

# A phenomenographic study of creativity as an employability skill in Higher Education

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A thesis submitted in part fulfilment of the requirements of the  
University of Lincoln for the degree of  
Doctor of Philosophy (Professional)

School of Education  
University of Lincoln

January 2021

For Jim, Celia and Anne

## Abstract

The aim of this study was to better understand the meaning given by academics, students and graduate employers to the concept of creativity as an employability skill. The expectations incumbent upon UK Higher Education institutions to develop graduates with skills that meet with graduate employers' expectations, appears to be ever growing and the increased scrutiny of institutional performance in this regard, via metrics such as the Graduate Outcomes survey and the Teaching Excellence Framework, seemingly promote the prioritisation of graduate employability skills. Creativity has been noted (Gray, 2016) as being an important skill for future employability and whilst agreement is apparent that creativity is valued, little in the way of a consensus regarding an actual definition of creativity is evident. Contextualised in UK Higher Education, the primary focus of the research was to explore the variation and complexities in the participants' perceptions of creativity and, thus, establish a consensus of understanding of creativity as an employability skill. In doing so, the study begins to address the seeming lack of understanding which surrounds creativity *per se* and the apparent conflict between the underpinning values of Higher Education, which appreciate creativity and the risk aversion resulting from the metrification of the sector. The study adopted an interpretivist, phenomenographic position and undertook data collection employing a Constructivist Grounded Theory (Charmaz, 2014) approach; engaging 41 academics, 84 students and 25 graduate employers in the initial stage of data collection. Three academics, three students and two graduate employers participated in the latter three stages of data collection, with participants undertaking reflexive photography activity, unstructured and semi-structured interviews. Congruent with the principles of Grounded Theory (Corbin and Strauss, 2015), constant comparison, theoretical sampling and memoing were undertaken during the data collection and analysis. The findings of this study have illustrated consensual themes in the participants' perception of creativity as an employability skill in a number of ways; specifically noting that the concept has two core aspects (processing of thoughts and production of a valued entity) which are influenced by surrounding factors (personal characteristics, collaborating with others, facilitating situational factors, understanding the subject). Furthermore, the research highlights that whilst elements of consensual understanding existed across the participants, a plurality of definition by participant grouping and subject domain emerged. Taking the themes and the plurality into

account, the study generated 17 recommendations to subsequently inform future practices of graduate employers, and academics and students in Higher Education so as to better develop creativity as an employability skill in graduates.

**Keywords:** Creativity, Employability, Higher Education, Constructivist Grounded Theory, plurality.

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## Acknowledgements

My heartfelt and ceaseless gratitude to, above all others, Sarah.

Also to Erin, Dylan, Carol, Joss, Sara, Scott, Karin, Kelly, Kev, Sally, Mark, Gyles, Mark, all participants and Seb.

And of course, Harry and his *“quite right.”*



## Chapter One – Overview and introduction

### 1.1 Introduction

This introductory chapter is intended to present the research study and the associated research context, rationale and question. Once established, chapter one will then provide an introduction to the underpinning principles of creativity at both a conceptual and applied level, prior to the exploration of relevant contemporary research and practice in the UK Higher Education (HE) sector. Subsequently, chapter one will then briefly discuss the fundamental theoretical and philosophical frameworks which underpin this study's research position and design, including a reflexive examination of the researcher's position and the influence this may have had on the study.

Creativity, as a concept, appears to be in receipt of much anecdotal attention and formal research investigation; being explored using a variety of perspectives from the fundamental theoretical foundations (for example; Wallas, 1926/2014) to applied studies in a plethora of bespoke contexts (for example; Sternberg *et al.*, 2014). The underpinning premise that creativity is a positive entity, is seemingly the assumed starting position in the associated literature, with the majority of authors believing the concept to be beneficial at an individual, collective and societal level. Jackson (2008) supported these viewpoints and illustrated that creativity is valuable in various ways including for a national economy, individual health and well-being and the health of society. The vast amount of interest that has been afforded to the analysis and application of creativity since Guilford's seminal paper of 1950, and the weight of this sustained interest, indicates that this concept is a valued human characteristic (da Costa *et al.*, 2015). Furthermore, Andreasen (2011) recognised the virtuous nature of creativity and celebrated its paradoxical value of enabling humans to adapt to changes in their environment yet, concurrently, providing personal agency to change that environment.

Contemporary studies (Sarooghi *et al.* (2015); Medeiros *et al.* (2014); Škerlavaj *et al.* (2014) amongst many others) also illustrated the clear benefits of individual and collective creativity in an employment environment; highlighting positives such as increased productivity, greater problem solving capacity and innovative output. This apparent recognition of creativity as an employability skill is supported by Bakhshi *et al.* (2015) who noted that employment which

requires creativity spans a range of sectors from the arts to the science and engineering careers. Whilst these studies concur in this respect, an agreed understanding of creativity as an employability skill is, however, not evident in the research literature. Indeed, when attempting to define the general notion of creativity, in a theoretical or contextualised sense, a seemingly vast array of variables and relationships between dimensions require consideration (An *et al.*, 2016) and to some, the concept will remain without definition (Bohm, 1968/2007). It could therefore be postulated that the development of this skill, which has such value generically and in an employment context, may be challenging for those charged with establishing, nurturing and promoting it, including those in HE.

The research study that follows here, situates itself in the context of UK HE and graduate employment environments, in an attempt to understand and clarify the meaning of creativity from the perspective of HE students, HE academics and employers of HE graduates. The outcomes of the study are intended to inform the local learning and teaching practices within the participating university, so that students will be better prepared for employment post-graduation, whilst also contributing to the wider research base in the subject area of creativity. The predominantly qualitative study was undertaken between March 2017 and February 2018, following ethical approval and initial pilot testing in 2016.

## **1.2 Research rationale, objective and question**

The understanding of creativity at a conceptual and applied level, as demonstrated in the research literature (Torrence, 1972; Osborne, 2003; Sternberg, 2006), appears to continually cause controversy and illustrate discrepancy amongst the research community; with a definition that is universally agreed upon and applicable across subject domains, apparently, remaining absent. Describing creativity in HE as a '*wicked problem*' (p1), Jackson (2006a) highlighted that the creativity is often viewed in an implicit and somewhat presupposed manner, rather than being consciously considered and understood; hence, the understanding of the concept does not move forwards. Individualised frameworks are evident within contextualised studies of the subject (for example Charyton and Merrill, 2009), however, how creativity is defined in the context of employability remains as equally nebulous, as with a general definition, despite its apparent importance as a graduate skill (Zhou, 2018).

Therefore, this study aimed to address the deficiency of a meaningful definition of creativity in an employability context by constructing a conceptual framework that could be used to inform and support HE learning and teaching practices when developing creativity in HE students. Furthermore, the findings of the study are intended to contribute to the ongoing study of creativity and support the understanding of the concept generally. It should also be recognised that, due to no contradictions evident in the associated literature, this study does assume that creativity as a skill in an employment setting equates to creativity generally and the perceptions of creativity an academic, HE environment.

The value and timeliness of the proposed research appears warranted as a contribution shall be made to the knowledge base in the field of creativity in a number of ways, including the application of a different methodological approach to the subject and the simultaneous tripartite engagement of participant groups. Whilst not novel in their own right, applying these approaches in an affiliated way to explore the concept and provide an understanding, brought a new dimension that has not been employed in this area of research previously.

The methodologies evident in the existing literature generally accept an ontological stance based in realism and the resulting methods adopt approaches which tend towards positivism or post positivism (Almedia *et al.*, 2008; Sternberg *et al.*, 2014). Whilst it is acknowledged that these approaches do have value, given what appears to be the highly subjective and value laden nature of creativity, this study adopted a relativist position and employed a Constructivist Grounded Theory (ConGT) (Charmaz, 2014) approach to the data collection. This method, therefore, attempts to view creativity from the perspective of the participants in an inductive manner and it is perceived that this approach has permitted a deeper insight into the concept than previously noted and uncovered further understandings of the perceptions of creativity from the perspective of the three parties.

This application of ConGT is also particularly relevant when taking into account the graduate employer perspective. Few academic studies in the domain of employability, for example Yeung and Mullen (2019) or Hesketh (2008), have routinely engaged with employers and where they do so, tend to employ quantitative approaches to data collection and which result in generally statistical outputs. Whilst such tangible data is useful, the hesitancy in the research

base to define creativity does, perhaps, indicate a requirement for a more constructivist approach and therefore, the use of ConGT to fully immerse employers in the data collection and thus provide rich, contextualised and valid data, appears justified.

The resulting research question was, therefore;

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The research question was, by design, open and abridged to remain congruent with the philosophy of Grounded Theory and crucially to this study, the notions of inductive reasoning. It was considered that any further research questions or sub-sets would introduce an aspect of predetermination to the research process which would have been counter-intuitive to the methodology and the resulting outcomes.

### 1.3 Research context

*‘Such lay use of the terms creative, creativity, or creating may have sufficed on the streets; but as happened with the term intelligence, the variant forms of creativity have seemed in need of more precise formulation’*

(Gardener, 2011, p19)

‘Creativity’ is a word that seemingly appears with great frequency in various professional, academic and research contexts but, as indicated by Gardener (ibid), with questionable understanding of the concept. The following section briefly introduces the contemporary and classical explorations of creativity and, subsequently, illustrates the concept in the context of graduate employability in UK HE.

#### 1.3.1 Defining creativity

By way of an introduction to the problem, Kandiko (2012) highlighted eight apparently reasonable but varied definitions of human creativity and identified a lexicon of related terms such as flexible, useful, original, products, novel, change and constraints. This uncertainty was also confirmed by Oliver *et al.* (2006) who acknowledged that an established framework for creativity was not apparent in the research literature. Stein and Harper (2012) defined creativity, very simply, as ‘coming up with something new’ (p6) whereas Ogunleye (2006)

implied that the resulting ideas of creativity had to have value but may not necessarily be new to *'the whole of human history'* (p96). Sternberg (2006) tended to show agreement and stated that creativity is the combining of previous ideas and knowledge to extend creations and knowledge; a position supported by Awang and Ramly (2008) who also introduced the notion that creative ideas should transcend across subject domains.

In many applied studies, such as Medeiros *et al.* (2014) or Liu and Schonwetter (2004), the emergence of individualised definitions of creativity contrived by authors to align with the subject matter and employed as frameworks in their own context are evident. As Dellas and Gaier (1970) would have it *'the one stop research study is typical'* (p69). Whilst this epistemological position and pragmatic approach is logical, it could be argued that it is not helpful in establishing a clear definition for creativity that could transcend contexts, however, given the amount of research undertaken since Wallas (1926/2014), a generic definition is perhaps unrealistic or arbitrary even if achieved. Kneller (1965) offered support for this notion, suggesting that creativity cannot be easily defined due to its constituents being too flexible and unpredictable. The various frameworks of creativity, although diverse, are interesting and do present an insight which assists in the analysis and application of creativity related concepts, and are therefore of relevance to this study.

### **1.3.2 Frameworks of creativity**

As a likely result of the absence of a definition of creativity, the surrounding conceptual frameworks are of equal variety and are widely debated in the associated research. Kaufman and Beghetto (2009) developed a four C's model which categorised creativity into four layers of 'mini-c' (personal, internalised creativity), 'little-c' (small, external acts of creativity), 'pro-c' (developed creativity with high, if not world changing, impact) and 'big-c' (cultural or domain changing creativity). Whilst helpful in categorising creativity, Kaufmann and Begetto's (2009) model does not explore the process of creativity, however, Besancon *et al.* (2013) proposed that creativity is the culmination of *'creative potential, creative accomplishment and creative talent'* (p79); noting that *potential* is the intrinsic ability of an individual to devise something new; *accomplishment* referring to where a value product has been created, with *talent* being suggested as the motivation to repeatedly undertake such actions. Besancon *et al.* (ibid) do add, however, quantification of these variables is difficult and will rely upon subjective opinion.

Sternberg (2006) and Runco (2010) postulated that the ability of a human to be creative is dependent upon various factors such as personal traits, cognition and situational factors, with both authors being in agreement that individual factors such as motivation and personality are equal contributors to human creativity. Similarly, Guilford (1950) identified '*temperamental variables*' (p454), for example self-confidence, as dependents of creativity, however, as suggested by Nickerson (2010), the establishing of reliable findings in the literature base to support this idea, has yet to become apparent. Similarly, a lack of agreement in the associated literature base is evident when considering the process of human creativity.

### **1.3.3 Processes**

Disagreement surrounding the underlying process of human creativity are very much apparent in the associated research base, causing conjecture when the practical underpinning processes are considered. Widely referenced in the associated literature, process models proposed by Wallas (1926/2014) and Guilford (1950) have seemingly provided a platform for later iterations of frameworks that attempted to explain the processes of creativity. Wallas' (1926/2014) process of creativity identified the four stages of '*preparation, incubation, illumination and verification*' (p38), with Guilford (1950) proposing the process of '*sensitivity, fluency, novelty, flexibility, synthesis, reorganisation and evaluation*' (p451-453); both seemingly suggesting a flow which moves from initial genesis of an idea, to synthesis of a product and subsequent evaluation.

Guilford (1967) appears, perhaps, to have expanded the notion of '*fluency*' (p452) and developed the notion of divergent thinking in creativity, whereby, individuals generate various diverse solutions and ideas to a given problem; indeed in the opinion of Baer and Kaufman (2006), creativity and divergence are considered to be synonymous, however, this does not take into account the latter stages of Guilford (1950) or Wallas' (1926/2014) models with regard to verification of ideas. Daly *et al.* (2014), tended to support this and proposed that for problems to be solved, a degree of convergent, rather than divergent, is required. Agreement is evident from Runco (2010), who suggested that unnecessary divergent thinking can limit efficiency and effectiveness in finding a creative solution to an issue. The componential

framework proposed by Amabile (1983) similarly suggested ‘*response validation*’ (p367) where creative ideas are evaluated against criteria or other factual knowledge and the process element of Rhodes’s (1961) four Ps model of creativity, noted that something of a mechanical flow to creative thinking, which applies cognition and reasoning. It could be suggested that, to some extent, these proposed models lack reference to the social contexts in which they exist, however, Glăveanu (2013) illustrated using a five A’s model, that actions and audiences are key situational factors which influence the creative process and the resultant product.

As highlighted here, similar to the definition of creativity, there is conjecture and disagreement as to the constituents and sequencing of the creative process, which does little to assist when attempting to clarify how to develop creativity in individuals. It has been suggested by Simonton (2006) that the development of creativity within individuals, whether this be process or product, can take place in a variety of educational and societal contexts, and UK HE has been viewed as a vehicle for this creativity development in students and staff alike (Neary, 2010). As this present study situates itself within a UK HE environment, the development of creativity within a UK HE context will now be introduced.

#### **1.3.4 Creativity in UK Higher Education**

The development of individual creativity can be undertaken in a variety of educational and societal contexts, including that of HE (Simonton, 2006) and UK HE can be considered to offer the same opportunity for staff and students alike (Neary, 2010). Indeed, creativity has long been considered a fundamental underpinning value of HE (Cribb and Gewirtz, 2013) and as suggested by Jackson (2014)

*‘If the moral purpose of higher education is to enable individuals to prepare themselves for the complexities and challenges of their future life, then surely enabling learners to develop their creative potential must be an important part of this purpose’ (p8).*

The position and existence of creativity within the UK HE context is, to some extent, defined by the political landscape which drives the sector. Whilst UK HE institutions do operate in an autonomous manner, they are not impervious to governmental policies and acts which influence their operation and have made a variety references to the importance creativity.

The Further and Higher Education Act (1992) and The Future of Higher Education white paper (DfES, 2003), emphasised the development of intellectual as opposed to creativity skills and subsequent later governmental papers, such as the Higher Ambitions (BIS, 2009) and the Student at the Heart of the System (BIS, 2011) white papers made little reference to creativity, instead giving more prominence to innovation. In association with governmental policy, UK HE is also held accountable to the frameworks or benchmarks of the Quality Assurance Agency (QAA), who are charged with the maintenance of academic threshold standards for UK HE. Within the QAA guidance, references to creativity appear to be inconsistent, with few being made in the Quality Code (three references across the 12 advice and guidance documents (QAA, 2018b)) and similarly the Quality Code for HE's Subject Benchmark Statements (QAA, 2019), also appears to make little consistent reference to creativity in other than arts based subject domains.

The seemingly uncommon reference to creativity in the regulatory documentation of the QAA could, perhaps, be a function of an HE environment that is increasingly hesitant of divergence and risk taking, due to the increasing metrification and accountability associated with its operation. The marketization and competition that is also promoted in the Success as a Knowledge Economy white paper (BIS, 2016) and the reference to the commoditisation of HE noted in guidance from QAA (2015) appears to present something of a conceptual barrier to creativity in UK HE.

Baer and Garrett (2010) identified the risk taking nature and potential inefficiencies of creativity; both of which are at odds with the consumerist values of accountability and standards (Clarke, 2012). This presents a challenge to the UK HE sector, where traditional values of creativity and the encouragement of such activity in students, is conflicted by governmental policy that tends towards measurement and conformity; to the point where institutional funding could be restricted should certain thresholds not be met. This challenge appears to be confounded by the requirements of employers who desire creativity in their graduate workforce (Rae *et al.*, 2012; Gray, 2016).

Subsequent governmental policies (for example DfES, 2003; BIS, 2009; BIS 2016) also appear to have steered UK HE towards increased demands with regard to the employability of the



graduates of HE in what is seemingly an attempt to improve the knowledge driven economy. As clearly stated by BIS (2016), the government will '*shine a light on the employability outcomes of courses and institutions*' (p58). It would, therefore, seem timely and pertinent that research such as this current study is undertaken to understand employability further and the specific employability skills required by graduate employers, including creativity.

