off the internet site.
Interviewee: Would it be readable?
Interviewer: Yeah, should be.
Interviewee: But it's almost inspired me to make my own, put it up in my room.
Interviewer: Go for it.
Interviewee: From like one side of the room to the other. I don't know ... because I've always ... not that I have been a doodler but that just really kind of... that just really got me, like it ... that made me relax almost and I knew that, I told myself sitting in there like I was not going to, I didn't want to write anything down. I didn't want to take notes. I didn't want to write things down because when you do that you lose so much of engagement and I literally I was... even if I have a pen in front of me, I put it out of sight. I put everything out of sight except for a like a little bit of a timeline and then I just, I just like no ... I am putting this aside, I'm just going to go with this and I am going to engage and I felt ... I did not look at the clock once. I felt engaged. The whole time it was just like from 1... it was 12. So, it basically flows, exactly like what you were talking about before from what I know for ...
Interviewer: Yes, it's exactly.
Interviewee: ...with my very basic understanding of it right now. And for me I just, I was like I'm going to take this as a fun thing and you know this is to help me not to make me more stressed out. You know, it's all... sort of times, it's how you look at something. And if you are kind of grounded at first, and then you are like, "Okay, I'm going to look at this, I'm going to either tick it or I won't tick it." You know, you are in a grocery store and you have a shopping cart. So, basically I sat down, and I kind of had a feeling like I knew that you know, you guys are going to try to make this creative and how will I see it from different perspective and seize the room around and do all kinds of stuff. Really, the first assignment when we got actually backtracked... Derrick was, he lectured very quickly, one of our last lectures in 404, and he just, when he caught my eye, he just caught my attention in terms of, I was engaged in what he was doing and he explained. He always made so much sense. He made so much sense to me, because I was reading about the hedgehog and like all that stuff and like I had no idea, it's so hard to understand some of these professors. I don't know if I get to say anything in this interview.
Interviewer: Anything.
Interviewee: Okay. I guess in terms of lot of these professors *[Inaudible]* it's very difficult to understand. You know very, I want to get into his mind but it takes so much energy to do that and it was just so refreshing to have someone just... just to have people to sit and have someone just give it you. And it kind of started clicking a little bit, you know, although I really didn't do a lot of those readings so that's okay. Anyway, so then I was excited about Derrick just

talking about it because it would just flow. Like it was just... I actually could focus on him. I could feel him or just thinking about what I should be doing the next day or what I should be doing five hours later. Like my inner, I had this inner monologues to myself like all the time, that I can't turn off. And I did it for that day, I really did it. And I don't know it was me, I think it was combination probably. So, anyway that was definitely a part and I was gung ho, ready, *[Inaudible]*, turn leaf, [Inaudible], done you know? And then I think it was the first time when we started drawing, drawing like about our dissertations. And I think it was probably just the right timing for me, because I had already been thinking about what I want to target and I already know what I want to target and I talked to you about it already. But I need to focus, I need to the theoretical but I have the area which I feel comfortable with.

And I just, I literally, I was like a little dork, I bolted to the poster, I already knew which one was I was going to target and I went, I just like hogged the, I guess I hogged the whatever colored pencils, and I just already like, to have a vision and I started drawing. Like those drawings inspired me to draw in that way 'cuz I used to do like *[Inaudible]* draw. And I did. And I drew like these buildings *[Inaudible]* and all of that stuff, anyway. So, I just kept going with it. I was just basically spitting out what was in my head, like spitting out, putting what was in my head on there so that it was not... like I almost like threw it up, which felt so good. 'Cuz otherwise, we have it in all our head and you carry it everyday, and that probably I guess contributed to my ideas, I would say. So, that's like what I remember very distinctly now. And then I didn't even think about food, because usually I'll like think about food like right way, like what am I going to eat or should I eat that... Mmm.... I always think what I should be doing. I didn't think about it once. It's okay, it's there, I was like so, I guess I was definitely, I'm trying to think of the word, completely engaged. I understand what engage means now more so. And of course I was interested in you, because you're the person that Catherine was talking about, I'm assuming. And things were like coming together and I was thinking Ok, I feel good about that. I feel good about the presentation. I felt good about what I am here for, and obviously being home made it better because I was away from everything. But being thing there was just like one long journey, I didn't like feel like it was fixed hour. I wasn't counting the hour.
Interviewer: What did you think made that happen?
Interviewee: Made what happened?
Interviewer: Your engagement.
Interviewee: My engagement? I think it was a combination. I think it was like the bright room, that you are sort of forced to be in this...not forced but... it sounds kind of you know negative, but it's in a positive way where you basically look in the right environment where you are just awake and probably me I was relaxed when I guess, I got back from break and I turned in my essays and I turned them even a day before they were due because of everything. I guess makes it a deadline but I turned them in before. Like I avoided a lot of the stresses that I could have potentially encountered. So, I was relaxed walking in there. So, I think that was huge and I like said, I told myself I put the pen away, I was like no, I'm not going to do the rational, like I'm just going to... no matter what happens, I'm just going to let, I'm going to absorb. Because I know within myself if I am relaxed that's when my idea starts to flow. And I'll just think versus like forcing myself because it makes you so tired in the end, and you lose so much energy and you are much more stressed out and interest. So, in that sense, like it was like an exercise, a flow of relaxing from in a way.
Interviewer: And then you turned some to the group stuff after that, what was that like?
Interviewee: The group stuff, you know it's funny, because usually, I can definitely take up like this leader role always, you know, either you are a kind of like the leader, or you just kind of like sit back, and I just wanted to sit back. I was not going to just like, okay let's just do, this, this, this, you know. I read it, I was like listening to other people first, and I definitely was listening to everybody else around me first, before I even started blurting things out. And then I started generating ideas and at first you know the more we were talking and the more we were generating ideas, the first, it didn't seem like we were going to get to anywhere but the fact that we had 45 minutes preparation time was nice. Like it was just a... it was like a cushion. It was like okay, 45 minutes, sweet, this is great you know? It wasn't like, okay take 5 minutes, 10