### **1.3.5 Creativity as an employability skill**

As suggested by Nevin (2016), creativity is a skill valued by graduate employers and can support graduates from the unpredictability of work environments that will encounter in their lifetime. Lauder (2015) supported this suggestion and noted that creativity is a skill which is desired by employers and seemingly desired by policy makers given its possible contribution to human capital; an opinion largely agreed upon when examining various UK governments policies and the links to the supposed knowledge driven economy (BIS, 2016).

Graduate employers deem transferable core skills, including creativity, as a necessity for the workforces of the future alongside professional, subject specific technical skills (Universities UK, 2018). The World Economic Forum (Gray, 2016) also proposed that creativity has increased its importance as an employability skill in the last decade, although did not define it, and that it is in their view, one of the top ten employability skills going into the third decade of the twenty first century. The Institute of Student Employers (ISE) (2018) noted that global employer perceptions of creativity as an employability skill are high yet, at the same time, also reported that employer satisfaction of this graduate skill to be generally deficient. The ISE (ibid) report also highlighted a divergence between student and employer perceptions of the value creativity; suggesting this may be due to a change of priorities if employers but also noting '*a clear lack of understanding between the two groups*' (p18). This apparent misalignment of understanding is also evident in some of the associated literature which surrounds creativity in an employment context. Mumford *et al.* (2002), suggested that creativity is concerned with successfully producing a novel solution, whereas, The Institute for Directors (2007) applied the term '*innovation*' (p12) when referring to creativity; however, others such as Rae *et al.* (2012) described creativity as aligning to the notions of initiative, independence, problem solving and resourcefulness. Perhaps resulting from the lack of agreed definition in the research literature,

this variance with regard to the meaning of creativity in an applied context, that being employability, could very well be a limiting factor in employers understanding of the concept and the ability of UK HE institutions to fully appreciate the position and views of graduate employers.

Literature which links the specific concepts of creativity and employability is generally not forthcoming currently with regards to clear meanings and guiding principles, and the confluence of creativity and employability in an educational context appears to have resulted in only a minority of studies being undertaken in this area. This appears to be particularly true in a European or UK context, with only limited research activity being published in Asia or Australasia. Again, it could be postulated that this lack of contextualised research in UK HE which draws together creativity and employability, may be a contributory factor in the seeming lack of development of creativity in graduates and the low employer perceptions reported by ISE (2018). Recognising that creativity is, seemingly, a valuable personal skill (Jackson *et al.*, 2015) and is held in high regard by graduate employers as a key employability skill (Smith-Bingham, 2006), it could be considered interesting to note the general deficiency of bespoke literature in this area, an absence of specific governmental policy or guidance and a lack of tangible approaches to the development of creativity in UK HE institutional employability strategies.

Given creativity's importance in terms of employability and as a desirable personal skill, also taking into account the diverse meaning afforded to the concept from employers and academics, and the paucity of tangible policy or guidance referring to its development, it would seem logical and necessary to establish how academics, students and employers perceive creativity. This solidifying of meaning can then lead to recommendations for the development of creativity in undergraduates and, thus, promote employability following graduation. This study intended to achieve this aim.

This study does assume that the perceptions of creativity in a HE environment equate to those within an employment setting.

## 1.4 Theoretical and conceptual influences

### 1.4.1 Interpretivism

Dash (2005) and Cohen *et al.* (2011) identified three foremost forms of interpretivist approach; phenomenology, ethnomethodology and symbolic interactionism, all of which are based on the centrality of the subjective human experience. The current study is aligned more towards the phenomenological stance of interpretivism as the participants' perceptions of phenomena, that being creativity and employability, were collected and understood (O'Leary, 2007).

Situated in opposition to the ontological stance of positivism, interpretivism describes a reality as constructed by an individual (Waring, 2012) and hence, multiple realities of the world exist due to meaning and knowledge not existing outside of human interpretation (Denzin and Lincoln, 2003). The interpretivist paradigm, epistemologically, views knowledge as a socially constructed phenomenon, produced by interactions between humans and their environments (Hartas, 2010). Waring (2012) supported this concept and noted that knowledge of phenomena is indirectly constructed through the interpretation of observations and experience, therefore the notion of objective, independent knowledge that is external to a human being is not possible.

Given the central tenets of interpretivism being human involvement in and interpretation of experience, it would seem logical to assume that the current study will be value laden and bound by the cultures and history of the context this study is situated within. Referring to this concept of axiology, Gadamer (2004) suggested that as all humans have values developed in their environments, it is not merely the participants' values which are relevant to this study; it is also those of the researcher as they themselves inseparably entwined with the research scenario. Cresswell (2007) supported this and noted that this concept will influence all aspects of the research process including data collection, analyses and summations; therefore, the careful selection of approaches and the use of reflexivity was important.

### 1.4.2 Grounded theory

Glasser and Strauss (1967) described the methodology of Grounded Theory (GT) which challenged the traditional ideals of testing theory by the collection of facts and data, by defining a research approach whereby theory is inductively derived by systematic data

collection, with no preconceived ideas of the subject matter. As theory begins to emerge, further data is captured and employed to test this theory in an ongoing '*constant comparative*' (Evans, 2013, p44) basis. The rationale for the creation of the GT approach was built on the notion that theory based on data is more robust, more meaningful to those applying the theory (due to the participants playing an active role in its creation) and has a better '*fit*' (p3) with the domain of study as the principles of the theory have been derived directly from that domain (ibid).

Since the publication of the initial work on GT, it appears that varying interpretations and applications of the methodology have been developed. Evans (2013) provided an overview of the three main categories of GT; identifying the classical (CGT), Straussian and Constructivist models. A feminist approach was also highlighted however this appears not to be a distinct GT model, rather, the application of feminist theory to one of the three aforementioned models. As the name suggests, CGT is based on the original principles defined by Glaser and Strauss (1967) and suggests that the approach should not engage with literature or previous knowledge until after the data collection, as to do so may present misleading contexts that could skew the path of the theory development (Scott and Usher, 2011). The Straussian approach differs in that previous knowledge is employed to guide the research process and provide hypotheses early on in the study, moving the methodology more towards a deductive and more structured approach; a reflection of the schism that had subsequently occurred between Glaser and Strauss (Evans, 2013).

Constructivist GT (ConGT) was designed by Charmaz in 2000 (Charmaz, 2014) and follows similar principles to CGT (inductive approach) and Straussian GT (aligning with the notion of engaging with previous literature) whilst also moving away from the simplistic singular focus of the previous models and more towards recognition of constructivist notions of multiple realities and acknowledging individual and societal values and views (Cresswell, 2007). Due to this, the method also differs from the previous models as the role of the researcher is now far more embedded in the research and must be reflexive in acknowledging the shaping their values can have on the data (Charmaz, 2014). In the context of this study, this closeness to the data and the participants is considered important in both its novelty of approach in the field of

creativity research and also in providing a deeper understanding of the meanings given to creativity by participants.

### **1.4.3 Criticism of Grounded Theory**

The notion that a researcher could work without preconceptions was criticised by Scott and Usher (2011), who stated that the social values of a person will always be present and will guide the research process in some way; with similar criticism being noted by Layder (2006) who highlighted that relevant theory could not be discounted. Pragmatically, Allan (2003) employed GT in an applied context and noticed that due to time constraints of some participants, the concept of interviewing participants with no parameters was problematic and unrealistic. Allan (ibid) also argued that the process of analysing and coding data has to be, in some way, based upon preconceived ideas.

In the context of this study, CGT traditionally would adopt a positivistic epistemological stance, appearing to make the approach incompatible with the interpretivist style of paradigm previously suggested here. However, the ConGT methodology (Charmaz, 2014) is a valid counter to this issue. Within Charmaz's (ibid) model, situational factors define the epistemology and that *'research acts are not given, they are constructed'* (p13). Whilst it is clear that GT, including ConGT, is not without its criticisms, the approach is seemingly aligned to achieving the depth of understanding required in this study and the inductive nature of the intended theory creation. The notion and importance of reflexivity is also congruent with ConGT and Evans (2013) strongly emphasised the need for researchers to be conscious of their biases, which is facilitated in the methodology of ConGT, more so than with positivistic CGT or Straussian GT.

### **1.4.4 The researcher**

This element of the introduction illustrates the researcher's experience and background in the context of this study into creativity; highlighting also the personal positionality via a reflexive evaluation of the researcher's professional and personal status.

As an academic undertaking management responsibilities in a UK General Further Education (FE) College, it could be argued that I was something of an outsider to the data collection and research process in general, given the sector within which the participant groups operated within; that being UK HE. Whilst this professional distance did, perhaps, provide an increased element objectivity during data collection, processing and analysis, it would appear to be more valid to designate myself as an insider for a variety of reasons.

The personal educational journey I experienced was not untypical. Following a generally scientific A level education in a UK sixth form college, undergraduate study was undertaken in the area of Sports Science and a subsequent post graduate qualification (MSc) in the same subject domain achieved. With particular emphasis during the post graduate study, the subject matter was highly positivistic and very much demanding the notions of empiricism, whilst being suspicious of interpretivist approaches. Indeed, my experience of research at this level examined kinetics and kinematics of a particular sporting technique and, hence, amassed large amounts of quantitative data via instrumentation, thus uncoupling the participants' views from the data collection and subsequently de-humanising the analytical process (Krane and Baird, 2005).

The conjunction between educational and professional experience occurred in 1999 as I began related employment in a HE Institution (HEI) and subsequently taught on undergraduate sport science programmes until 2012 within a Further Education setting. It is, however, worthy of note that during this time I was exposed to and surrounded by interpretivist epistemologies via personally undertaking and (subsequently teaching on) teacher education programmes. This introduced the researcher to dialogue, interactions and methodologies that were less dispassionate, highly qualitative and more subjective than previously relied upon. Met with some doubt in the initial periods, it took me some time to adapt to this paradigm shift and I received (constructive) criticism from tutors and mentors for not acknowledging and accepting the human interactions associated with education and teaching. Personal experience, through the observation of and feedback on my teaching sessions, began to unravel this somewhat alien paradigm as tutors and mentors would seek to understand the choice of my teaching techniques, pursue opinion from students on the impact of these techniques and require me

to personally and subjectively reflect upon teaching sessions using highly qualitative frameworks such as Gibbs (1998).

Some years later, and with the notions of humanism entrenched, interpretivistic approaches were further embedded and appreciated when I had the privilege of tutoring teacher trainees from a vast array of vocational backgrounds and educational contexts. This enlightened me as to the need to understand individuals' values and experiences rather than endeavouring to generalise across a population of professionals.

Further to this tutoring, I was duty bound by my role to undertake routine observations of colleagues teaching sessions as part of the quality assurance procedure at the college which culminated, at the end of any given observation, in the formulation of a judgment and the assigning of a numeric grade (1 to 4) to the observee. Often, this subjective grade would create a conflict between performativity, that is to achieve a grade 1 or 2, and demonstrating creative teaching methods that may fail when observed, thus resulting in a lower grade and potential performance management consequences. This made me question how the political and procedural frameworks which govern, explicitly and implicitly, the teaching environment can affect the application of lecturers' creativity and the development of creativity in students. I became curious as to the factors and underlying constructs which permit, or not, creativity to exist in an educational context. These notions were also evident during my subsequent employment as a Senior Lecturer in Educational Development at a post-92 UK university.

Furthermore, it is important to recognise that as a teaching professional and practitioner in a HE context, I experienced, first-hand, the two central tenets of this study; that is creativity and employability. As a lecturer of both highly mathematical subject areas and abstract concepts of research methodologies, it was often challenging to engage and stimulate students whose motivations were based in practical sports performance. Therefore, the devising of teaching sessions that applied theory to practical situations in novel and innovative ways was necessary to promote learning and reduce student disengagement. It was here that I also became intrigued by the realisation that creativity in itself is a fascinating concept as not all teaching colleagues saw value in it and if they did, there appeared to be a spectrum of aptitude to be creative in terms of teaching.

The notions of employability were also incumbent upon myself in the educational context and manifested themselves in two ways. As part of the curriculum design process, I was jointly responsible for embedding generic transferable skills into the undergraduate and teacher training programmes' teaching, learning and assessment strategies, with their achievement being monitored and tracked. Moreover, the vocational nature of both the sport and teacher education subject domains demanded the programme content to be current and relevant to related employment sectors. This afforded me insights into the importance of developing employability in HE students and the necessity of ensuring employers' requirements are engaged with, considered and subsequently developed in graduates via in the programme design. This experience not only challenged my thinking as to the purposes of HE more broadly but my consciousness of the formulae of employability from the perspectives of employers and HE academics; essentially asking what skills and attributes does an employable graduate have and how close is the HE sector in meeting this definition? These considerations were heightened as a manager responsible for HE in a FE college and accountable for the success of 'destinations' data when examined and published by external scrutiny, namely, the Destinations of Leavers of Higher Education (DLHE) survey.

When the researcher's professional experiences and varied associated philosophical contexts are aggregated, the resulting positionality in relation to this research piece is one of an involved participant adopting an emic stance, with an empathetic understanding of empiricism and objectivity, thus allowing objective reflection on personal values and biases. This position would appear to be congruent with the data collection approach required to address the research question of this study and to provide greater depth of understanding in the area of creativity as an employability skill.

## **1.5 Conclusion**

The first chapter of this thesis has introduced the current study which, in the context of UK HE, explores the meaning given to the concept of creativity as an employability skill. Subsequently, this chapter provided an overview of the underpinnings of the research related to the concepts of the research question and identified the philosophical position and theoretical aspects of the approaches taken in this study. The research question was established as a result of the



seeming conflicted environment of UK HE which has creativity as an underpinning value and is expected to develop creativity in its graduates, whilst also being accountable to risk averse metrics and external scrutiny. Furthermore, the situation is compounded by the lack of a general definition of creativity and the apparent variations in the understanding of creativity from academics, students and graduate employers. As noted by Jackson (2014) *'there needs to be conversation to enable the sharing of perceptions and understandings'* (p11).

Following the introductory chapter, a review of literature associated to the underpinning elements of the current study and its research question shall be presented to give context to the further chapters. Subsequent to the literature review, chapter three will illustrate and discuss the inductive methodological position of this study and the approaches that were employed to capture the perceptions of academics, students and employers with regard to creativity as an employability skill. Chapter four then conveys the findings of the study; highlighting how the key conceptual themes and theory have been derived through the four stages of the method and, as result of the methodological stance, comparison and discussion of findings with previous research occurs in this chapter. The thesis is then drawn to a close with chapter five which provides summative conclusions including a localised model of creativity as an employability skill, specific to the context of the study, and the plurality exhibited by participant groups and subject within the proposed model. Study limitations and recommendations for practice and research are also highlighted in the final chapter thus proposing pragmatic outputs from the current study and research themes of further exploration.

## Chapter Two – Review of literature

### 2.1 Introduction

Chapter two will provide a critical review of the literature which surrounds and influence the concepts embedded within the current study's research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The chapter is therefore divided into three related sections; initially a brief overview of the current UK HE context is provided which considers the place of creativity in the context of UK HE, thereby identifying and critically evaluating political and social factors which influence the stakeholders who surround it. The following section emerges from this review of UK HE and discusses the concept of employability, the various interpretations of what constitutes graduate employability and its value in HE. The last focal section of chapter two, moves from the notions and values of employability to concentrate its attention on creativity as a concept, exploring the theoretical underpinning principles and applications evident in the research literature. Finally, this chapter will close with concluding remarks that will assimilate and summarise the key overlapping elements of the three sections of the literature review; those being UK HE, employability and creativity, thus providing something of a rationale for the subsequent methodology and method chapter.

As illustrated in chapter one and explored further in chapter three, the current study adopted a Constructivist Grounded Theory approach to data collection (Charmaz, 2014). Whilst Constructivist Grounded Theory permits engagement with a literature base associated to the research question, caution was also exercised to ensure that the principles and values of Grounded Theory (Glaser and Strauss, 1967) were maintained to facilitate the greatest degree of induction in the data collection as possible. Thus, to minimise the literature unintentionally compromising the inductive intentions of the current study, the majority of this literature review was finalised following the collection of data collection and resulting analyses.

The literature base which surrounds HE (and its influences), employability and creativity appear to be abundant in volume in each of these three distinct areas and, whilst much debated, understanding of these three concepts in isolation has seemingly received much research attention and is therefore informative. Although valuable in their own context, the limitations of the current literature in relation to the research question of this study are based on the lack of interaction between the three concept areas, particularly where creativity overlaps with HE and employability. A possible limitation is also apparent in the literature base related to employability, in as much as the engagement of graduate employers in empirical research tends to be less evident in proportion to the overall breadth of publications in the area.

## 2.2 Creativity in the UK Higher Education Context

Williams (2016) noted that HE has for many years had a positive purpose and has been thought of as a *'public good'* (p619) through social and personal benefits, however, the perception of *'good'* has altered over time. The UK HE sector and its perceived role has undergone various transformations in post-war UK and been considered by Filippakou and Tapper (2016) to be in a continual state of instability. The current form of the UK HE sector appears to have been shaped by many government policies including the Education Reform Act (1988) and, perhaps significantly, the Further and Higher Education Act (1992), which permitted former polytechnics to assume the title of university and award honours degrees to undergraduate students. According to Green (1994) the Further and Higher Education Act (1992) attempted to remove inequity between traditional universities and polytechnics and, thereby, promote increased participation in HE, however, Filippakou *et al.* (2012) argued that the differing identities of traditional and post-1992 universities are made more distinct due to uniform governmental administration being applied to the universities with differing structural components. Ingleby (2015) described HE as

*'A complex profile of institutions and students are present that cannot be explained by all-encompassing statements'* (p522).

The Further and Higher Education Act (1992) seemingly attempted, albeit partially, to develop the agenda of upskilling the nation's workforce to subsequently support, theoretically, the achievement of greater economic growth in the UK (Keep, 2014), however, the notion of skills

development was not precisely defined by the 1992 Act. Some authors, for example Ingleby (2015), also identified the increased inference of skills and employability development in the UK HE agenda and hypothesised that employability tended to be associated with lower ranking universities and student cohorts from lower socioeconomic groups; a position supported by Filippakou *et al.* (2012).

In objection to the idea that employability should be directly developed in HE students, Harvey (2000) maintained that universities should be developing subject specific skills and knowledge in students, whilst also '*empowering*' (p3) individuals to be lifelong learners who are then, by default, employable. Reflection on this debate and The Further and Higher Education Act (1992), amongst other policies, provokes a discourse as to what the role of HE is. The purpose of HE, according to Calhoun (2006), is to provide, amongst other purposes such as new knowledge acquisition, education that prepares individuals for employment that is of benefit to society directly (for example by training professional occupations), to promote social mobility and to shape a '*public sphere*' (p10) and thus, prepare individuals to participate within that sphere. East *et al.* (2014) questioned the egalitarian notions proposed by Calhoun (2006) and noted that in more contemporary society, the benefits of HE are as likely to be for the individual seeking '*private advancement*' (p1619) as they are the well-being of society and economic development, including a knowledge driven economy.

This debate, to some extent, further illustrates some of the challenges and turbulence of the HE sector, and Filippakou and Tapper (2016) argued that the interpretation of social and economic factors, will drive the way in which universities act and operate. Indeed, this position was, initially, substantiated by the UK Government's 2017 Higher Education and Research Act which established the Office for Students as a regulatory body in UK HE and stated, as it's very first general duty, the necessity to uphold the autonomy of HE providers. The prioritisation of autonomy in the 2017 Act is interesting and potentially in opposition to latter imposition of regulations on HE stated in the Act and those incumbent in the Quality Assurance Agency's UK Quality Code for Higher Education (QAA, 2018b) which prescribe the '*fundamental principles that should apply to higher education*' (p1). Within the UK Quality Code, reference points are

provided by QAA as to the academic standards that UK HE providers are expected to meet and the *'core'* and *'common practices'* in the delivery of these expectations. Further subject specific information and content which supposedly define UK HE programmes of study, are also provided by QAA via subject specific benchmark statements and specialist guides. It is worthy of note that the creation of these guidelines is undertaken by peers from UK HE institutions and representation from relevant professional subject bodies (for example, Royal Geographical Society (QAA, 2014c) so it could be suggested that to some extent, the sector is self-regulating. However, whilst UK HE is supposedly autonomous (Higher Education and Research Act (2017), the above mentioned governmental regulatory requirements appear to provide something of a constraining force on the freedom of the UK Higher; a challenge compounded by the Higher Education and Research Act's (2017) drive to facilitate and encourage competition between providers of HE.

Using a conceptual analysis of the consumerist conditions apparent in the UK HE sector, Naidoo *et al.* (2011) contended that the increased marketisation of universities has led to a *'devalorisation'* (p1148) of academic capital and that meeting the perceived needs of consumer desires has resulted in the learning experience of students being reduced. According to the theorising of Filippakou *et al.* (2012), HE institutions with a longer established reputation in the sector, tend to rely on this reputation to attract and retain students, thus resisting the demands of the, suggested, counter-productive consumerism and hence are better positioned to maintain some of the fundamental aspects of HE such as creativity (Neary, 2010). Naidoo *et al.* (2011) concurred with this summation and it could therefore be suggested that the differential in the HE sector identified here is in contradiction to the ideals of the Further and Higher Education Act (1992) which aimed to produce greater equity within the HE sector.

Exploration of other guidance provided by QAA also points to a marketised, consumerist ideology in the HE sector. The *'Skills for Employability'* publication (QAA, 2015) stated that HE is a *'product with a price tag'* (np) and subsequently guides the reader to material related to the Key Information Set; a set of course level metrics which must be publicised by UK HE providers to inform prospective students of a provider's performance (Higher Education

Statistics Agency (HESA), 2016). When drawn together, the suggestions made by Filippakou *et al.* (2012), Naidoo *et al.* (2011) and Ball (2003), tend to illustrate that the marketisation of HE is potentially divisive and has counter-productive impacts on the fundamental underpinnings of HE; including the capacity for creative thinking. Nickolai *et al.* (2012) seemingly supported this position and highlighted that a tension between income generation and knowledge production is evident in HE. Clarke (2012) appeared also to concur with this position and adopted a view that HE does need to be re-thought, to facilitate openness, development and collaboration whilst opposing the neoliberalist values of choice and competition, instead, basing itself on the principle of knowledge creation.

To some extent, Tight (2014), appears to challenge the perceived conflict between consumerism of UK HE and the collegiality and social knowledge creation that have been appreciated by universities for many years. Tight (*ibid*) concluded that the apparent tension appears to be born from the perceptions of academics who are resistive to changes in local policy, rather than from a dichotomy between the principles of collegiality and managerialism, and that new entrants to the university sector did not share the same concerns as their more experienced colleagues. Evidently, it would appear that to some degree, Tight (2014) is supported by Hordern (2019) who argued that communities, in this case the HE community, require '*telos or purpose*' (p290) as it provides the substance for critical evaluation and is therefore crucial to the development of the expertise which are synonymous in HE. Hordern (*ibid*) went further to convey that all communities must be adaptable and supple in their being, as no one community exists in isolation and is free from the influences of a changing society, therefore needing to constantly redefine itself to meet the changing context in which it is situated.

Taking into account the differing views illustrated here, seemingly, the UK HE sector is currently at an impasse; conflicted by the traditions of the perceived fundamental values of HE, against the values of consumerism and marketisation fuelled by governmental policy and regulation. This appears to present tension in the operation of the UK HE sector as the notions of freedom,

autonomy and knowledge generation are perceived to be challenged by compliance, metrification and performativity.

The principal examples of performativity and metrification in the current UK HE sector are the collection of graduate employability statistics via the Graduate Outcomes survey (HESA, 2019a), increased scrutiny of institutional approaches by regulatory bodies such as the Office for Students (established by the Higher Education and Research Act) and the National Student Survey (NSS) (Office for Students, 2019), which seeks the views of graduating students as to their experience of the university they studied at, via subjective surveying methods. Since 2017, the Graduate Outcome survey (formerly known as the Destination of Leavers from Higher Education) and NSS have formed the mainstay of the contributory information which informs the Teaching Excellence Framework (TEF) (Office for Students, 2019); a judgement based scoring system whereby institutions delivering HE are awarded a bronze, silver or gold rating which is published in the public domain and can, albeit in relatively small magnitudes (£250 per year), effect funding per student head. As reported by the Office for Students (2019), the TEF aims to *'assesses excellence in teaching at universities and colleges'* (np).

Neary (2016) argued that the metrics associated to the TEF are proxy rather than direct measures of the standards of teaching and that the implementation of the TEF is not to assess the standards of teaching but to further increase an unstable market driven sector introducing the possibility of institutional failure. Gunn (2018) agreed, to some extent, with Neary's (2016) position in that it can be seen as multifaceted; providing institutional information to prospective applicants and as a measure to inform the maximum permissible tuition fee an institution may charge. However, in contrast, Gunn's (2017) outlook regarding the TEF appears to be positive and suggested that the TEF should be welcomed by the HE sector as it permits the *'quantification of quality'* (p15) via the measures it employs. Gunn (ibid) went on to acknowledge the subjectivity of teaching excellence as a concept but concluded that the TEF does permit the assessment of teaching excellence by the use of generic descriptions within the framework. Wild and Berger (2016) contradicted this principle and suggested that the TEF is flawed in being able to evaluate teaching excellence as the parameters of, for example,

employability skills are not defined and therefore cannot be accurately measured. Furthermore, Blackmore *et al.* (2016) criticised the reliability of the underpinning data related to TEF assessments, suggesting that the proxy measures are affected by the reputation and prestige of an institution, and also claimed that the associated employability that an undergraduate experiences is a function of the social and cultural value of the institution rather than the employability skills developed; thus invalidating the TEF employability metrics.

The metrics which are incumbent within the UK HE sector are seemingly, particularly the TEF, a point of conjecture as to their validity, reliability and therefore value. This aside, these metrics appear to be an inescapable element of HE and as identified by Ingleby (2015), this metrification appears to drive behaviours and perceptions of students within HE, which differ to those of academics. For example, academics described values of reflection and development whereas students conveyed the concept of value for money as important. This conflicting student view seemingly implies that deliverers of HE are required and perhaps under pressure to meet the desires of the 'consumers' (Ingleby, *ibid*, p518); indeed BIS (2016) referred to students as consumers in the Success as a Knowledge Economy white paper and that

*'Competition between providers in any market incentivises them to raise their game, offering consumers a greater choice of more innovative and better quality products and services at lower cost. Higher education is no exception.'* (p8)

thus suggesting alignment with the general concepts of performativity identified by Ball (2003). Further critique of the ideals of consumerism was provided by Cribb and Gewirtz (2013) who highlighted that HE should be concerned with and strive for disagreement and individuality; ideals which are limited by the commodification and incorporation of the sector.

The primary concept of the research question in this current study, that being creativity, presents, perhaps, a specific example of how the individuality and divergence traditionally associated with HE could be challenged by the current political drivers of the sector.



In 2003, the Department for Education and Skills (DfES) released the Future of Higher Education white paper, which promoted a vision for HE that acknowledged the need for '*fostering imagination, creativity and contribution to society*' (p21). Whilst seemingly being supportive of the requirement to facilitate and develop creativity, there appeared to be a disjoin between this statement of intent and the linkages with latter chapters which prescribed the importance of business and HE collaboration but did little to establish the role of creativity in this relationship, however, reference to technical and intellectual skills were frequent in this respect. Subsequent to the 2003 document, the 2009 Higher Ambitions white paper (BIS, 2009) conveyed a vision of the HE sector being focused on enhancing the UK's future by prioritising subjects linked to economic growth and working with employers and businesses to secure the greatest '*economic benefit*' (p4). The Higher Ambitions white paper (2009) appeared to illustrate a shift further towards a more market driven sector, as illustrated by the reference to competition whilst encouraging competition between universities whereby institutions who responded best to economic challenges would receive greater funding. This reference was interesting, in that, it appeared to be linked to funding for Science, Technology, Engineering and Mathematics (STEM) subjects only but was preceded by a commitment to institutional autonomy. This could be viewed as something of a conflicting message in that HE institutions with little or no STEM subject expertise, would be at a financial disadvantage should they exercise their autonomy and maintain delivery of other subjects. In the context of creativity, the linking of funding to STEM subjects could also be perceived as a limitation as these subjects have been linked with a lesser requirement for associated individuals to be creative (Zhou, 2018; Simonton, 2009).

A perhaps more tangible illustration of the decreased political importance placed upon creativity in the Higher Ambitions white paper (2009) was the use of the term *creativity* within the document. With the exception of two perfunctory references, the term *creativity* did not appear within the 107 pages of the main text and appears to have been superseded by the term *innovation* (60 relevant citations). It could be postulated that this emphasised a change in the political landscape, moving from the more general notion of creativity mentioned in the 2003 white paper, to the outputs and product of creativity in the 2009 white paper and the subsequent Student at the Heart of the System white paper (BIS, 2011a).

These political drivers and the constraints they appear to impose, seemingly are in conflict with the perceived underpinnings HE and the ideals noted by, amongst others, Cribb and Gewirtz (2013) and Neary (2010) including the freedom to be creative. Similarly, the regulatory frameworks prescribed by QAA which surround UK HE also, it could be argued, are potentially limiting to creativity and its development in HE graduates. For example, a review of the specialist guide *Education for sustainable development: Guidance for UK higher education providers* (QAA, 2014a) illustrates that no references to ‘creativity’ or being ‘creative’ are made when referring to the development of such skills in graduates. Similarly, the requirements of UK HE providers in the UK Quality Code for Higher Education (2018b), as referenced by Subject Benchmark Statements, also appears to present expectations that are not always conducive to creativity development. Table 2.1 illustrates the frequency of references to the word ‘creativity’ or ‘creative’ (in the context of direct relevance to skills development) in graduates from a sample of QAA Subject Benchmark Statements.

**Table 2.1 - Sample of QAA Subject Benchmark Statements**

<i>Subject Benchmark Statement</i>	<i>Year of publication</i>	<i>Combined frequency of the terms creativity and creative</i>
Archaeology	2014	3
Architecture	2020	9
Art and Design	2017	37
Biomedical Science	2020	1
Business and Management	2019	3
Chemistry	2019	0
Communication, Media, Film and Cultural Studies	2019	28
Criminology	2019	2
Dance, Drama and Performance	2019	32

Education Studies	2019	0
Engineering	2019	6
Events, Hospitality, Leisure, Sport and Tourism	2019	15
Forensic Science	2012	0
Pharmacy (MPharm)	2002	2
Psychology	2019	0
Social Policy	2019	2
Social Work	2019	0
Sociology	2019	3

Unsurprisingly, those subjects which could be perceived as being traditionally aligned to creative industries or production, illustrated a higher frequency of ‘creativity’ or ‘creative’ in the related benchmark statements. However, table 2.1 highlights an apparent lack of association in other subjects, particularly but perhaps not unexpectedly, in science based subjects. Somewhat ironically, the Biomedical Science benchmark statement noted in its introduction that *‘creativity and diversity are encouraged [in the subject]’* (p5) yet no further reference to creativity was made in the entire text.

Perhaps of greater concern is the paucity of references to creativity in social science based subjects such as social policy and education. Jackson (2006b), amongst many others, conveyed the benefits of humans being creative in their existence, as creativity permits the generation of new ideas to address problems and overcome the challenges posed by an ever changing world. Given the degree of human interaction within the specific example of the social sciences, it could be postulated that a high frequency and complexity of problems and challenges are likely and that therefore a greater requirement for creativity is necessary. With the exception of the creative or production industries, the scarcity of expectation (see table 2.1) related to creativity within the QAA subject benchmarks, tends to suggest that the sector is constrained against the development of a fundamental underpinning of the UK HE sector.

Whilst the subject benchmarks noted in table 2.1 remain current and apparently routinely employed within the UK HE sector, more recent guidance created by QAA (Enterprise and Entrepreneurship Education (QAA, 2018a) does perhaps suggest an increased recognition of creativity. 21 references to either 'creativity' or 'creative' are apparent in the document, with the guidance highlighting the need for the provision of '*creative thinking*' (p23) for students and noted creativity as an entrepreneurial competency. This relatively recent guidance document appears positive with regard to creativity, however, it must be considered that this appears to be one artefact in a myriad of other documentation and relates to one specific area of study only; possibly indicating that whilst the creativity is coming to the fore, there are still many constraining factors within the regulatory frameworks and policy of UK HE.

As noted previously, these subsequent governmental policies (DfES, 2003; BIS, 2009; BIS 2016) that have steered UK HE conveyed seemingly increasing demands on the sector to increase the employability of the graduates of HE in an attempt to enhance and promote the knowledge economy. Indeed, BIS (2016) emphasised that the government will '*shine a light on the employability outcomes of courses and institutions*' (p58). Finn (2017) proposed that the narratives which surround employability in the HE context have greater complexity than suggested in the governmental policies and that the concepts have been applied to policy without sufficient critical discourse. Referring to the political notions of employability as '*folly*' (p629), Frankham (2017) concurred with Finn's (2017) position and illustrated that the term employability has a variety of definitions and is influenced by varying cultures and structures in different workplaces.

These critiques of the political landscape which surrounds HE, highlight that the concept of employability is not simplistic in terms of its definition or application. As the research question of the study present here situates itself within an employability context, it is appropriate that the underpinnings of employability should be explored, and this shall now follow in section 2.3.

## 2.3 Employability

In the UK HE context, the concept of employability including the teaching and improvement of employability skills in students, is a relatively new notion and seemingly gained an impetus following the Dearing Report (1997) which advocated the critical role universities have in developing graduates with the skills to contribute to the needs of a global economy. Lauder (2015) suggested that the concept of graduate skills development and enhancing the education of an individual, promotes a more productive economy is in line with human capital theory approach; something evident in both the Future of Higher Education white paper (DfES, 2003) and the Higher Ambitions white paper (BIS, 2009), which appears to have further embedded these practices of the UK HE sector. This theoretical thread continued in successive governmental policies; specifically the Students at the Heart of the System white paper (BIS, 2011), and the Success as a Knowledge Economy white paper (BIS, 2016). The Students at the Heart of the System white paper (BIS, 2011) advocated the requirement of UK HE to develop high level skills in their graduates and is potentially associated with further expansion of HE recruitment via accessing a wider, mass market (Ipate *et al.*, 2014) and, according to Wilton (2011) and Li (2013) an increased interest in employability from UK HE deliverers. The Success as a Knowledge Economy white paper (BIS, 2016) made clear reference to the importance of employability skill development in graduates and, perhaps more influentially, the governmental scrutiny placed upon UK HE in regard to employability performance of their courses. This emphasis made in the 2016 white paper, appears to align and operationalise the demands for clarity and transparency made by the Dearing Review of Higher Education (1997), however, it could be argued that with the introduction of the DLHE in 2003 (later becoming the Graduate Outcomes survey in 2018) which captured student employability data (HESA, 2005) this was not necessarily an innovative change in political direction, rather, a reaffirmation of the performativity of UK HE.