minutes, you know it's like immediately. You are like pushed in a corner and you are forced to probably spit something out and you are probably forced to think in a way where you wouldn't think if you had 45 minutes. I didn't even think about time but that was, it was nice just to know that okay we had time basically.

Then we just started kind of going with it, and it was fun and firstly for me like I wasn't nervous to perform in front of everyone. Like, I don't *[Inaudible]* order and you know having experience and have interviewed... I have sweated and been stressed so much of my life that I didn't want to be stressed and I don't want to think about what other people were going to think of me. Like I didn't really care. Like I was there for me. I wasn't there, you know, obviously like, it's how you, it's how you, like I said at the beginning it's how you think about it. What point of view you take. It was for me, it wasn't what Patrick, why he is here, and remember what he said. You know? Like none of that stuff. I am just like you know, I am here, I going to do the best that I can and I am going to have fun with this and I went with my instinct and doing that in the end I thought it produced great results, because I was just going with it and I felt like was I wasn't behind anybody else or you know, like I don't know, I was just like we are all kind of in the same, I felt like, everybody probably thought the same way. I actually felt that everyone were more anxious than I was, which made feel better, which is kind of bad in a way, but you can't help it.
Interviewer: And how did you prepare, I mean when you said you listened first and then what happened?
Interviewee: For me, I sat down, actually I didn't have a group, because I was too slow and I was like totally relaxed and there was one seat last somewhere and I sat down and like we were just talking first before I even read a sheet. Like I couldn't even, I'll be honest, like I'm very one or the other. I'll either I will listen or I'll totally read, and I just couldn't read words been, like I couldn't read anything. It's like, oh, okay fine, I got to read it so I know what I am doing but then okay, put it away. Like that's what I was focused on, like I was focused on like... I was so engaged in the people. Every single person like I was hearing they were saying. I wasn't, like I wasn't forcing myself to hear what everybody else was talking about. And it was so, it was just... it was swell. Like it was just like, it just worked so nicely. We all said something and then someone built on something else and we just automatically just kind of dropped one idea of preparing for whatever we were doing and I know, we went into some important *[Inaudible]* we all knew that we wanted to have it like easy going and make it simple and make it real and we just, it just happened.
Interviewer: And did you feel creative in the process?
Interviewee: Definitely.
Interviewer: How? What was different?
Interviewee: Definitely. I felt creative. I felt like my mind was just working, like my mind was... my mind and like the colors and the ideas, that's what was guiding me. That was, that definitely guided me. I felt like in the beginning there was this visual picture. I was like so visual and that was just kind of like... I just felt guided, like I could... I felt I could do anything at that point. And uh... I really feel like that. I haven't felt like that in such a long time.
Interviewer: Did you feel free? Is that why you felt like...
Interviewee: Yes, I felt free. I felt everything was okay. I was felt okay my family is there. I am here and I am doing here. I am not homesick. I am not this, I am not that. These people, we're all together in one room and we're here for six hours and we can't go anywhere and we ain't going anywhere. Make this the best time possible, maximize it in a way where you just kind of have to let your thoughts run, and I think that's exactly how. Like I wasn't forcing myself to focus and I definitely felt free. I felt like me. I felt like me.
Interviewer: And again why do you think that was?
Interviewee: Why? Let me back track, I felt like one part of me, like my old self part of me, which was letting, just letting my thoughts run in a way where I sat and just kind of observed first. And listened. And looked around. And just heard what people said, just basically we were just hearing what people were saying and looking at Derrick, looking at you, looking at other people, looking at my classmates. Actually a lot of times I didn't really look at the classmates a lot. Like I didn't look back or anything.

It was just the white, I don't know. It was just such an open space and it wasn't too busy, which was good and things were changing I guess. The drawings were changing, it was good, because the old stuff, okay, like it was erased a little bit and then new stuff came and it was just natural progression. And I felt it was just, I was just ease with everything.
Interviewer: During your skit that you prepared, the play, did you use any props?
Interviewee: Yeah, we did. We used... we did. And immediately of course while we were preparing, what props should we use but we kept it really simple. I mean all we used were signs which was easy and then pots, the green pots, which was like our pot of gold. And I think that was pretty much it.
Interviewer: Did you play at all with the toys during the day?
Interviewee: No. I didn't.
Interviewer: Uh, ok...then the second group thing...
Interviewee: But I looked at the table and I picked up the props and I felt that they were...
Interviewer: Did they have any...
Interviewee: And I saw the puppets, I saw that stuff, and I was like, I am not going to use that. I almost felt like, I don't want to complicate it. I was like I don't want to complicate it. Like, if I see that then I'll kind of make it stick what we were thinking and then I was like, if I have time I'll check it out again but I didn't touch them or anything, no. I was like in my mind.
Interviewer: In your mind, so you were fully engaged the...
Interviewee: Completely.
Interviewer: That's nice to hear.
Interviewee: Yeah, I felt like I was almost hypnotized in a way.
Interviewer: Wow, really?
Interviewee: Yeah, yeah. Totally hypnotized.
Interviewer: What about the other group activity, with the communities of interest. What was that like?
Interviewee: I was a little... I mean again I was sort of sitting back and I wasn't yelling out things and you know, there's so many things of interest, and then most girls do the zen thing and the yoga and all that stuff, and exactly what I like kind of raised my hand for. That was a little in disarray because I felt like I fit everywhere in a way. You know, like I didn't want to just, I didn't want to stand in one place because I knew that someone else somewhere else but I totally had a community of interest with them. So I almost felt separated. It was like, it was almost like paradoxical in a way, almost felt more separated at one point than before.
Interviewer: Okay.
Interviewee: I felt before, I was like one big cohesive group and then it was like okay, I had to take something like I can just...I don't know.
Interviewer: And going back to the skit for a second what was it like to watch the other performances?
Interviewee: Well, I was the first group to go and I was actually late in coming, so I had to use the rest room. So my group already like started, but actually I was like so relaxed I guess I was like maybe this is the flow. Like I was like oh I'll just came back and if they start without me... like they won't start without me and then I came back and they were like already kind of lining up and I was like oh, they're starting, okay. And then we just....we were the first ones. So we were just performing what we were thinking we were going to do anyway, and then after that, I relaxed and saw everything else and I guess you could be critical in a way but not really. Like I actually wasn't critical. Like I was just sitting back and watching them. I was watching... not so much on, you know, it's really funny like I was focused on my classmates and how their personalities came out and how I got to know them last term versus what the actual topic was. Like I actually forget about, I didn't even think about, oh Ms. OSP. Like I didn't even really think about what that meant; I was focusing on the people. I was thinking what their lives were like. Like what they were doing during the break. Like watching them and not so much the contest.
Interviewer: And did you enjoy it or...?
Interviewee: Definitely, yeah, yeah. Um, some were ....I guess, probably because it's... probably because of the use of language in a way, some were a little harder to understand. Luckily, I was

sitting in the front and a lot of times you know, it's almost like your are frustrated within yourself because you are trying to hear what they were saying, but I almost felt like everything fit. I almost... whatever I saw, I almost felt like it was what I expected the presentations to be from the people.
Interviewer: From the group, okay, now standing back and just thinking about the environment, talk me through what *[Inaudible]* what you liked?
Interviewee: Well, now that I think back, if I can just visualize it. I like the fact that you couldn't see the food, it was just like in the back and that's something you need to get if you need it. I like the fact that it was like open space.