Early in this proliferation of political output, Harvey (2000) disputed the notion that HE exists to create employable workers and contended that HE should be concerned with a student experience that is transformative, which subsequently motivates individuals to continue learning following graduation. This position was supported by the work of Lave and Wenger (1991) which provided an opposition to human capital theory, suggesting that skills

development has contextual underpinnings and are not necessarily transferable across situations. Hinchcliffe and Jolly (2011) seemingly concurred with Lave and Wenger (1991) and proposed that the transformational effect on the lives of HE students is lost when too narrow a focus is put onto employability. Similarly, Kalfa and Taksa (2015) also expressed that the rational, measured nature of human capital theory and the utilitarian output of it, reduces the worth of the academic values and creativity of HE.

Opposition to the views of Harvey (2000) and Kalfa and Taksa (2015) were apparent from Weiss *et al.* (2014) who asserted that HE is transformative and should provide a student journey to employment, particularly as the worldwide labour market changes and becomes more competitive (see section 6, figures 2.6.1 and 2.6.2). The position of Weiss *et al.* (ibid) was supported by Rae (2014) who proposed that, since the 2008 global economic crisis, if graduates of HE are to remain competitive in a challenging employment market, sound employability skills must be possessed and demonstrated.

Given the emotive nature of education and the political philosophies that surround and influence it, it is likely that the discourse and argument related to HE and employability will continue. A contributory factor in this discourse, perhaps, is HE's perception and understanding of the term employability.

*'In truth, there are no straightforward definitions of employability'*

(Chadha and Toner 2017, p2)

According to Tholen (2014), the understanding of employability has tended to be superficially approached and over simplified by policy making bodies, leading to misunderstanding and confusion in some areas of education. Ipate and Parvu (2010) suggested that the term employability was often confused with the idea of students gaining employment post-graduation and that the defining of employability skills, varies between institution with skills and attributes such as independent learning, communication, numeracy and problem solving, have been cited (Oria, 2012). Yorke (2006), in association with the Higher Education Academy

(now Advance HE), reviewed perceptions and definitions of employability in the UK HE sector and developed a definition which stated that employability is

*'a set of achievements – skills, understanding and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy'* (p8)

Despite this definition being adopted by, for example, the University of Kent (2019) and the University of Edinburgh (2016), the complex and multidimensional nature of employability is evident within the above definition; particularly given the reference to skills, understanding and personal attributes. Furthermore, a critique was provided by Morrison (2014) who noted that social contexts are given insufficient consideration in this type of definition and that HE students attempting to find employment after study are often subject to the issues of race, class and gender as well as their skills, understanding and attributes; as Tholen (2014) would have it *'the social construction of employability'* (p2).

Morrison's (2014) study employed a focus group approach where student perceptions were gathered and thus, potentially, issues of validity could be raised when applying these findings to the general UK HE population, however, previous research by Wilton (2011) tended to support Morrison's conclusions. Utilising more objective metrics, Wilton (2011) highlighted that students of post-1992 were, irrespective of their employability skills, seemingly disadvantaged in comparison to students from traditional universities when attempting to obtain employment. This position was not in agreement with the conclusions of Strathee (2009) who undertook a review of the associated literature and suggested that the employability of graduates following completion of their studies was not influenced by the reputational perceptions of the HE providers where students studied, although the Institute of Student Employers (ISE) (2018) reported that employers who had specifically sought graduates from more highly ranked universities were more likely to be satisfied with the transferable skills of the graduates, compared to employers who recruited more generally. It is worthy of note, however, that the ISE (ibid) report used a sample of global employers rather than the UK based perception reported in the studies of Morrison's (2014), Wilton (2011) and Strathee (2009),

therefore, variability in the social perceptions of HE providers and transferable skills (Simonton, 2006) may vary and skew the data.

The literature associated to the UK HE's perceptions of employability tends to indicate inconsistency in terms of the understanding of the concept and practices related to the development of employability skills in students. It could be proposed that this inconsistency is a concern for the sector, given the increasing importance of employability for the graduates of UK HE (Tholen, 2014) and the mounting accountability which is placed upon UK HE for the employment outcomes of their graduates, as measured by the Graduate Outcomes Survey and the TEF. Given this exposure of employability performance to a public audience at both a course and institutional level, it is understandable that employability strategies have emerged and are seemingly commonplace in many UK HE institutions. For example, Anglia Ruskin University (2019) created an employability strategy which, initially based on the foundations of Knight and Yorke (2004), notes that employability is concerned with developing achievements and attributes which will prepare students for gaining future graduate employment, to ensure that this employment is sustained and that a student can progress within this employment in the future. It also appears that in a number of HE institutions, graduate attribute frameworks are evident, whereby non-subject specific student characteristics linked to personal development, as defined by a provider, are described. Sometimes in association with an employability strategy, graduate attribute frameworks often follow the concepts of personal attributes referred to by Knight and Yorke (*ibid*) and Yorke (2006).

Bowden *et al.* (2000) described that graduate attributes should be agreed by a university community and aim to develop an individual's qualities, skills and understandings; seemingly in alignment with York's (2006) definition of employability. Barrie (2004) noted that graduate attributes are those attributes which transcend disciplinary knowledge and can be applied in a range of contexts, being developed through the '*process of higher education*' (p263) as opposed to additional teaching and learning activities.



It would appear that the generic nature of graduate attribute frameworks could define them as a subset of employability with the skills and knowledge, as referred to by Yorke (2006), being developed within a subject discipline. Kalfa and Taksa (2015) tend to concur with this notion and illustrated, via the application of theory from Bordieu, that '*embodied cultural capital*' (p589) is the combination of technical, subject specific skills and generic attributes such as working as part of a team. However, Barrie (2004) and Allen and Simpson (2019) illustrated that graduate attributes can be developed using a variety of methods including integration into curriculum and being embedded within the subject discipline. Barrie (2004) highlighted that four strategies for delivering graduate attribute frameworks are apparent in universities: firstly, the '*precursor*' (p265) approach where frameworks are viewed as external to the course of study; secondly, the '*complementary*' (p265) style whereby attributes are delivered within a curriculum via a specialist module but are not related directly to the disciplinary content; thirdly, '*translation*' (p266) where attributes are directly related to subject knowledge but are not taught within or as part of the curriculum; and finally, '*enabling*' conceptions whereby the graduate attributes are central to the delivery of disciplinary content and are an vital element of the curriculum. It could be argued that the latter two approaches are not conducive to the utility of graduate attributes with regard to employability after graduation given the close relation to the subject specific delivery, as supported by Morrison's (2014) study which illustrated how graduates from an Education Studies programme could not transfer employment skills to another sector of employment. The precursor and complementary models as suggested by Barrie (2004) may, theoretically, offer greater transferability of employment skills given the generic nature of delivery, however, the general notion of graduate attribute frameworks have been criticised. Wald and Harland (2019) argued that graduate attribute frameworks operationalise the metrification of the graduate attributes that the HE sector have long been conscious of and that these frameworks are based on neoliberal values, hence promoting conformity in HE as opposed to the values of freedom and thinking. Winberg *et al.* (2018), to some extent, agreed with Wald and Harland (2019) and noted that graduate attributes are not fully understood theoretically and have been implemented in HE in a rationalised and technical manner, thus overlooking the cultural aspects of institutions.

The variation in how HE providers conceptualise employability and graduate attributes, and indeed the difference and application between the two notions, is not necessarily surprising given the perceived lack of conceptual understanding and the institutional autonomy referred to in the Higher Education and Research Act (2017) act. This does, perhaps, highlight a challenge when attempting to understand and progress the field of employability, particularly when engaging with employers external to the HE sector. Whilst the arguments questioning HE being a formalised conduit for employability (for example Harvey, 2000; Williams, 2016) exist, the current context of UK HE does seemingly dictate that employability is an inescapable element of the political landscape and that, to some degree, employers look to HE providers to provide the future skills of their workforce (Ehlers and Kellerman, 2019). It could, therefore, be postulated that whilst the debate surrounding HE's role in employability should continue, a pragmatic approach to employability which promotes the values of HE, at the same time as being empathetic to the notions of employability and employers is required. Indeed, the House of Lords (2015) recommended that a *'higher education system that works with industry to align courses to employer requirements'* (p16) is required to ensure workforce skills meet future demands. Osmani *et al.* (2015) conducted a review of literature of business related subjects in the context of graduate attributes and employer expectations, and highlighted a clear schism between the perception of skills required by employers to be *'essential for succeeding in the workplace'* (p376) and those evident in the graduate attribute frameworks of HE providers. The findings of Poon (2012) seemingly agreed with this position and noted that employers associated, specifically within the real estate sector, valued *'softer skills'* (p431), such as report writing and communication, but had concerns that graduates were not fully prepared to be successful in employment. Commenting on this concern from an academic as opposed to an employer's perspective, Frankham (2017) suggested that as a result of performativity measures such as the NSS and academics reaction to the measures, students are becoming *'more homogenised'* (p636) and demonstrating less independence and initiative; skills that employers value in their employees. Holdsworth (2018) provided agreement with this stance and expressed the concept of *'generic distinctiveness'* (p1217) in relation to employability, whereby graduate attribute frameworks encourage personal development of attributes yet, due to the conformity of the framework, graduates become somewhat generic.

The extent to which employers have been engaged in the academic research associated with graduate employability appears, it could be argued, to be somewhat low. Engagement with employers was undertaken by Welsh and Hannis (2011) who examined perceptions of graduate employability in forensic science, from the perspective of relevant employers. Their findings suggested that graduates were not fully prepared for employment in this sector of work, despite the perceived view that the quality of the educational experience was sound. This paper tended to focus, however, on technical skills specific to the subject of forensic science and did not comment on generic attribute development. Similarly, Tholen *et al.* (2016) conducted a study which engaged with employers from the estate agent sector and surveyed employer perceptions of graduate skills and their value. The findings suggested that employers had greater regard for more generic and less technical skills, although it should be noted that whilst employers sought graduate level employees, these graduates were placed into non-graduate positions. That aside, the article highlighted a perhaps valuable point that graduates have softer skills prior to attending HE which should be fostered and therefore HE should be *'concerned less with 'graduate skills' and more with the 'skills of graduates''* (p519).

Ipate and Parvu (2010) showed alignment with this finding and presented a descriptive meta-analysis which attempted to define the attributes of graduates which are perceived by employers as valuable for employment. The sample of studies included in this research was, unfortunately small (three only) and heterogeneous, potentially restricting the validity of the findings, however, the results were specifically based on UK HE and noted that generic skills such as creativity were important and valued more highly than the degree discipline. Whilst publications produced by industry bodies and sector organisations tend to lack academic rigour and are generally anecdotally based, the suggestions made by, for example, The Institute of Directors (2007) and High Flyers (2014), also tend to indicate that creativity is considered to be a valuable and desirable skill in a graduate. These suggestions are supported by recent publications such as *Future Skills; the future of learning and higher education* (Ehlers and Kellerman, 2019) and the World Economic Forum (Gray, 2016) which are inclined towards the virtues of softer skills, such as creativity, alongside technical skills in graduates.

The academic and industry based research appears to suggest that HE has a role to play in the development of creativity as a skill, thus being responsive to the needs of employers and as Kandiko (2012) highlighted

*'...current trends in managerialism and national assessment structures are making universities more like businesses, just at the time businesses are trying to function more like universities' (p198).*

In association with Hordern (2019) and to some degree Clarke (2012), Kandiko's (2012) position seemingly appears to emphasise the possibility for the UK HE sector to work productively with employers, businesses and industry to operate collaboratively in an attempt to develop students' employability skills, including creativity. However, the lack of agreement in terms of a definition of creativity and the somewhat ethereal interpretations of the principles and processes which surround it, would appear to put the general concept and development of creativity in conflict with the consumerist principles of standards and accountability (Clarke, 2012) and potentially, the minimal references to creativity across the Subject Benchmark Statements are reflective of this conflict. Therefore, a challenge facing UK HE is, it could be argued, one of meeting the requirements of employers to engender graduates with skills such as creativity (Institute of Directors, 2007; Rae *et al.*, 2012) within an educational sector which is now inextricably entwined with metrics and performativity.

It could be postulated that should a better understanding of creativity be established and greater agreement as to the meaning of creativity be found, between employers and HE, that the notion of its development may be more amenable to the neoliberalist values currently evident in UK HE. For this to be possible, it is important to appreciate the concepts and interpretations of creativity that are evident in the associated research and, hence, the following section will begin to explore this literature base.

## **2.4 Creativity**

Creativity is a widely studied phenomenon that has predominantly been researched since the latter stages of the nineteenth and the early twentieth century. An initial framework of Wallas (1926/2014) provided one of the first conceptual models of creativity and this work tended,

like others at that time such as Varendonck (1921), to be theoretical in its nature, focusing on the psychological processes of individual creativity and perceived associated concepts such as intelligence. Guilford (1950) presented a seminal address to the American Psychological Society entitled '*creativity*' which encouraged further research to the concept of creativity and seemingly acted as something of a catalyst for the proliferation of research into the topic and, subsequently, applied studies such as Bruch (1965) began to emerge, continuing to the present day.

Research into creativity has manifest itself in a diverse range of philosophical and methodological ways, however, there is general ideological consensus that creativity is a positive virtue and should be valued (Andreasen, 2011). Alencar (2015) further noted that

*'Creativity is a key resource for individuals and societies. It enables the individuals to take greater benefit from opportunities, and to cope better with challenges and difficulties in their personal and professional lives. Creativity is also a vital element for societies' progress and culture'* (np).

Focusing on the individual person, Rogers (1969) described how, in his experience as a psychotherapist, an individual who is '*fully functioning*' (p181) is creative and is able to make connections, be open and be aware of their environment, subsequently being able to employ the resulting creativity in being flexible in adapting to new situations and conditions. Moreover, Rogers (ibid) illustrated that a creative person will be happier as they find pleasure in discovery and living in an experience, as opposed to being structured and influenced by previous experience. Quarrie (2017) agreed with Rogers' position and highlighted that creativity and well-being are synergistic in their potential to improve the quality of an individual's life via the creation of personal solutions to problems related to aspects wellbeing, thus providing a context to promote self-actualisation. This concept tended to receive support from Fox (2012) who went further to note that being creative is an '*integral component of health*' (p507). Csikszentmihalyi (2019) also concurred with the view of creativity being an important individual need and noted that being creative provides an individual with intrinsic rewards, promoting senses of well-being, personal satisfaction, and tempting towards, as Csikszentmihalyi (ibid) and Quarrie (2017) recognised, the self-actualisation that Maslow (1954) noted. Linked to this,

creativity, according to Deci and Ryan (2008), permits the individual a sense of autonomy as opposed to independence and thus allows the individual to define a purposeful direction in their life, leading to a eudemonic existence, although Glăveanu and Kaufman (2019) suggested that in contemporary society, the value of creativity has shifted from personal well-being to supporting capitalist ideals of productivity.

Creativity may not, however, always be considered a positive phenomenon. Osbourne (2003) maintained a negative stance towards the concept, highlighting that the '*moronic consequences of the doctrine of creativity*' (p507) actually constrain individualism and that personal inventiveness, based on exemplars and free from theoretical notions of creativity, should be adopted. Whilst this challenge to the theories and encouragement of creativity has its critical value, it could be argued that what Osbourne (ibid) proposes is, in itself, a form of creativity. Also challenging the notion of wholesale positive creativity, McLaren (1993) initially identified the idea of a '*dark side*' to creativity; noting that creativity is, in some way, intentional and therefore can be negative as well as positive. Gino and Ariely (2012) showed empirical associations between heightened levels of creativity and dishonesty, illustrating that those participants deemed as highly creative were more likely to cheat and then find create solutions to conceal their dishonesty. In a study of the link between students' creativity and their ethical decisions making, Nepal *et al.* (2015) concluded that there was no relationship between the two and that those students assessed as being more creative did not exhibit an increase in unethical decision making. Subjective self-reporting (student and teacher) of these highly subjective concepts was employed in this study, therefore, caution must be applied to these findings, however, the study reaffirms the valuable suggestion that the teaching of creativity and ethical behaviour should be coalescent.

Simonton (2014) proposed general agreement with the idea that those who are creative are more likely to have better mental health, however, the author demonstrated that individuals who could be classified as a '*creative genius*' (p471) correlate more positively with symptoms of mental ill health and psychopathy. Similarly, Jonason *et al.* (2017) identified statistical associations between individuals who exhibited Machiavellianism and psychopathy with harm-

based creative behaviour, however, it should be noted that in both of the above studies the participants' displaying negative creativity tended to be at the extremes of the data sets. These examples tend to illustrate that creativity can have negative consequences, either through individual choice or psychological make up, but that understanding of the field requires further investigation. Whilst not dismissive of the growing attention in the literature base towards the negative potential of creativity and the need to be cognisant of it, the majority of the associated research into creativity supports the notion that it is a valuable trait; beneficial to both the individual and society in general.