I like the fact, that we could sit, we weren't forced to stand, or the stuff like I actually really out of the community of interest, I actually just, because I knew that we were going to be there for six hours, like I actually for the first time I really wanted to sit so I liked that, and I like the Lighting and I like that it was light, that it was bright, which I felt like kept me engaged. I wasn't really dressing off really, everything was white. I guess, I didn't like that. Definitely like before, I really loved the drawing, I thought it was really awesome.
Interviewer: Do you think that was your favorite thing, probably the drawings?
Interviewee: Probably. I like them and the lighting, just the atmosphere overall.
Interviewer: What was your least favorite thing of the day, would you say?
Interviewee: Uh least favorite...
Interviewer: Or what could be improved?
Interviewee: It was definitely long, but I think that that wasn't so much of a problem, I mean towards the end, people sort of losing it a little a bit but maybe because we knew that it was approaching 6 o'clock that your clock intuitively would like shut down. We really didn't have like a formal, formal break. And I didn't actually have a problem with that, like other people were like, I need a break. I need a coffee break. You just... you saw what people needed. You know just to see themselves throughout the day. And I was kind of happy within myself because I was like I don't need a coffee right now. I don't need it. And I don't need to have that, like I almost, to be honest with you did not want to talk to people until the end. Like I wanted to dot this. I really actually wanted to do this for six hours, or whatever, straight. And then talk about it. *[Inaudible]* have it one experience. I felt like that could break the focus or the flow or whatever we were doing. What could be changed? Well, certain professors that talk it's really difficult to understand them and I remember the very beginning, Patrick started talking again and like no one could hear anything and people were talking and all excited and were talking about the timeline. That was kind of in disarray, like you can hear him, people were talking and I don't know if that's something you can necessarily change. I don't know. I remember that was like a little... like kind of point of. It wasn't that big of a deal. Then at the end I think we were just like oh, I'm too tired to like throw things but... but it was good. I mean I'm glad I did it in the end because I was kind of going along with it. And I don't know how I felt that about that the last one. It was a little cheesy but I think it made a point, it made a visual point and I think that was good. Because then it's kind of like, oh well who were people picking and I could kind of tell though because some people weren't picked and I don't know I kind of saw them like, it was kind of sitting back. Again I kind of kept thinking of the psychology of the people where everyone was thinking. And I was like, I don't know you know. It's not that big of a deal just to make a point. I don't know if I would really change anything. Maybe for the presentations, for the groups who are performing, maybe have a little bit more space. I like the fact that there was that wall behind it. I wouldn't change that all, I like the fact that everything was supposed to say there the whole time. And I don't know if I would change anything.
Interviewer: Okay, so one last question. You know how we talked about collaboration and this and that and have you made any efforts to take it forward?
Interviewee: Collaboration with...
Interviewer: Just taking this event and going forward.
Interviewee: Yeah. And actually, I think actually everybody kind of automatically started thinking and doing something...to doing things. And I'm kind of just sitting back and letting it happen. But usually I try to... kind of engage people and try to get them together, but this time like everyone's

already kind of focused. So in that sense I think the collaboration, I don't know if it's necessarily with our dissertations yet. 'Cuz I need to finish that on my own and that's the thing. And I keep coming back to that. Ultimately it's our...it's our work.

So relying too much on everybody or like doing what everyone else is doing like all day along and gathering all these for example, readings and all the stuff like that took so much time last term. And I don't want to do that again. So, yeah, collaborating but not being sort of an instigating leader all the time. I am kind of letting it happen right now. I am kind of going with the flow.
Interviewer: Do you want to add anything about the day that I didn't ask about?
Interviewee: I really liked the way Derrick spoke to us. It was really just, even the way he was dressed was casual. He was very casual but yet there was a little bit of flair. There was a little bit of kind of like a trendy flair that I personally liked that you didn't feel like it was just like sometimes you can equate academics with being like sort of old and grey, but this was not that way. It was like this new media way of doing things. Like I felt it was cool. It was... I think my favorite part was the first part where I had a chance to spit out what I was basically thinking during these nights or the night before that when I got back from break. But I lost my glove, that's probably the one thing I would change. But anyway, what I would change? I mean I think... I don't know if there's anything else that I can think of. Maybe I guess I didn't really get a chance to see what everybody else did and when we were I guess, when we were sort of we had to listen to one presentation and move around I was supposed to give mine, which was good. And I actually like the fact that I had to do mine because it vocalized, articulated what I was thinking. But I wouldn't I guess I didn't mind hearing what other people were saying, and I guess at that point I wanted to hear what other people with my community of interest with my dissertation would have to say. So that I could go to stage two. That's all.
Interviewer: Aright, thank you very much.

WS_200011
Name: Despina
Skit: Network Central
Nationality: Greek

Speaker 1: Questions are to view your experience of the day. So you sign up for the event and you walk in the door?
Speaker 2: My first impression? Um.. let me try to remember. It as a week now. Well, at first, it was like seeing all these little toys and the whole set up, 'cos I've been in that room before and every time I'm in there, it's a different... there's a set up. So this time, it was always, I was disoriented, 'cos I'm like wait a minute, where can I focus? Like my... the beginning and the end of the room, there was no beginning and end. And like where's the front of the room, back of the room? In terms of like context. In the beginning, I was interested to see how the day would unravel. And I guess like you're kind of hesitant in the beginning, but then after a while, you know, when you're more like exposed to what exactly you'd be doing, I found it actually very interesting.
Speaker 1: So you said when you walked in you saw toys. Like what stuff?
Speaker 2: Snakes, Beanies...Finally, something that's a little more loose in the context of an educational environment. And since we are MSc. students, I mean MSc. students have, well I'll speak for myself, like I'm supposed to be studious and I'm supposed to be serious and just focusing on school, and I just forget that you know hey I actually like being with toys, I actually have a few. So it's like that's all a part of who you are, and it's just a part of your everyday environment. So you should incorporate that into your work, 'cos it just makes things more pleasant, I think. And you know, you sort of don't take things so seriously. That's what I think. They just loosened me up basically.
Speaker 1: Tell me more about your day, like the different activities. What did you like? What did you feel? What did you think? What did you experience?