*'Creativity has a major role in society'* (Simonton, 2019, p475). Alongside the personal benefits of creativity, the societal benefits of this concept are also very much acknowledged in the literature base. Ingold and Hallam (2007) highlighted that global economic growth and social well-being have been facilitated and enabled by creativity via the improvisation and generation of new ideas and products. This is a notion that is supported by many researchers, for example Zhou (2018), who noted that creativity can be linked to increased personal financial income but also drive enhancements in the wider industrial economies via a creative workforce. Indeed, the World Economic Forum (Gray, 2016) predicted that the need for cognitive abilities, which by their definition includes creativity, in the core skill set of all jobs will rise by 52% by 2020 and, subsequently in 2019, reported that creativity will be the third most important employment skill from 2020 onwards. The justification provided by the World Economic Forum (Gray, 2016) for this rise in creativity from the tenth most require skill in 2015 to the third in 2020, was based on the supposition that

*'With the avalanche of new products, new technologies and new ways of working, workers are going to have to become more creative in order to benefit from these changes'* (np)

Considering the virtues of creativity more widely, Sternberg (2012) argued that alongside general education, a greater emphasis on the development of children's creativity should be undertaken; not only to aid economic development but also, more importantly, to address international societal issues such as climate change and warfare. Ehlers and Kellerman (2019) tended to agree with this position and noted that *'object-related skills'* (p3) future skills, such

as creativity, are required to be developed in individuals to facilitate the effective use of knowledge in different, novel ways to meet the needs of the 21<sup>st</sup> century.

The literature base appears to show that the value of creativity has been established and the benefits, subjectively perhaps, recognised. However, whilst these benefits are noted, the actual understanding of what creativity is and how it is defined is seemingly a point of conjecture and, as Jordanous and Keller (2016) expressed, creativity as a concept is multi-faceted, intricate and associated with a range of variables and behaviours. This discussion surrounding the definition of creativity will now be explored in the following section.

#### **2.4.1 Defining creativity**

Creativity is a concept which practitioners and researchers alike appear to have difficulty in defining clearly and with a consensus that can transcend differing domains. Indeed, Kneller (1965) suggested that creativity cannot be easily defined due to its fluctuating and erratic nature and Bohm (1968/2007) stated that it is not possible to narratively define the concept. Plucker *et al.* (2004) agreed with this sentiment and found that in a study of 90 articles on the topic, most authors did not provide a precise working definition of creativity and therefore are often, it was hypothesised, discussing different concepts and making false comparisons. It was further acknowledged by Oliver *et al.* (2006) that an agreed definition or framework for creativity was not evident in the literature base and Kandiko (2012) quoted numerous respected authors in the field of creativity (for example Amabile *et al.* 1996), who employed eight seemingly reasonable yet varied definitions of creativity which employed the terms original, novel, flexible, change, useful, products and (free from) constraints. Kaufman and Glăveanu (2019) concurred that whilst, in their view, the rudimentary definition of creativity being '*something new and task appropriate*' (p27) is established, exploring a more advanced definition and taking into account the varying opinions becomes complex and perhaps impractical. Studies within the literature that surrounds creativity do, however, appear to often combine terminology and devise a plethora of bespoke definitions, ranging from the simplistic, for example Stein and Harper's (2012) '*coming up with something new*' (p6), to the more intricate such as Plucker *et al.*'s (2004) definition of



*'creativity is the interaction among aptitude, process and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context'* (p90).

Related to this, Dellas and Gaier (1970) noted that *'the one stop research study is typical'* (p69) and whilst logical and pragmatic, this approach appears to do little to address the problem of establishing a clear definition for creativity that is transferable to varying contexts.

The above definitions illustrate an interesting debate within the literature related to creativity, in that, the terms *new* and *novel* are sometimes viewed as synonymous, whilst generally being seen as distinct. While Barbot *et al.* (2011) concurred with Stein and Harper's (2012) use of the term *new*, Sternberg (2006) and Liu and Schonwetter (2004), tended to disagree and illustrated creativity to also be the use of previous products and knowledge to extend creations and understanding. This seemingly introduces the notion of *novelty* which, it would appear from the associated research base, implies that creativity is most usually concerned with contriving products which are *'unobvious'* (Plucker *et al.*, 2004, p88) rather than necessarily being the genesis of an entity which is completely new and not seen before.

To further complicate the debate, Awang and Ramly (2008) also inferred that the definition of creativity is also associated with having the ability to transcendence across subject domains and within individual subject boundaries. Guilford (1950) made reference to the creative individual having the ability to be flexible and *'changes sets'* (p452); a notion supported by Sternberg (2006) who suggested that combining or reshaping current artefacts or understanding to provide something novel can also considered to be creative and Gardener (2011) postulated that creativity can be characterised by cross domain interactions and *'asynchronies'* (p333) that facilitate creativity in individuals. This view was further supported by Jackson (2016) and Nevin (2016). Using a more applied approach, Kandiko (2012) showed agreement with this and illustrated that creativity was a common theme of successful leaders who operated in interdisciplinary contexts.

However, whilst acknowledging that a broad experience and knowledge across a variety of domains facilitated creativity, Amabile (1988) did not identify inter-disciplinarity specifically or a tendency to work cross domains as one of the ten qualities of an individual which promotes creativity. An applied study undertaken by Glăveanu *et al.* (2013) tended to align with the thoughts of Amabile (1988) and noted that their findings suggested consideration should be given to the domain specific features of the '*creative action*' (p13). Similarly, Fischer *et al.* (2016) provided evidence from a meta-analysis to suggest that creativity is dependent upon the '*cultural, social and disciplinary perspective*' (p134) thus implying that each occurrence of creativity is contextualised by the bounds of its domain. Domain specific, applied research articles in the current literature associated with creativity are seemingly frequent (for example, Liu and Schonwetter, 2004; Medeiros *et al.*, 2014; Taylor *et al.*, 2015) and, it could be suggested, supports the notion that creativity is very much a subject specific concept.

The related but subtly diverse issue of the divergence of creativity within a subject domain was examined by Simonton (2009), who developed a hierarchy of domains, based on the necessity to be creative in each subject. Simonton (*ibid*) proposed three primary findings; firstly, positivistic sciences, such as chemistry or physics, tend to be less reliant on creativity than the natural sciences (for example biology), social sciences and arts based subjects. Secondly, perceived dispositional factors of domains such as logic, objectivity and convention had a bearing of the creative capacity on those operating within them; therefore, those individuals in the scientific domains tended to be less intuitive or emotional, whereas the art based subjects were more individualised and subjective. These two conclusions would appear to support the notion of domain specific creativity, however, Simonton's (*ibid*) third finding concluded that within each discipline, individuals tended to be '*domain-regressive*' (p449), that is, for domain specific impact to occur (in creativity terms) individuals tended to regress into the domain [arbitrarily] below where they were operating. For example, a positivistic scientist may take creative inspiration from a social science or an art based subject; a finding which tends to suggest that some form of inter-disciplinarity is preferable for creativity to occur.

As with the arguments surrounding the general definition of creativity, the debate as to domain specificity in relation to creativity is similarly ongoing and the above examples perhaps illustrate that inter-disciplinarity can take two forms: firstly in the act of being creative (for example, considering diverse domains when designing an entity) and secondly in the output of creativity (for example, an entity which has value across different domains). This possible division in the literature is also reflective of a more general separation apparent in the research base surrounding creativity; that being, the focus on the process of creativity and attention given to the product of creativity. The theoretical underpinnings and the applied applications of these two concepts will now be explored.

#### **2.4.2 The frameworks of the product and the process of creativity**

When distinguishing between the creative product and the creative process, Reiter-Palmon (2011) adopted a simplistic approach to separating the two concepts and stated that the process of problem identification and designing solutions was *creativity*; while *innovation* was, in essence, the output or product of creativity. Beghetto and Kaufman, (2007) appeared not to agree with this stance and perceived the terms of creativity and innovation as synonymous, and similarly Stouffer *et al.* (2004) defined creativity to have four stages (defining a problem, investigating the problem, articulating a solution and validating the proposed solution) thus not delineating creativity in the same manner as Reiter-Palmon (2011). Barbot *et al.* (2011) appeared to contradict Reiter-Palmon (2011) by positioning the definition of creativity as providing an original or new output that has contextualised value in the domain of the subject area. Seemingly, the notion of creativity being identified as a process or a product also causes some debate within the associated literature base, including Kleiman (2008) who, taking a phenomenographic approach with academics, also identify that alongside product and process, constraints, transformation and fulfilment were also identified as descriptions of creativity. Therefore, it is important to examine the theoretical frameworks which underpin and influence these arguments.

### 2.4.3 The product of creativity

Amabile (1996) noted that whilst much research into creativity has focused on the personality traits of the individual, it is the definitions of the products of creativity that are of greater use for creativity research as they tend to be operational and permit, for example, assessment models of creativity. Despite the ongoing debate as to the synonymy of creativity and innovation, Runco (2010) seemingly concurred with Reiter-Palmon (2011) and emphasised that innovation is demonstrated via a result or product and requires much greater objective evaluation than creativity. As noted in section 2.4.1, the concepts of novelty and acceptance (Stein, 1953) are generally frequent in the literature and seemingly the key conceptual issues when examining the product aspects of creativity (or innovation), and as highlighted by Runco (2010) are subjective in their nature.

By the nature of the term, product is usually associated with a physical entity or tangible output resulting from a creative process, however, Jules and Sundberg (2018) suggested that the output of creativity in the 21<sup>st</sup> workplace is not necessarily tangible or specific to a domain, but more abstract or ethereal, citing examples such as using creativity to analyse and distil different data sets. Similarly, Plucker *et al.* (2004) agreed that the product of creativity can also be less tangible and provided examples describing improved theory of how to manage anti-social behaviour or crime, and Bowden (2004) stated that the result of creativity can be '*ideas or artefacts*' (p1). Lassig (2020) tended to agree with the less tangible notions of creative and also illustrated that the output of creativity can be an emotional response such as '*creative personal expression*' (p4) whereby a person uses creativity as a means to represent their personality; '*creative boundary pushing*' (p4) which permits an individual to explore further and know more about a domain's current understanding of knowledge in that area, and '*creative task achievement*' (p4) where creativity is employed to fulfil a particular expectation.

Irrespective of whether the product of creativity is tangible or otherwise, the subjective assessment of the product still appears to remain and Besancon *et al.* (2013) specifically noted the validation of the output by an external audience. Congruent with Besancon *et al.* (ibid), Glăveanu *et al.*'s (2013) investigation into creativity of five different subject domains illustrated

that in each case, the creative output received some form of '*social undergoing*' (p5) whereby external co-actors, for example colleagues, clients or friends, evaluate the product. Similarly, Jordanous and Keller (2016) placed value on the external evaluation as it felt that new creations should be linked to current concepts and beliefs if they are to be effective and in a much earlier but still widely quoted framework, Amabile (1983) stated that:

*'A product or response is creative to the extent that appropriate observers independently agree it is creative. Appropriate observers are those familiar with the domain in which the product was created or the response articulated'* (p359).

Aligning with these models, O'Byrne *et al.* (2018) also tended towards the external validation of the creative product but also noted that the creator and the external validators should have mutual trust in one another if creativity is to be encouraged; congruent with the theories of Sternberg (2012) which highlight the developmental benefits of rewarding creative activity. Whilst the creator's feelings and perceptions are evident in the models proposed by Glăveanu *et al.* (2013), they are seemingly not employed as a self-evaluation of the creative product, however, alternative views are evident in the literature. Treffinger *et al.* (2002) described '*listening to one's inner voice*' (p11) as a key characteristic of the creative person and thus permitting reflection and critique of their own products. In a similar manner, both Bowden (2004) and Gilhooly *et al.* (2013) both expressed that the output of creativity can be as much for the creator as it is for an external audience; with Bowden (2004) highlighting the concept of P-creativity (psychological creativity) where the output is surprising and new to the creator or as Gilhooly *et al.* (2013) would have it, '*solutions novel to the solver*' (p137).

As noted above, similar to the general definition of creativity, it would appear that variability in the understanding of the creative product and how it is defined is evident in the literature base. It is seemingly apparent that creative outputs can have value to individuals, external co-actors or both but this is variable based on situational factors and, similarly, whilst agreement appears to be evident with regard to the product being new or novel, it is not clear as to whether this novelty is defined as the genesis of a never been seen before entity or the combination of previous discoveries. Kleiman (2008) concluded that, academics from UK HE institutions intuitively identified creativity as relating to novelty and genesis, as opposed to

utility and synthesis. Furthermore, the notion of what can be considered a creative product is also somewhat unclear, with some authors recognising tangible artefacts as the product and others citing intangible thoughts and theories as valid outputs.

In terms of models which categorise creative products, Sternberg *et al.* (2002) proposed eight different types of creativity or as they termed them, '*creative contributions*' (p11), which followed something of a continuum, ranging from replication, redefinition, forward incrementation and advanced forward incrementation to redirection, reconstruction, reinitiation and integration. Replication, redefinition and the incrementation contributions permit the support of the current thinking in the area of interest; whereas redirection, reconstruction and reinitiation disagree with the status quo and attempt to change the direction of the area. Integration referred to the bringing together of two previously uncombined ideas to create a new approach or way of thinking. Whilst interesting and useful in categorising creative products by way of relating to a field or domain rather than, Sternberg *et al.*'s (2002) categorisation could, perhaps, be considered complex, particularly when put into the context of the Propulsion Model of Creativity from where it emerged.

Arguably the most basic but highly accessible framework is that proposed by Grigorenko *et al.* (2008) which illustrated the 'big-C' 'little-c' concept; whereby 'big-C' (big creativity) referred to acts which significantly alter practical, cultural or paradigmatic practices, and 'little-c' being less significant, every day functional acts of creativity. These descriptions would, apparently, tend to suggest that Grigorenko *et al.*'s (ibid) model leans towards defining creativity as being a product rather than a process, and whilst providing an accessible approach, the dichotomous framework could be viewed as limiting as most acts of creativity are not likely to significantly shift paradigms or thinking and therefore would be considered little-c.

Kaufman and Beghetto (2009) provided an extension to the Grigorenko *et al.* (2008) framework and contrived the Four C model which included '*Pro-c*' (p2), describing professional creative (Pro-c) acts whereby, generally professional, expertise beyond little-c are displayed but not yet

attaining big-C status. Kaufmann and Beghetto (2009) also included '*mini-c*' (p2) prior to little-c and defined this as the initiation of interpreting, understanding and, perhaps, combining of thoughts and experiences before expressing them through little-c acts; essentially, acknowledging the value of creativity as a personal and internal act. Whilst appearing to be an enhancement on the Big-C little-c model in so much as further subdivisions allow more robust categorisation of creative products, it could be argued that debate could still occur should a creative product fall between the categories of the Four C model. Simonton (2019) went further and suggested the '*Boldface-C*' (p655) category which referred to individuals who produced multiple, highly regarded and impactful works (for example Descartes or Beethoven) as opposed to single acts of creativity. Whilst valuable in recognising the repetition of high level creative acts and thus providing further differentiating between levels of creative products, the pragmatic usefulness of this further extension to the Four C model could be questioned as it, seemingly, adds little to the understanding of how creators attain this level of creativity. A further interpretation and adaption to Kaufmann and Beghetto's (2009) four C's model was proposed by Lassig (2012). Whilst studying creativity in the context of adolescents, Lassig (ibid) identified that, for this age group, the mini-c and little-c are most relevant and, subsequently, postulated that an '*ed-c or educational creativity*' (p280) category for adolescent creativity exists. This form of creativity specifically related to developing creativity in formal educational contexts, taking into account the limitations usually experienced in these settings, and thus benefiting from the judgement, and therefore the valuing, of others, unlike in mini-c creativity. Following this theory through, Kaufmann and Beghetto's (2009) four C's model was adapted by Lassig (2012) to form a five C's model (with little-c and ed-c being parallel), which was suggested could be applied to adult settings. However, it could be argued that the little-c category is adaptable to the environment it is being applied to, including education, and that little-c will naturally take into account the contextual factors of the environment it is being applied to.

The theories of Kaufman and Beghetto (2009) and Grigorenko *et al.* (2008) reiterate the notion that creativity can be viewed as a product, be that tangible or abstract, however, how these products are conceived and contrived cannot be explained by the product models. Cowan (2006) argued that, although obvious, to judge creativity merely by the product or evidence

that is produced, is likely to result in the misunderstanding of the creative act (for example the magnitude of adaptation that has been undertaken) and therefore consideration of how the entity has been conceived is necessary. Lubart *et al.* (2019) reported that in Western cultures, less credence is given to understanding the process of creativity, instead more focus is given to the production itself and as McCabe and de Waal Malefyt (2015) described, this approach views creativity in a '*backward*' (p50) manner, rather than examining how to improve the process and conditions for creativity. Runco (2010) aligned with this stance and suggested that whilst assessing products is useful, it does little to assist in understanding the creative potential of individuals or organisations.

*'Many products are processes, and many processes are products. And a person is both a product and a process'* (Barron, 1995 cited in Glăveanu, 2013, 71).

Therefore, to understand how a creative product is arrived at, it would seem appropriate that the concepts and theories which surround creative processes are considered and, hence, the following element of this chapter shall explore such theory and current understanding.

#### **2.4.4 The process of creativity**

It would appear that discord and debate is widely apparent, causing great conjecture when the theoretical and practical underpinning processes of human creativity are considered.

In one of the earlier references illustrating thinking concerned with creative process, Wallas (1926/2014) proposed what appears to be one of the cornerstones of research into the notion of human creative processes and described the journey to the '*formation of new thought*' (p38). Wallas (*ibid*) illustrated *preparation, incubation, illumination and verification* (p38) as the four key stages of the creative process, with *preparation* being described as a conscious, systematic phase where thought is given to a problem, with clarity surrounding the issue sought. According to the author, what follows is an unconscious state of *incubation*, where the individual undertakes '*involuntary mental events*' (p41) to consider the issue, which is subsequently followed by an *illumination* whereby the realisation of a solution to the issue is forthcoming. It was proposed by Wallas (1926/2014) that the terminal stage of the creative



process is the application of logical thinking to the situation and *verification* affirms or rejects the proposed solution.

Seemingly, the four stage model proposed by Wallas (1926/2014) has been employed as a basis for discussion and investigation, although the inference that incubation and, therefore by implication, creativity has greater likelihood in an '*educated man*' (p40) has been challenged. In subsequent research surrounding creativity (Guilford, 1950), the associations between creativity and intelligence have been brought into question and doubt has been raised as to the validity of the correlations between Intelligence Quotient (IQ) testing *per se* and an individual's creative capacity. The links between intelligence, usually referred to as IQ, tends to be challenged, by the more modern literature such as Runco (2003) who suggested understanding can be contrived by all humans from experiencing and interpreting different environments and scenarios; a necessary component for creativity. Jackson (2014) tended to support this position and noted that his data collection that the majority of UK HE academics believe that it is possible for all to develop creativity when supported by the necessary facilitating factors. Contrary to the view of Runco (ibid), Plucker and Makel (2010) concluded that, following a literature review, those individuals regarded as being creative appeared to have an IQ of greater magnitude but the correlation established between the two variables was dependent upon the specific elements of IQ and creativity that were being examined. Initially, the work of Balgiu and Adir (2014) tended to suggest support for Plucker and Makel (2010) in that the results of a quantitative study into relationship between academic achievement and creativity illustrated no overall correlation between the two variables. However, Balgiu and Adir (2014) noted some possible limitations in their conclusions due to the calculation of the measures to assess academic achievement and also noted that '*different measurements of creativity lead to different conclusions related to the relationship between creativity and academic achievement*' (p927). It could be suggested that the knowledge base surrounding the associations between intelligence and creativity is not fully established and the relationship between the associated variables is complex.

An apparent catalyst in the growth of inquiry into creativity was the seminal paper of Guilford (1950) which also appears to have triggered the beginnings of applied studies in many differing contexts of creativity. This work proposed a framework of seven stages which, to some extent, resonated with Wallas' (1926/2014) model of the creative process, particularly with reference to '*sensitivity to problems*' (Guilford, 1950, p451) where the initial thoughts regarding the problem were considered. Similarly, the final aspect of Wallas' (1926/2014) and Guilford's (1950) processes, those being '*verification*' (p38) and '*evaluation*' (p453) respectively, find accord. Guilford's (ibid) processes of *sensitivity, fluency, novelty, flexibility, synthesis, reorganisation* and *evaluation* (p451-453) showed no alignment to Wallas' (1926/2014) unconscious incubation state, instead giving credence to personality traits such as the ability to transcend between differing methods and new ways of thinking. Whilst Guilford's (1950) model seemingly followed a sequential order, it could be argued that the ordering and position of *sensitivity, fluency, novelty and flexibility* may be seen as arbitrary as these traits could all be influential during the synthesis stage of the creative process. This view could also be supported by the position of Sternberg (2006) who noted the balances, deficiencies and compensations between personality traits during creative endeavours, rather than regarding them as equitable as implied by Guilford (1950).

As a likely development of the '*fluency*' (p452) element reported in Guilford's (1950) paper, Guilford (1967) illustrated the concept and importance of divergent thinking, that being the ability to generate several diverse ideas in a free flowing manner, as a necessary aspect of creativity, and in the views of some authors, for example Baer and Kaufman (2006), divergent thinking and creativity are often considered to be synonymous. In a related manner, Daly *et al.* (2014) separated the notions of creativity and problem solving, arguing that problem solving required convergent (on the problem topic), rather than divergent thinking. To counter this, it could be suggested that for problems to be solved in new ways, a creative divergent phase may need to be undertaken prior to convergence back to the problem; indeed Kleiman (2008) identified that '*playing for the sake of playing*' (p213) is a necessary risk when attempting to be creative. Runco (2010) tended to concur and suggested that excessive divergent thinking has the potential to contrive irrelevant and unnecessary ideas that are not efficient or effective in reaching a solution to a given problem; a position supported by Mumford *et al.* (2002) who

suggested that *'idea structuring'* (p739) is required to be undertaken (by a person in a leadership role) to steer the creative ideas, so as to ensure efficiency. In the framework of Amabile (1983), a similarly proposed phase of *'response validation'* (p367) was suggested which advocated that the output is evaluated against criteria or other factual knowledge. In a less process and more *component* driven manner, Glăveanu (2013) also postulated that creative outputs are seen, not in isolation, but are interdependent with the social world in which they exist. Dellas and Gaier (1970) addressed this issue in a less practical and more conceptual manner, and were similarly critical of the divergent approach; suggesting that effect creativity is effected more greatly by personal traits, such as motivation, as opposed to intellectual skills such as divergent thinking. Medeiros *et al.* (2014) supported this notion and provided experimental findings which suggested that successful creativity in marketing tasks appeared to result from motivation above other factors.

In a relatively early theoretical model, Campbell (1960) proposed that the initiation of a creative process begins with Blind Variation, Selective Retention (BVSR); suggesting that a person initially will think about a range of ideas in response to a problem which are *'lacking prescience or forethought'* (p 387) and independent of the environment (blind), not connected with any solution and using no previous knowledge on the subject (variation), will select a thought or thoughts in a systematic and consistent way (selection) and retain the information for later use and reproduction (retention). This model seemingly tends towards a trial and error approach to creative thinking and as critiqued by Berg (2019), the BVSR theory suggested that individuals only view creativity retrospectively, rather than planning and predicting its future course. It could also be argued that the BVSR model lacked acknowledgement of social contexts and the attributes of the individual.

The Four Ps approach (Person, Process, Product, Press) (Rhodes, 1961) did give recognition to the attributes of the Person during the creative process and acknowledge in the Press element that social variables and the environment conditioned the creativity; noting that individuals have and will rely on stored memories, thus opposing the BVSR theory of Campbell (1960). Rhodes (1961) described the Process as a mechanical flow of cognition which applies, amongst

other variables, the motivation, thinking and reasoning of the Person (also in contradiction of Campbell, 1960). Interestingly in relation to previous discussions in section 2.4.4, Rhodes (1961) identified that '*when an idea becomes embodied into a tangible form, it becomes a product*' (p309) and continued to note that there is no system attached to these products with regard to their novelty or value, implying that every product has a worth.

Assessment of the worth of a creative product was, however, proposed in Amabile's (1983) componential framework for conceptualising creativity, whereby a '*response validation*' (p367) will evaluate the product against criteria or current facts and failure, success or partial success established in the '*outcome*' (p367) phase. Preceding these terminal stages, three other sequential stages were proposed (problem or task presentation, preparation and response generation) which are underpinned by task motivation, domain-relevant skills and creativity-relevant skills (such as being open to suggestion and endeavouring to find approaches). Amabile (ibid) suggested that should partial success be achieved in the final stage of the model, the cycle begins once more, provided the underpinning task motivation remains sufficiently high and not affected by extrinsic influences and constraints. The inclusion of this social dynamic was clearly conveyed in the paper as a strength of the model as previous theories had, it was claimed, given insufficient attention to social psychology. Whilst welcomed and seemingly highly relevant and appropriate, the social element included in the model is, it could be argued, limited in that it only applies to one phase (*task motivation*) of the process directly and could be applied to others, for example the domain-relevant skills, given the direct relation to the *response validation* aspect, which appears only to be an internal process with no external audience interaction.

Besancon *et al.* (2013) undertook a comparative analysis of educational opportunities and gifted children, illustrating that three concepts of creativity existed; '*creative potential, creative accomplishment and creative talent*' (p79). *Potential* referred to a person's intrinsic ability to be adaptable and novel in their thinking; *accomplishment* defined as producing an output which is tangible and has value; with *talent* noted as being the predisposition to duplicate such creative episodes. It could be argued that the pragmatism of this framework could, potentially,

be attractive to those with an interest in creativity, given its simplicity and the possibility of quantification of some elements of the framework. According to Besancon *et al.* (ibid) the element of *accomplishment* necessitates validation by ‘*some audience*’ (p79), however, the qualifications, characteristics or components of the audience are not made clear by the authors and as identified previously (Gardener, 2011), the output of creativity can be highly subjective and open to variability. Besancon *et al.*’s (2013) definition of *accomplishment* being a tangible entity also appears to be, according to Runco (2010), assumptive rather than necessarily fact, and in some instances contrary to other researchers’ views (Kaufman and Beghetto, 2009; Claxton, 1997) who feel that a creative output can be abstract and internalised to a person.

Similar to the personal factors suggested by Besancon *et al.*’s (2013), Runco (2009) also illustrated four personal elements which influence creativity namely; cognitive requirements, motivational influences, personality traits and contextual factors. Runco (2010) enhanced this model and identified a hierarchy of creativity which contained six key factors, subdivided into potential and performance categories (see figure 2.4.1)

**Figure 2.4.1 Hierarchy of Creativity (adapted from Runco, 2010, p240)**

<b>Creative Potential</b>	<i>Person</i>	<i>Process</i>	<i>Press</i>
	Personality traits	Cognitive, social, historical	Distal, immediate
<b>Creative Performance</b>	<i>Products</i>	<i>Persuasion</i>	<i>Interactions</i>
	Inventions, publications	Systems, individual field domains	Person vs environment

Runco (2010) seemingly emphasised that the creativity of individuals and, as noted by the author, organisations are influenced by various factors, with the cognitive processing aspects only contributing in association with an individual’s personality and the environment (press) which they operate within; resulting in creative performance. Runco (ibid) suggested that it would be incorrect to assume that all individuals have equitable creative potential, rather, a

person's genetics will define their level of creative potential but, in agreement with Rogers (1969) and (Sternberg, 2012), Runco (2010) noted that all people are highly likely to have creative potential. Glăveanu (2010) also identified that the thinking which surrounds personal creativity has developed over time; from early theory or '*He-paradigm*' (p80) which suggested genetic predisposition to be creative, to the '*I-paradigm*' (p81) which considered the variability in psychological traits which influence creativity in individuals. Glăveanu (ibid) was perhaps critical of these two paradigms in that no recognition of social contexts or influences were evident and therefore proposed the '*We-paradigm*' (p82); acknowledging that creativity develops as a result of both personal motivation and social interactions.

To some extent, Sternberg (2006) agreed that creativity is not merely linked to intellectual skills and previously gained knowledge but that, employing the notions of Creative Investment Theory, the factors of '*intellectual abilities, knowledge, styles of thinking, personality, motivation, and environment*' (p88) are also necessary. The author went on to note that where one of these factors maybe deficient in an individual, compensation from a different factor can maintain creative potential. Guilford (1950) similarly identified '*primary traits*' (p454) as dependents of creative productivity, referring to factors such as an individual's patience and disposition, however, Nickerson (2010) highlighted this factorial approach that purposes to influence creativity has yet to be reliably established by the research base. Sternberg (2012) suggested that creativity is a habit that can be practiced and learned, proposing the '*Investment Theory*' (p3) whereby an individual will explore as yet undiscovered ideas or ones which are not currently in favour, then endeavour to turn the ideas into creative solutions; as Sternberg (ibid) put it '*creative people are ones who are willing and able to metaphorically buy low and sell high in the realm of ideas*' (p5). According to this theory, the creative person's actions are facilitated by a number of factors: intellectual abilities such as being able to judge which ideas are worthy of further exploration and the ability to convince others of a creation; sound knowledge of the subject without being dogmatic; a desire to think in novel ways; a personality that is willing to take reasonable risks and endure uncertainty; a clear and definite motivation towards the task, reflected intrinsically but often influenced by external factors; an environment where mutual agreement of the definition of creativity is established and creative acts are supported and rewarded. Interestingly, Sternberg's (2012) theory drew together

personal characteristics and social factors in the study of creativity and emphasised the importance of the individual and the contexts which underpin the process of creativity.

Similarly, in a development of his 2010 work, Glăveanu (2013) adopted an approach which recognised the social context of creativity and the dynamic influences these have on individuals; thus proposing the five A's framework whereby

*'In light of sociocultural sources, the actor exists only in relation to an audience, action cannot take place outside of interactions with a social and material world, and artefacts embody the cultural traditions of different communities' (p71)*

As can be noted above, Glăveanu (2013) postulated that the creative person is the *Actor* who exists in and is influenced by a social context, rather than being an individual only affected by their personal traits. The actor undertakes *Actions* which are interconnections of intrinsic psychological and external behavioural factors resulting in an act being undertaken, influenced by the subject domain, the idiosyncrasies of the actor and the environment in which they are situated. Within the five A's framework, the result of this action is the creation of an *Artifact* [artefact] which is a tangible or conceptual entity that, due to the contextual acknowledgments in the actor and action, is culturally grounded and, again, not existing in isolation. Glăveanu (ibid) also recognised the impact of the *Audience* on creativity, noting that the relationships with family, friends and critics and their perceptions of the artefact during the creative process, construct what is deemed to be creative and what is not. The actor interacts with the judgements made by the audience and hence creativity becomes an iterative, dialogic process, influenced by sociocultural factors rather than existing in isolation. The final element of Glăveanu's (ibid) framework suggested that actors experience material *Affordances* of their environment and objects which surround them, that is, how the actor perceives environments and objects, how malleable they are and what they can be used for. It was argued that greater creativity can be produced by an actor whose perceptions allow them to make the most of these affordances, although Glăveanu (ibid) also suggested that these affordances can adapt and develop over time to a range of sociocultural influences. Whilst not identifying the stages of the creative process, this work does emphasise the sociocultural connotations that impact upon being creative and, as noted by De Costa *et al.* (2015), creativity has been associated with

emotional intelligence and the ability to engage with a social context and considering the needs of an organisation, a group or an individual, whereby the sharing and empathy towards emotions are considered. Robinson (2009) concurred with this requirement to understand and permit emotional intelligence in a social context to promote creativity; as does McCabe and de Waal Malefyt (2015) who stated '*creativity flows from an organized, structured context that has social roots*' (p57). Similarly, Lassig (2020) also illustrated that the social resources, such as people of a similar mindset, and environmental conditions, such as constraints, play a significant role in the fostering and facilitation of creativity, noting that both affective and cognitive encouragement can result from a supportive environment.

Simonton (2006) noted that the development of creativity within individuals, whether this be process or product, takes place in a variety of societal contexts including educational settings such as HE. As noted by Jackson (2006a)

*'higher education is about helping students to develop, then helping students to understand and develop their unique creativities is an important and worthwhile educational goal'* (p2)

HE has been perceived to be conduit to the development of creativity in students and staff alike (Neary, 2010; Harvey, 2000) and it would appear that much of the literature related to creativity has emerged from a HE setting. In the context of the research question of this study, it would therefore seem appropriate to explore the literature which surrounds creativity in the context of HE, thus permitting an evaluation of the value of creativity in HE and the extent to which the personal traits described by Dellas and Gaier (1970) and Medeiros *et al.* (2014), amongst others, are evident or being developed in UK HE students.

## **2.5 Development of Creativity in Higher Education**

It has been suggested (Sternberg, 2006) whilst an individual makes a significant contribution to their own creative development, society and the variety of diverse settings which the individual is surrounded by, can play a role in supporting the divergent nature of the creative and the development of creativity. Jackson (2016) referred to this notion as the '*creative ecology*' (np) whereby distinct factors such as relationships, resources and affordances



interconnect in diverse ways (dependent upon the setting) to form complex and unique ecologies which influence the development of creativity. Peter-Szarka (2012) demonstrated agreement with this via an analysis of (compulsory) school aged children, noting that environmental determinants which encourage creativity are pivotal in fostering a person's creativity; a notion supported by Robinson (2009) who identified the '*field*' (p111), that being other people and their values, as being crucial in this respect. As previously illustrated, HE is complex and influenced by an array of policy, environments and people and, therefore, it could be reasonably postulated that the HE environment is similarly complex creative ecology that has a bearing on an individual's creative development.

Employing a meta-analysis approach, Bryon and Khazanchi (2012) evaluated the correlation between reward conditions in a range of employment sectors, including HE, and the individual motivation to be creative. The analysis concluded that when creative-contingent rewards were offered (such as greater choice), the likelihood of creative behaviour increased in individuals and it was recommended by authors that this can be supported by '*managers, parents, educators*' (p826) providing clarity of expectation via contingent performance feedback, appraisals of creative performance, rewarding creative attempts to be creative and increasing the choice given to individuals, rather than imposing control. These findings tend towards agreement with notions provided by Sternberg (2012) who stated that rewarding people for engaging in the opportunities to be creative and demonstrate creative behaviours, promotes the '*creative habit*' (p3). Conversely, Sternberg (ibid) also noted that, in educational settings, the use of standardised assessments that test knowledge, remove the opportunity for the encouragement and rewarding of creativity; a position supported by Plucker and Makel (2010) who highlighted the diminished necessity of creativity and divergent approaches in such standardised tests.

Support for this principle is also evident from Makel (2009), however, the author suggested that in education, the seeming importance of a culture which demands accountability and quantification, is likely to be at odds with the values of creativity and creative development.

Likewise, the work of Ball (2003) also suggested agreement and presented qualitative findings illustrating that teaching professionals' perception of a culture of regulation and performativity, eroded an already limited freedom to be creative. The findings and positions of these authors tend to suggest that a performance lead method in HE would not be conducive to creativity and creative ability development in staff or students. However, Kandiko (2012) compared the views of 10 senior leaders in HE institutions, via interviews, with specific reference to the possibility of creativity being supported through interdisciplinary work, what the challenges to undertaking creative work are and how creativity can be a motivational tool. The study reported that academic leaders within HE felt that administrative and bureaucratic issues tended to prevent the opportunities to be creative, the study also illustrated that if research grants or the recruitment of large student numbers was achieved, the bureaucratic administration challenges tended to ease and thus space for creativity increased. This finding, it could be argued, might imply from a leader's perspective that creativity and its development is essentially a cost bound exercise in HE.