Speaker 1: When Garrick said, just go to the board and draw, that was my, okay, since I've been here since October, and that was the first time that I actually put everything that I've been thinking about for the last few months on paper, 'cos I couldn't say it with words. And I may be talking a lot now, but I'm very internal, more like perceptive and observant. So for me, getting something on paper artistically was great, 'cos I actually like drawing and sketching and all that. So that's the way I express myself and having that actually as a resource and given to me as an opportunity to express myself that way just made the experience overall more overwhelming and at the same time, this defines the whole process, 'cos you're looking to the future and how you know, the process of you going to your graduation day. And having that as a visual instead of writing it down, writing it in a journal, was much better, and sort of playful and innocent and I think that's very important. Okay. That was one event. The role-playing... should I elaborate on everything?
Speaker 1: Yeah. What about when you then shared the poster?
Speaker 2: Okay, sharing the posters. It gave me... okay, at first I was shy. I was like okay, now I have to sit here and explain everything. But everything was just allover the place. So... but I found that in the end everybody, one student said to me, he said well basically you're just going through the same thing that everyone else is going through. And you know, basic... and then just like... I don't know. I think everybody had something different on paper. But we were all focusing on how we were going to balance our life or school and all that. But you found like the commonality that you were not alone and everyone's going through the same dilemmas. But it's good to share that, because you could actually open up; 'cos I think that the whole event as a whole just opened us up more. And through drawings, through... I mean role play, I mean finally I saw people acting silly . . .
Speaker 1: Tell me more about it.
Speaker 2: instead of being in the labs and all you can hear are the key boards and everyone running around stressing about getting articles and that's not what the MSC is about.

Speaker 2: Right? Isn't it... it's more of the journey, right, than the actual... the outcome and... all of that technical and reading and all that is gonna happen. You can't control it, it's gonna happen. So at least, I mean allow yourself to enjoy it, because then you're gonna be complaining about your work, you know, your professional life. So I think humans on the whole are very unsatisfied with everything. But that's a different story. So you just enjoy the doing and I think and act silly and allow things to just come out, whether they sound stupid or crazy. What else? I don't know.
Speaker 1: In what skit were you in?
Speaker 2: I was in the network central.
Speaker 1: And how did your group prepare for this?
Speaker 2: Oh, we really got into it. I think we actually started getting something out when we started acting and improvising. Because in the beginning we were all just sitting in a circle and saying ok let's do this, let's do that, lets... but at the end, we were just like, let's just get up, go outside, pick up a few props, and then just improvise. And basically our whole skit, even while we were acting it out, it just came out totally different. But we practiced outside and um... yeah.
Speaker 1: Did you feel that the group work you were doing was different than group work normally is?
Speaker 2: Yeah, absolutely.
Speaker 1: How so?
Speaker 2: Okay, group work. Well actually I'll tell you when we were sitting down in a chair, you did see a lot of the group dynamics that go on when you're talking, and you saw how like some people were trying to impose their idea or the other person was just kind of shy, the other one was like I don't really wanna do this, but they didn't want to say it. But I think once we got up and we were acting it out, then all of that disappeared. We didn't have... the endings are actually negative towards group dynamics. It was just more fun. It's like everyone chose their own role. And then we all just helped each other out, like okay, or how about this, this will be more fun and instead of keeping it rigid, so it was more flexible. And it actually made you put

yourself in different roles as well, because this person saying, okay, I wanna do this. I wanna act this out. So you trying to see it from their point of view and then you giving your own opinion about it, 'cos you're putting yourself in your shoes, and it's like yeah I can see how that aspect can be also part of myself. I don't know, more collaborative.
Speaker 1: And did you feel creative?
Speaker 2: Yes. That was the most creative day of my life since I've been here basically, because you've created something out of nothing basically. I mean we had supposedly bricks, we had like a little chalkboard but I mean the way we used everything wasn't the way it's supposed to be used. We just used it the way we thought we should use it and that's how it was useful to us, to show the rest of the group, the audience, you know the message that we're trying to get across.
Speaker 1: And how did you like watching the skits, the other ones?
Speaker 2: It was good to see how everyone defined their own, I forgot, what was the topic? Oh it was like you get your M.Sc. and after, okay. So you saw how different people were interpreting their own futures. However there were common elements in everything. And I think the worries were the same, the dreams and the visions that everybody wants were all the same. And it was fun to see how, I mean everyone thought, oh we're gonna go up there, we're gonna make fools of ourselves. But after we all just saw each other's skits, it was like okay yeah, that was funny what you did, so. Again, it's just loosening up, not being so, not limiting yourself, by you know, me limiting myself, nobody else is limiting me. But we do it ourselves, so.
Speaker 1: And thinking of the environment, take a step back, what's stands out?
Speaker 2: About the environment, that is was an open space. There were no closed quarters besides the four walls, I think. There was nothing, actually okay, the board created a stage, you know; more interactive.