In a similar vein, the findings of Medeiros *et al.*'s (2014) quantitative study illustrated that when constraints were placed upon individuals and groups, no inhibiting of creative problem solving was evident and when task objective constraints (for example resource availability), improvements in creative problem solving were noticed. Employing a sample of 1807 employers, Liangding *et al.* (2014) similarly demonstrated that improved creativity and enhanced team relationships occurred when a higher task complexity was applied. When considering these findings and those of Medeiros *et al.* (2014) into account, it maybe suggested that if the culture of accountability and performativity in HE was perceived as a complex, challenging constraint to creativity, rather than an impenetrable barrier, perhaps creative behaviour may increase and creative abilities also develop. The literature base would, however, advocate caution to this approach as it has been suggested that perverse, negative behaviours can result when creativity is required (McClaren, 1993; Gino and Ariely, 2012). Furthermore, Medeiros *et al.* (2014) also highlighted that the increases in creativity noted in association with the number of constraints, began to reverse when multiple constraints were applied and Liangding *et al.* (2014) noted that creative behaviours were also improved when

employees felt supported by an organisation. These findings, again, highlight the complexity of creative development in organisations, including providers of HE.

Perhaps further adding to the administrative complications of HE is the range of subject areas delivered by providers. In the academic year 2017/2018, UK HE providers (the majority being universities) each offered a median average of 14 different subject areas (HESA, 2019b) ranging from the physical sciences, social sciences to arts based subjects. As proposed by Simonton (2009), the creativity requirements of each subject domain are seemingly diverse; a theory supported by the references to creativity in the QAA Subject Benchmark Statements (2019), therefore, tending to correlate with the domain regressive model suggested by Simonton (2009), in that, citations of creativity are more sparse in the physical sciences and more frequent in arts based subjects. Hence, the breadth of subject domains offered by HE providers, theoretically, increases the level of challenge of developing creativity in students in the variety of subjects. Simonton's (2009) model was not without criticism, however. Runco (2009) commented that the sampled literature was not sufficiently generalised to support the conclusions made and that the described outputs of creativity were tangible thus overlooking the more abstract, little-c (Kaufman and Beghetto, 2009) acts. Specific challenge to Simonton (2009) is also evident in the literature base, for example, Stouffer *et al.* (2004) who argued that the problems faced by science based disciplines (engineering cited) such as decreasing global resources, require individuals to be increasingly creative to confront the challenges. In supportive of Simonton (2009), Gilhooly *et al.* (2013) reported that simple motor tasks or verbal exercises significantly ( $p < 0.01$ ) increased creative output, thus aligning with the domain regressive model, as participants used these activities to regress from their original subject domain into an active incubation period. Gilhooly *et al.* (2013) finding also tends to agree with the original four stage theory of Wallas (1926/2014).

The research of Gilhooly *et al.* (2013) and Simonton (2009) seemingly indicated that the situational conditions in which an individual exists and operates is required to be facilitative for creativity to occur; for example, the incubation activity is appropriate (Gilhooly *et al.*, 2013) or subject specific, individualised regression opportunities (Simonton, 2009). Hoever *et al.* (2012)

was apparently also in agreement with this notion and cited that in a laboratory based experimental study, the maximising of personal creativity was depended upon appropriate conditions of work; although the authors conceded that the understanding of the generic conditions that promote creativity have yet to be established.

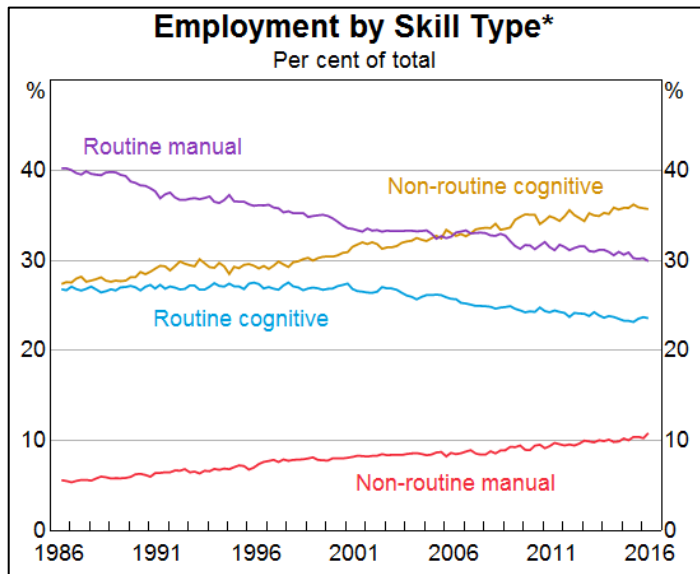
As evaluated in the present section of this chapter and previously in section 2.2, the environment of HE is challenging in the context of how creativity is permitted and developed in students and staff. The challenge is seemingly multifaceted and places stress on the necessary, according to the literature base, ecologies that foster creativity and creative development; such as the cost of the administrative burden, the breadth of curriculum disciplines and the understanding of the conditions which encourage creativity. As noted in section 2.3 of this chapter, the development of creativity as a skill within the graduates of HE, has been shown to be increasingly important to the individuals themselves, whilst also being desirable for graduate employers.

The relevance of the development of creativity as a graduate employability skill will be explored.

## **2.6 Creativity as an employability skill**

It would seem apparent that creativity is a skill which is desired by employers and seen as necessary by policy makers wishing to develop human capital (Lauder, 2015). Nevin (2016) highlighted that creativity is valued by graduate employers and is an important skill that will '*insulate*' (p14) a workforce from unpredictable future work environments; a view seemingly supported by various UK governments due to the apparent contributory effect on the knowledge driven economy (BIS, 2016). More locally to the context of the current study, the Greater Lincolnshire Local Enterprise Partnership (GLLEP) (2019) identified that between 2014 and 2024, the largest demand in relation to qualification level is forecast to be at graduate level and that, predominantly, the occupations in most replacement demand (due to retirement of the workforce) and expansion demand (due to sector expansion) are those which require non-routine work and, it could be proposed, greater levels of creativity.

Figure 2.6.1 – Changes in employment by skill type in Australia (adapted from Heath, 2016)



This local demand is, to some extent, mirrored by similar patterns in other westernised countries as noted in figure 2.6.1 and figure 2.6.2, whereby demand for jobs which require non-routine activity, be they manual or cognitive, have continued to expand despite global economic instability. No similar data is apparent for the UK context, however, given the likeness (English speaking, democratic states) in the nature of the countries in figure 2.6.1 and 2.6.2, and the similarities with regard to the categorisation in other creativity related research (Baer and Kaufman, 2006) it could be argued that an assumption of comparable trends in employment types can be reasonably, if somewhat cautiously, assumed in the UK.

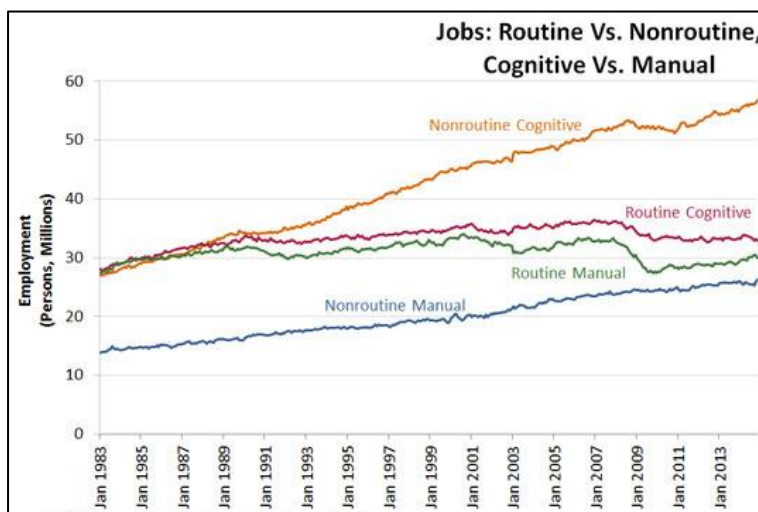


Figure 2.6.2 – Changes in employment by skill type in the United States of America (adapted from Dvorkin, 2016)

Universities UK (2018) acknowledged that employers deem graduate transferable, core skills (defined as soft, universal skills which are neither academic nor technical) as a necessity for the future economy alongside subject specific or professional technical skills and cited creativity as one of those core skills. Interestingly, Universities UK (ibid) commented upon the current supply of graduate skills in meeting the requirements of employers and cited high levels of employer satisfaction in this respect; citing *'Employers are generally satisfied with the transferable skills of graduates'* (p23). The report similarly noted high student satisfaction with transferable skills; for example, 88% of students reported that transferable skills have had a positive impact in their work contexts, allowing greater personal responsibility to be applied. It is, perhaps, worthy of note that the student survey was undertaken three and a half years after completion of the course of study, so it may be argued that skills developed could have, potentially, taken place since graduation and it is also questionable as to whether individuals can remember such specific detail of their programme when surveyed so long after completion.

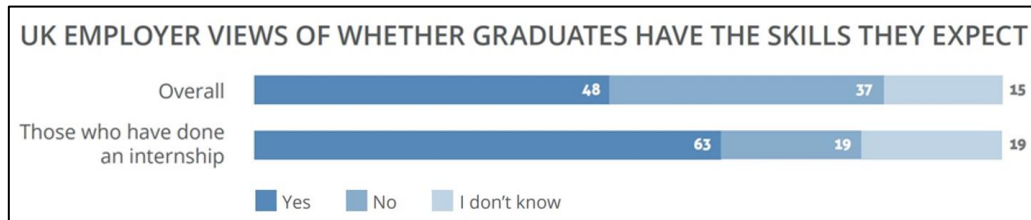
The Universities UK (2018) report also evaluates the position of the HE sector in meeting the future skills demands of employers and the economy. Similar to their analysis of the current supply, the authors noted that

*'Transferable skills – those graduating from higher education courses tend to have high levels of transferable skills and their employer satisfaction with these tends to be high'* (p26)

As Universities UK is the *'representative organisation for the UK's universities'* (p32) it is, perhaps, not surprising to observe this positive rhetoric and evaluation of the skills development UK HE offers; potentially driven by the governmental performativity agenda as identified in section 2.2. However, triangulation of the Universities UK (2018) position is not necessarily obvious in other relevant sources of information. The Institute of Student Employers (ISE) (2018) surveyed UK and international employers with regard to their perceptions and experiences of graduate skills and reported that in Western Europe of the 15 core skills employer importance scores were higher than employer satisfaction scores in 11 of the core skills categories. Figure 2.6.3 tends to bore this out for UK specifically, where 48% of

employers appear to perceive that graduates have the necessary core skills they expect, in seeming contradiction to the high satisfaction noted by Universities UK (2018).

Figure 2.6.3 UK employer satisfaction of graduate skill (from ISE, 2018, p22)



ISE (2018) reported that, from a sample of 11000 participants, global employers perceived the importance of creativity to be high (reported factor score of 82) but also perceived their satisfaction of graduate skills in this regard to be relatively deficient at a factor score 64. It is worthy of note, however, that the definition of creativity was not forthcoming in the ISE (2018) report and that other ‘core skills’ (p9) within this survey have been used synonymously with creativity in other literature, for example problem solving (Mumford *et al.*, 2002), perhaps illustrating some confusion as to the definition and meaning of the term creativity.

In a similar vein, whilst employers appear to hold general agreement that creativity is necessary and desirable (Gray, 2016), the shared perception of the pragmatic attributes that reflect creative behaviour in graduates is not consistent. For example, Rae *et al.* (2012) described creativity as aligning to the notions of initiative, independence, problem solving and resourcefulness, however, The Institute for Directors (2007) categorised creativity under the term ‘innovation’ (p12) and whilst other authors (Kandiko, 2012; Gardener, 2011; Sternberg, 2006; Guilford, 1950) consider creativity to be a transferable skill. Wilton (2011) suggested that creativity is ‘developed on a narrower range of programmes of study’ (p89) implying that the notion of transferability is questionable. Unfortunately, the literature surrounding these concepts is equally indeterminate and scant with regards to clear meanings and guiding principles; and the confluence of creativity and employability in an educational context appears to have resulted in only a minority of studies being undertaken in this area. Furthermore, there

appears to be a paucity of such research in a European or UK context, with the few specific studies emanating from East Asia or Australasia. Given this position, it could be argued that this may be a contributory limiting factor in the development of creativity in graduates. Acknowledging the generally agreed recognition of the value of creativity (Jackson *et al.*, 2015) and its seeming importance as an employability skill (Smith-Bingham, 2006), it is perhaps interesting to note that the specific literature surrounding the topic of creativity and employability in the HE context and supporting documentation at an institutional level, such as employability strategies, is also perhaps deficient in tangible approaches and methods that effectively develop creativity in HE students.

One such study that did investigate the development of creativity in the context of employability was Ko and Lau (2014), who completed an analysis of the teaching of creativity (defined as the ability to produce work of novelty and appropriateness) in secondary schools in Hong Kong and subsequent progression to further study and employment in the creative industries. Ko and Lau (*ibid*) summarised that the planned development of creativity in schools via extra-curricular activity or through vocational education tended to be more likely to engage in careers in the creative industries, and that to ensure continued success, the transition of creativity between industry and education should continue to remain clear. However, as acknowledged by the authors, the findings were limited and should be treated with caution in the context of the present study as the direct applicability to a UK HE context is perhaps limited due to the differing international context, socio-geographic environment and the use of secondary school students.

A further international study, which cross referenced creativity and employability, was undertaken by Rampersad and Patel (2014). Their study evaluated a qualitative pilot project which analysed the perceptions of creativity leadership (creativity defined as the ability to seek creative and innovative solutions as alternatives to best practices) from the standpoint of students and employers, whilst students were engaged in placement activities. The methodological style which is evident in the article tends more towards an iterative than investigative approach and whilst the qualitative results were apparently positive in with



regard to the employers' satisfaction and the students' development, the perceptions of creativity from the participants' perspective was not forthcoming and, therefore, little can be drawn from the article. Similar to Ko and Lau (2014), the differing international context can also be seen as a limitation to the applicability of this research. However, the notion of skills development during placement activity does perhaps strike accord with the findings of Jackson (2016) and Allan and Clarke (2007), in that, creativity is perhaps best developed when the situation and conditions are most conducive to do so. With the exception of courses with specific work placement requirements embedded into the curriculum (sandwich courses), the UK HE sector does not mandate placement activity during study and it could be postulated that specific employability skills development, including that of creativity, could be better supported in a placement environment.

## **2.7 Conclusion**

Chapter two has provided an exploration of the pertinent literature which surrounds the concepts embedded within the current study's research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The review has, thus, engaged with three key areas; HE, employability and creativity, and has provided a base of knowledge which has supported and informed the current study. Due to the nature of the method employed in the current study, that being Constructivist Grounded Theory (Charmaz, 2014), this review of literature was undertaken predominantly after the collection and analysis of data and, hence, has been particularly informative to the latter processes of contriving conclusions and recommendations from the study.

Whilst initial engagements with the literature prior to data collection were intended to frame rather than direct the current study, the explorations of the related research has highlighted a deficiency of specific understanding of the shared views of academics, students and graduate employers with regard to creativity, and particularly in the local context in which the current study is situated. If the knowledge surrounding creativity in the context of it being an employability skill is to be enhanced, there appears to be a requirement to seek the views of

academics, students and employers, thus enhancing the representation of those who are directly involved in the application and development of the skill.

This literature review has demonstrated that the concepts incumbent within the research question are grounded in a variety of theoretical frameworks and much debated understanding which, therefore, creates a complex environment for practitioners to operate within. It could therefore be argued that, as alluded to above, the perceptions of academics, students and employers within this environment should be considered and explored; something not overtly obvious within the literature base.

Within the reviewed literature, there is seemingly a consensus surrounding the virtuous nature of creativity and a will from academics within HE that recognises the value of creativity and promotes its development. Similarly, it would appear that creativity's value as an employability skill is established and has gained further prominence in the contemporary literature, however, challenges to the development of creativity from the perspective of a general and employability related skill are also evident; with two issues seemingly being key. Firstly, the metrification of the UK HE sector and the resultant performativity of providers of HE would appear to be in conflict with the ideals of creativity, in the sense that creativity is less likely to occur if constrained by measurement and that creativity is not without a risk of failure, thus perhaps not being held in high esteem by the managers of HE providers and students alike. Secondly, whilst general agreement appears apparent that creativity is desired by academics, students and employers, their collective understanding of the concept of creativity is not consistent and therefore challenges the notion that creativity can be effectively developed in graduates during their HE if this agreed understanding is absent.

Therefore, it could be argued that, given the challenges and complexities noted above, this current study is relevant, timely and will provide further understanding of creativity from the perspective of relevant stakeholders to supplement the literature base, which appears

deficient in the specific context of creativity as an employability skill, and will also afford practitioners recommendations for future practice in the development of creativity.

## Chapter Three – Methodology and Method

### 3.1 Introduction

Chapter three will provide a detailed description of the methodology that underpinned the methods employed in the collection of perceptions from the participants involved within this study, thus answering the research question. This chapter shall begin by exploring the fundamental philosophical underpinnings of the methodology and the subsequent sequential alignment through this study's ontological, epistemological, axiological and methodological stance. Furthermore, the researcher positionality in the context of this study will be examined. An explanation of the predominant methodological stance of this research, that being an inductive Grounded Theory approach, shall be highlighted and subsequently, a more detailed review of the specific variant of this approach employed in this study, Constructivist Grounded Theory (Charmaz, 2014), will be presented and justified.