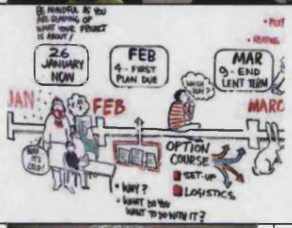
And because we would go like, first we'd be like in the center of the room, then we'd go to the back of the room, and you were always moving around. And even in the beginning, we were sitting in chairs in rows, then we were sitting in circles, then we were drawing, then all of a sudden we were sitting in circles, little tiny circles, in little communities, as they were saying in an open space. So everything was always changed so you never saw anything the same than the previous 15 minutes of the previous project.
Speaker 1: You just mentioned the community, tell me a little more about that?
Speaker 2: Well first we created communities of interest, based on our thesis and then we created communities of interest based on anything. But the communities of interest based on anything were easier to perform, like movies, music or . . . Because I think when you're thinking about like thesis for example, that just puts on so many pressures and things that you can be come maladaptive to. But when you're thinking like, okay, let's just think of a regular interest group, music. It's not constraining you I think. But I thing if you experience both you can see the difference and then just try and apply, okay, if you're going about forming an interest group based on activity then you can do the same thing for your M.Sc. and then collaborating that way.
Speaker 1: And when you sat in the circle and told similar interests, what was that like?
Speaker 2: Similar interests...well, one you saw that people had the same interests as you, that you never thought and you always create like all these assumptions about people, first impression. So a lot of stereotypes were eliminated and it was just fun. I don't know. Fun, but the only . . . fun, innocence and simplicity that comes to my mind, when I think about this event.
Speaker 1: So what was your favorite part?
Speaker 2: Drawing and mapping out my you know, journeys through the M.Sc. If you look at my drawing, the M.Sc. is like just a tiny, tiny little aspect of it, but we put so much emphasis on it or as... I do. But the rest of the things in my life were... are more meaningful to me and more important, personally. So I'm just having that as a visual, I took a picture of it, and I was okay. It's internally, subconsciously, unconsciously, I think that the M.Sc. is just a small aspect of my whole future and my life, that I shouldn't stress about it so much, and just like enjoy the rest of it, and then this will happen. You know, like chill out. I don't know.
Speaker 1: And what do you think could be improved?
Speaker 2: What would I think about my journey could be improved?

Speaker 1: Of the day.
Speaker 2: What could be improved of the day? In terms of the way we structured for us?
Speaker 1: Anything. What would you like to . . .
Speaker 2: Let's see. I would like, okay . . . I think if we incorporated games, either as a substitute to role play or in addition to, I think that would be really interesting.
Speaker 1: What types of games?
Speaker 2: Like dilemma games, right. Again as a group obviously which is giving us, okay, which is giving us thoughts for example, or whether it's toys or blocks or I don't know what or rope, 'cos I've done things in the past where you have to actually make, you have to create like a model, like surrounding this little egg and the egg has to fall without breaking. You know, that's like the simple thing . . . but that actually helps teamwork and like and you're not really focusing on each other but like this is what we have to get done, but things like that, like giving us props that aren't . . . they're kind of abstract and then just finding the solutions. I don't know.
Speaker 1: And you know in the event we talked a lot about collaboration and taking it even further, what have you done since the event?
Speaker 2: Well I suggested a whole like knowledge base, database folders. So far we were just using that for our essays, like reports or essays. But I suggested that, for example, now we're having problems with circulating articles, so I had suggested why don't we take folders and public folders and each of us, each week, scan an article, and just put it in the folders, everyone has access. So trying to get that done. I find myself, okay, I was very collaborative before, but I think more so now, viewing other people as collaborative is making not feel so like, yeah. Like I don't wanna help out, but you know if I want to help out but if everyone's helping out, it's great, instead of you helping out and then it's like, okay, what did I just do. I don't know.

Speaker 2: And how are you acting on this idea?
Speaker 1: Me or just in general after the event? Well I... we got the folders up. Actually we are helping each other out now more, so finding resources and articles. And it's not as competitive as it was. Since the last term, I had a feeling that it was very competitive. I think everybody was just so... I think everybody is so smart, but in the beginning, I think everyone was just intimidated by the whole M.Sc. aspect, and ah, everyone is so smart . . . then I just think that once we started talking like, okay guys, you know, this is just going on, and oh yeah, this is what I think. So obviously we're thinking the same way. We're going through the same, I don't know insecurities, you know, overwhelming aspects of the M.Sc., you know new knowledge so... I don't think it's as competitive anymore. That's my opinion. I don't know.
Speaker 1: Is there anything I didn't ask you that is worth mentioning in your opinion about the event?
Speaker 2: Um... hmmm. I wish it could be applied to like the whole of LSU, I think. I don't know if other departments do it. But I think is should be something more common. And I think it can be applied a little more during the M.Sc. I mean I know that we can't do like this year, like *PS404* write the articles or anything like that with *PS404*, but when we have seminars, instead of somebody just talking to us just like the lectures, may be it can be more interactive. I'm not saying ok, just let us draw and put stalls around everywhere. But more of a collaborative learning environment. I like idea exchanging. And I like people telling me crazy ideas that seem impossible. And like abstract ideas and like okay, how are we gonna take these abstract ideas and how are we gonna mold it into something concrete. I don't know. Is that clear?
Speaker 1: Yeah, I mean that's the way it should be.
Speaker 2: Yeah, for example, aha this is one thing I didn't mention. I cannot sit in that and I found myself last term like sitting in the inside, you know, the board that goes over it, I can't. I have to put it up and I have to use my own way of writing notes. And I cannot sit in rows and rows and rows. Like why can't we do things the way they were done... like old school? I'm not saying sitting in a circle. I don't know. It's academia, isn't it? Like it's an art? So why are we making it very structured and institutionalized? I'm sorry. I know it's impossible. But maybe sometimes. I really don't know what to say about that. Anything else?
Speaker 1: That's it.
Speaker 2: Cool.

Appendix I: Project Dreams and Reality Pre-event plans

Project Dreams and Reality 2006

	Who	How	What	
Introduction	PG GAJ	Plenary		
Timeline	PG VG AK	Plenary		
Swarm		Open Space		
Take a Flip		Open Space		This is an individual assignment. Find a flip-chart on the wall and use it to comment (in words and/or pictures) all or some of the questions below. Use any form that you choose. For example - draw, make notes, create a mind-map, create lists a picture may be worth a thousand words! You have approximately 45 minutes.
Shift and Share		Open Space		In this task participants were asked to take five minutes to go around the room and view everybody's flips. Then, shifting in five five-minute phases, one fifth of the participants shared their flips, presenting them and discussing them with the other four fifths.
Communities of Interest		Groups Sectioned off		Working as a group, take the time to discuss and plan what needs to be done in order to create the best possible support environment?
Communities Report Out		Plenary		
Scenarios		Groups Sectioned off	4+ plays like last year OR 4+ types of activities similar to hedgehog (e.g. play, artefacts, building, collage, movie)	
Scenarios Report Out		Plenary		
Process Discussion	PG GAJ			

Project Dreams and Reality 2007

Time	Event	Environment	Content	Who	Tools	Document/ Video
5	**Intro**	Chairs in arch – facing Vicky (exact chairs)	Introduce Space Introduce Crew	Vicky		D/V
10	**Timeline**	Students turn their own chairs 180 degrees to face Patrick.	Introduce Timeline Introduce former MSc students	Patrick	PH: Dates to Despina	D/V
15	**Project dreams & Nightmares**	Former MSc students to different corners and will be joined by students: 5 groups parallel groups	Talk about dreams and nightmares and the light at the end of the tunnel	Despina, Ai Viviane, Isidora, Stavroula		
15	**Flip: draw dream & stop demons**	Students asked to stand in front of poster and draw/write	draw dreams & stop demons → about MSc dissertation	Vicky instructs	VS: Flips & pens	
20	**Success Stories**	Plenary with three speakers. After – move chairs into 6 groups	Marc Damian Melissa	Vicky – one sentence on person		V go around groups
10	**Swarm**	In back of room		Vicky instructs		V
30	**Skits**	6 parallel groups – chairs only on outside – toys on table in the middle	Tell your story looking back. Not everyone must present	Vicky instructs	toys	
30	**Report Out**	Each group reports out from their area				D/V
20	**Build a bridge**	Students at posters Chairs in plenary	How will you get from MSc to future?	Vicky instructs		
10	**Swarm**	Around room. Environment moves 5 tables with kits into back of room	Talk about future and support. Find community of interest	Vicky instructs		
30	**Build a model**	Tables and kits in back (no chairs)	Support each other	Vicky instructs	model kits	
15	**How to support each other better (report out)**	Tables with models get moved to front, group presents with poster				

Appendix J: Facilitator's notes 2007 (Vicky)

INTRO

1. Introduce Environment
    a. Different from normal class room
    b. A day for students to reflect on project and thereafter
    c. Emergent – take care if you "physically" but you have to do the thinking

5 min

2. Introduce Crew
    a. Crew is here to support you.
    b. Documentation & website
    c. Paul – Process Facilitator: overall flow of event, music, documentation
    d. Slavica: creating website for you to revisit event
    e. Despina: Scribing
    f. Viviane: producer – sets everything up, makes sure people know what's happening, where to be, what's needed (crew, but also participants – e.g. made sure Daniel sent you invite)
    g. Ai & Isidora: environments & Documentation
    h. Vicky: let you know what to do when.

10

3. Patrick will now introduce you to the timeline and former students will talk about their experience afterwards – so to Patrick TURN CHAIRS (He will introduce student – break out in 4-6 groups)

15

4. 5 break-out groups: Project Dreams & Nightmares

15

5. Flip charts: draw dreams & stop demons → about MSc dissertation?

20

6. Success Stories: 3 former students will talk about where they are today (find out what they do – one sentence - and let students pick where to go – max 1/3 of students – put right number of chairs – success stories already sitting in the group)
    a. Marc -
    b. Damian – consultant for XYZ
    c. Melissa – community work??

10

7. Swarm: Talk to as many people in the room as you can in 10 minutes. Try to find out as much as you can about their research interests and future plans ???

30

8. Scenarios: "Imagine it is 5 years from now and you're looking back at your experience. Tell → Create, design and rehearse a five minute presentation that tells a story about the journey from completing your MSc project and gaining a successful and enjoyable career
    →You are free to set your story at any point in time.
    →You may present your stories in any medium that you choose.
    →There are props and materials in the environment. There are supporting crew with diverse talents who are available to assist → Please bring in props (push in table with toys)

→ you're free to choose your own group, but only as many as there are chairs (while they swarm we set up chairs in groups – split from 3 previous groups)

You have 30 minutes to prepare

30 → 9. Scenarios Report out 6 x 5 minutes

20 → 10. Build a bridge: ?? (revisit poster)

10 → 11. Swarm ?? find communities of interest – find people with similar research/life interests. May not be same groups as before

30 → 12. Build a model: community of interest???? There are arts & craft tools. Need tables for groups to work together. . May not be same groups as before

15 → 13. How to support each other better??? REPORT OUT???

Appendix K: Module outline designed in Pre-production 2006

Event	Description of module
Intro	The event begins with the lead facilitator introducing the crew and the aims of the day to the students.
Timeline	If students had any doubt that this event was going to be different, that doubt vanishes when students are asked, at the end of the first presentation, to pick up their chairs and flip the 180 degrees as the next presentation is happening behind them. Revealed on the other side of the room is a very picturesque timeline, denoting all significant deadlines for the MSc presentation presented by Prof Humphreys
Project dreams & Nightmares	Next, students join 5 former students MSc students, in small independent groups, to hear about the ream dreams and nightmares of preparing an MSc dissertation .Most importantly – there is is doable!
Flip: draw dream & stop demons	Blank posters are hanging across the room with coloured pens beneath each poster. Students are asked to approach a blank canvas and to describe their dreams and demons.
Success Stories	Former MSc students, now in successful in the working world, tell the students about their careers. There is life after the MSc!
Swarm	This phase of the event is probably the most active and intense and energy levels are very high. Students are given five minutes to find out as much as they can from as many students as possible.
Skits	From the swarm students join one of 6 groups to prepare skits to be presented to the other groups.
Report Out	Students present their skits from their assigned location.
Build a bridge	Students update their individual flip charts to incorporate aspects beyond the MSc. They are building a bridge from today to their future.
Build a model	Tables with modelling are given to students to create an interaction model of how they could better support each other.
How to support each other better (report out)	The models are presented to the rest of the groups

Appendix L: URL links to online documentation

http://www.psych.lse.ac.uk/socialpsychology/Events/2004-05/Ps404_WShop/index.php
http://www.psych.lse.ac.uk/socialpsychology/Events/2005-06/DR_WShop110106/index.php
http://www.psych.lse.ac.uk/socialpsychology/Events/2005-06/DR_WShop250106/Index.php
http://www.psych.lse.ac.uk/socialpsychology/events/2006-07/dreams_and_reality2007/dreamsanddemons.htm

Appendix M: Conferences and papers

Goldenberg, V. (2006, April). Navigating through an MSC and beyond: a flexible learning environment experience. Paper presented at IFIP Working Group 8.3. Task Force on Case Studies in Decision Making and Decision Support. April 6, 2006. Samos, Greece.

Goldenberg, V. (2006, June). Project Dreams and Reality. Navigating through an MSc and beyond: decision making in a flexible learning environment. Paper presented in PhD symposium at the International Conference on Creativity and Innovation in Decision Making and Decision Support (CIDMDS 2006), IFIP Working Group 8.3. June 27, 2006. London, UK.

Schwager, V. (2010). The role of play in enhancing decision making in Innovation Creativity Environments. Paper presented at the Doctoral Consortium DSS 2010 – 15th IFIP WG 8.3 International Conference on Decision Support Systems. Lisbon, Portugal.