The chapter will then present and discuss the more pragmatic elements of the method which were employed in the capture and analysis of the participant data; beginning with a review of a pilot study and the subsequent impacts and influences it had on the research process of the main study. Ethical considerations associated with the study will subsequently be discussed, along with how the participant sample was designed and convened. The chapter will conclude with an evaluation and justification of the analytical approaches undertaken to distil and give meaning to the narratives provided by the participants.

### 3.2 Philosophical position of this study

Kuhn (1996) and Scott and Usher (2011) suggested that coherence and alignment must be achieved between the rationale of any research piece and the philosophical position it situates itself in, as the methodology and methods adopted should be congruent with the assumed paradigm. Section 3.2 will, therefore, illustrate and justify the current study's philosophical position and demonstrate the orientation between this position and the research question.

The research question of the current study was:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

It is conceivable that one of a variety of ontological and associated epistemological positions could be adopted to address this research question and provide contributory findings to the field of creativity. However, the literature previously discussed in chapter 2.0 seemingly identified that the meaning of creativity and the associated facilitating factors to be highly subjective and emotive, with little consensus regarding a definition of the concept. Furthermore, the research question is structured to explore the perceptions of creativity from the perspective of the three groups of participants, in an attempt to better understand the meaning of creativity in the local context of the participants.

Given the findings of section two and the related design of the research question, it would appear prudent to situate this study in an ontological position which accepts constructivism as its basis, as it would seem clear that creativity is something of a social construct which is viewed and formed differently by human beings. These differing views noted in the related literature would, by definition, tend to oppose a realist ontology which dictates an objective reality, external to the individual (Waring, 2012); whereas the ontological values of constructivism describe a constructed reality, held within an individual, and that because of this individual nature, multiple realities of the world exist (Denzin and Lincoln, 2003). This study sought to understand these realities.

Epistemology has been defined as the nature of knowledge and the extent to which knowledge is valid (Cohen *et al.*, 2011) and as noted by Hesse-Biber and Leavy (2005) '*an epistemological position lays the foundation for the knowledge-building process*' (p12), therefore, the epistemic position of this study requires consideration. According to Kuhn (1996), a sound methodology is based upon an appropriate alignment between the ontological and the epistemological stance of the research (alignment to research instruments was also proposed by Kuhn (*ibid*) and will be discussed in section 3.8). As a constructivist ontology suggests that reality is internal

to the individual, the congruent epistemology would be required to align with this and recognise the individual sense making of knowledge, in this instance of creativity, which occurs. Alignment with the constructivistic ontology is found in the epistemological position of interpretivism, which asserts that any phenomena is made sense of by an individual via interpretations of reality (Taylor and Medina, 2013). An interpretivist epistemology would also appear appropriate as the research question attempts to understand how creativity as a concept is constructed by individuals as opposed to, for example, the testing of a hypothetical explanation of creativity.

As proposed by Waring (2012), the interpretivist position is concerned with exploring a deep, richer understanding of a subject matter from the view point of individuals, as opposed to a positivist stance which assert that knowledge is objectively assessed external to the individual via experience of phenomena. Given the seemingly complex nature of creativity, as identified in the literature review and pilot testing (see section 3.5) a positivistic approach was not deemed appropriate as the parsimonious, dehumanising and generalising nature of this epistemology did not appear to suggest that a meaningful depth of understanding would be gained. Adopting an interpretivist philosophical position also provided further rationale for the originality study, in that, much of the current literature base tends towards being situated in a paradigm which reflects the notions of positivism and, therefore, seeking the deduction of a singular truth via the testing of theory and assumption. In opposition to this, the current study attempted to provide a deeper understanding of creativity, albeit to a localised sample, via the inductive constructivist approach adopted; something which is less notable in the current knowledge base.

Related to notions of ontology and epistemology within educational research, an appreciation of the impact of core values held by individuals, known as axiology (Heron and Reason, 1997), is necessary as the axiological position taken by this study is likely to influence data collection, the subsequent analyses and, therefore, the resulting outcomes. For example, the aligning axiological position associated with positivism, would require the researcher to be uninterested in anything other than empirical information and become a *'disinterested*

*scientist'* (Krane and Baird, 2005, p90); adopting, as Harris (1990) put it, an etic position. However, the ontological and epistemological position of this study would be incongruent with such an etic stance due to the aforementioned requirement to accept and understand the individualised human perceptions and experiences. Therefore, the axiological stance of this study was emic (Pike, 1990) in its approach, recognising and being appreciative of the highly value laden nature of both the participants and the researcher. Section 3.8 of this chapter will highlight in more detail the method design and, given the close relationships formed with the stakeholder groups, illustrate my position as an insider researcher or, as Lincoln and Guba (2010) would have it, a '*passionate participant*' (p171). As a student and professional involved with understanding HE culture generally and locally, this involved emic position was of benefit to understanding the issues and concepts associated with the study, however, the emic style does invite an inherent danger of the researcher's own values impacting on the participants' involvement, the data collection and analysis. It was, therefore, important that the researcher's positionality and biases were acknowledged, in an attempt to limit compromises to validity of the findings. This positionality will now be discussed.

### **3.3 Positionality of the researcher**

The inductive nature of this study necessitated the analysis of emergent patterns, themes and categories from the collected data and to sensitise concepts by evaluating them in the context from which they emerged (Patton, 1990). This analysis was undertaken by myself as the researcher, as was the selection of the paradigm in which the study is situated, therefore recognition of my positionality is of crucial importance due to, as Hartas (2010) noted, research ideas and methodologies being influenced by our own identities, values and emotions. Indeed, the emic, insider position accepts the values and cultures of the participants, whilst also acknowledges the researcher's axiology (Pike, 1990). Furthermore, as suggested by Olive (2014), an emic approach encourages and appreciates the researcher's personal values and experience, as it suggested that to fully understand, give meaning to data and thus discover new knowledge, the researcher should be within or have experience of the cultures of the participant encourages.

Gadamer (2004) noted that complete objectivity is unachievable due to the values that humans possess, but given the underpinning need for credibility of findings and validity of the representations made by participants, it was important to ensure the analyses presented in this study were trustworthy and value conscious (Hartas, 2010). To give confidence in this respect, my credibility as a researcher was evaluated at the outset of the study to ensure '*intellectual rigour*' (Patton, 1990, p476) and '*any personal and professional information*' (ibid, p472) which could alter or bias the data collection and subsequent processing.

Early in the evaluation of my credibility, it was identified and acknowledged that my educational path was not necessarily aligned to inductive, qualitative methodologies as my undergraduate and master's degrees in sport science were positivistic, science based courses, where I specialised in the most objective and quantitative disciplines within the breadth of the subject domain. However, following a subsequent career path as an educator and pastoral tutor in an institution which tended towards widening participation in HE, I rapidly began to recognise and appreciate the individuality and differing values of the humans I engaged with; a position that was further developed some six years later (and continues at the time of writing) as a deliverer of initial teacher education and as an educational developer. The exposure to a range of educational contexts which continues to be afforded in this role, has further embedded my awareness and empathy towards how individuals view education, and altered my perspective as to how human construct social phenomena. My research positionality is now one of constructivism as opposed to positivism; moving away from the dispassionate, parsimonious, positivistic scientist (Dash, 2005) to an emic, involved, insider educational research who attempts to employ the notions of *verstehen* (contextual understanding of a phenomenon) (Holloway and Wheeler, 2002) rather than seek a unequivocal truth (Hesse-Biber and Leavy, 2005).

It could be argued that this researcher metamorphosis provided increased credibility to my positionality in that, having experienced both opposing aspects of the research paradigm debate, I have a greater appreciation of what positivism feels like in reality and, hence, was



more likely to identify when data collection or analyses were becoming too detached from the participants and the situational contexts.

As noted by Waring (2012), social phenomena is constructed via the interpretation of experiences and the environment an individual is situated in, therefore, it may be suggested that researcher credibility will be increased should they have experience and understanding of the related environment. In this respect, it could be argued that my experience of working with a range of stakeholders in HE environments for over 20 years including as a lecturer, pastoral tutor and course leader of undergraduate courses; as a manager in HE linking with several universities, colleges and QAA; as an educational developer working with a range of academics, and as an external examiner of HE courses in other institutions, has enhanced my credibility to undertake this study, as I have a well formed understanding of the context and stakeholders in which the data collection is situated.

Despite this likely credibility, as a socialised human being I recognise that I have biases based on a range of issues such as age, gender, race, class and culture; as Charmaz (2014) puts it

*‘Grounded theorists, like other researchers, may and do unwittingly start from their own preconceptions about what a particular experience means and entails’  
(p156)*

In an attempt to minimise the effects of these biases during the methodological design, data collection and subsequent analyses, a number of implicit and deliberate measures were undertaken during the production of this study. Firstly, all stages of the methodological design, method implementation and data analyses were critiqued by the study’s supervision team and furthermore, the various stages of the study have been peer validated at conferences and symposia. Secondly, the method design specifically required the participants to engage with the analyses and thereby provided the opportunity for challenges to my interpretations to be made. Aligning with the suggestions made by Patton (1990) which referred to presenting findings back to participants in a study, stage four of the method (see figure 3.8) tested the conceptual model derived from the analyses undertaken in stages one, two and three of the

method. In a similar vein, the underpinning Ground Theory notion of constant comparison (Glaser and Strauss, 1967) was also applied throughout the data collection and processing, which provided a routine evaluation of the analyses; as did the approach whereby a repeated coding methodology (see figure 3.10a and 3.10b) was employed to minimise bias. To maximise construct validity (Cohen *et al.*, 2011) and reduce researcher bias, all participants were provided with a record of the interviews and asked to review the content to ensure that the views expressed in the interviews were an accurate representation of their thoughts.

To conclude, the researcher's positionality is acknowledged as an involved participant and very much a tool of data collection. The research expertise and situational experiences of the researcher provides credibility, as do the assuring measures introduced to the study design and method in limiting researcher bias. The paradigmatic position of the study and the reflexive position of the researcher have been illustrated, and what now follows is a description and critique of the fundamental underpinnings of methodological design of this study; namely, Constructivist Grounded Theory (Charmaz, 2014).

### **3.4 Methodology**

The philosophical position of this study pertains to seeking an understanding of the interpretations of creativity as an employability skill as held by a localised group of participants; acknowledging that generalisability is not expected but appreciating the depth of insight this paradigm provides. Considering the position of the study and that of the researcher, the methodological design was intended to facilitate validity of the understanding of creativity, whilst also attempting to reduce the researcher's acknowledged biases and hence, a phenomenographic approach was adopted which invited an inductive data collection and analysis; one which applied the notions and principles of Grounded Theory (Glaser and Strauss, 1967). This chapter will now illustrate the key underpinnings and rationale of phenomenography and Grounded Theory.

Phenomenography appears to have been first identified by Marton (1981) and employs a '*second order perspective*' (p178) to understand the ideas people have about the world and

their experiences of reality; in essence, *'research which is directed at experiential description'* (p180) as opposed to an orientation which puts phenomena at the centre of an investigation.

Reviewing phenomenography as a research design, Tight (2016) noted that this approach seemingly has emerged from the HE sector and is usually linked to interests in the development of student learning in this sector. Tight (ibid) concurs with Marton (1981) in that phenomenography tends to have pragmatic motivations and is generally concerned with producing meaningful and useful outputs; noting of phenomenography

*'Any research design, methodology or theory which yields, or promises to yield, practically useful findings in this area will be welcomed'* (p331)

In the context of this study, a phenomenographic approach would seemingly be appropriate as the research question is concerned with inductively seeking an understanding of the stakeholder perceptions of creativity, rather than taking, as Marton (1981) would have it, a *'first order perspective'* (p178) which would define creativity from what is currently understood. As previously noted, consensus surrounding the definition of creativity *per se* is not evident yet the associated literature (for example Andreasen, 2011) which tends to indicate the importance of focusing on the concept from the position of the student, academic and employer perspective; thus making phenomenography a seemingly appropriate approach to explore the concept. Furthermore, in association with the intention to contribute to the current knowledge base of creativity, this study also aimed to provide pragmatic and practical recommendations for practitioners within and surrounding a local UK HE context, therefore, aligning to Tight's (2016) review. The phenomenographic approach would also appear to align with a constructivist epistemology in that there is an innate necessity and importance for description and understanding of knowledge, particularly of individual cases, as opposed to generalisability (Svensson, 1997).

The underpinnings of constructivism and phenomenography, necessitated the inclusion of an inductive methodology which sought to explore and understand the interpretations of creativity as an employability skill from the perspective of the participants with no, as far as the acknowledged research influence permitted, bias or preconception. Aligning to this position, the principles of Grounded Theory (Glasser and Strauss, 1967) were employed in this

study, whereby, a localised conceptual framework of creativity as an employability skill was inductively derived via data collection and subsequent constant comparison, without predetermined ideas of the subject matter. Evans (2013) noted that the Grounded Theory approach provides greater robustness and meaning to any created theory as the participants are playing an active role in its derivation and are directly involved with the subject matter.

Whilst Grounded Theory would appear to be congruent with the positionality of this study, the fundamental principle of not engaging with previous knowledge that is embedded within Grounded Theory, as defined by Glasser and Strauss (1967), has received criticism. Scott and Usher (2011) challenged the notion that preconceptions could be separated from the research process as, in their view, personal social values are continually present despite all attempts of researchers to dissociate from them. Allan (2003) also highlighted very practical limitations to the stance of no preconceptions and illustrated that when working in a situation that involves participants with constraints upon their time, discussions with no parameters became problematic. Furthermore, Allan (*ibid*) experienced conflicts during the processing of data as the coding of important occurrences had to be based on some previously experienced knowledge.

Being based in the social sciences, the current study is to some degree, in conflict with the purer notions of Glasser and Strauss's (1967) Grounded Theory, in that a more positivistic position was adopted by the original theory which sought out a single reality to explain phenomena. This conflict and the aforementioned criticism of the lack of engagement with previous knowledge, prompted the current study to employ a derivation of the Glasser and Strauss's original theory; that being Constructivist Grounded Theory as proposed by Charmaz (2000). Constructivist Grounded Theory adopts the inductive principles of the original Grounded Theory model, yet follows the later Straussian Grounded Theory model in that previous literature should be engaged with to bound, but not lead, research activity (Cresswell, 2007). Charmaz (2006) also suggested that a comprehensive literature reviewed be completed subsequent to the analysis of data to further promote the objectivity and creativity of the researcher, whilst also ensuring timeliness of the research within an external context.

Constructivist Grounded Theory also recognises and accepts the constructivist notion of multiple realities (Charmaz, 2014) both from the perspective of the participant and the researcher who, as pointed out by Evans (2013), through Constructivist Grounded Theory can be more cognisant of their biases and reflexive as they are more embedded in the research process compared to other forms of Grounded Theory. As Charmaz (2014) puts it *'research acts are not given, they are constructed'* (p13).

Whilst seemingly being an appropriate and well aligned methodology, Constructivist Grounded Theory is not without its critics. As one of the originators of Grounded Theory, Glaser (2002) contested the views of Charmaz's inception of Constructivist Grounded Theory and, as he saw it, the *'remodelled'* (p3) approach contradicted the underpinning principles of the original framework. Essentially, Glaser (ibid) highlighted that the fundamental positivistic paradigm of Grounded Theory lead to conceptualisation rather than the descriptive understandings produced by Constructivist Grounded Theory and criticised the methods proposed by Charmaz (2000) such as lengthy interviews which engage with the constructions of participants, instead noting that Grounded Theory data collection tended to be more passive, unobtrusive and observational. Glaser (2002) concluded by stating

*'But she [Charmaz] is misled in thinking that the constructivist vision is in fact GT. It is just another QDA [qualitative data analysis] method in pursuit of accuracy'* (p10/11).

Interestingly, similar criticisms of Charmaz (2000, 2006 and 2014) are not so forthcoming in the literature base, with many authors (for example, Kenny and Fourie, 2015) illustrating the divergence of the three forms of Grounded Theory without implying the superiority of one position over another. Conversely, Bryant (2009) argued that the criticisms of Constructivist Grounded Theory were somewhat unfair and highlighted that the two other variants are equally as open to criticism on the grounds of failing to engage with epistemological issues. Furthermore, Bryant (ibid) goes on to note, very practically, that it is the output of research that should be focused upon, should researcher not make *'strong epistemological claims'* (p32), as opposed to focusing on conflicting epistemological views and debates. This is supported by Hallberg (2006) who proposed that as research and thinking has developed over

time, Grounded Theory has also adapted to meet the changing needs of research and knowledge generation and that

*'...ontological and epistemological standpoints, i.e. our assumptions about what reality is and how it can be known, are embedded in the different modes of grounded theory and need our reflected standpoints' (p148).*

Appreciating this notion, it is important to clarify the selection of Constructivist Grounded Theory in the current study. As argued previously, the literature which surrounds creativity appears to indicate that it is an emotive topic, open to varying degrees of subjective interpretation, to which more positivist or post positivist methods have failed to fully understand. Therefore, a constructivist approach which looks to understand participant views points would seem appropriate and, with Bryant's (2009) thoughts in mind, conceive practical outputs which could positively impact on practice in a local HE context. Furthermore, the adoption in the method of principles such as memo writing, theoretical sampling, constant comparison and data saturation hold with the notions of Grounded Theory and hence make a distinction to general qualitative data analysis.

Subsequent to the seemingly appropriate methodology being established, specific methods of data collection that were consistent with the principles of Constructivist Grounded Theory were considered and designed, as described in section 3.8. To further support the design of a rigorous and valid method, a pilot study was undertaken to test and verify the initially planned tools of data collection and analyses, in the context of the research question and the contrived paradigm. Section 3.5 will now provide further details of this pilot study and the resultant impacts on the main study.

### 3.5 Pilot study

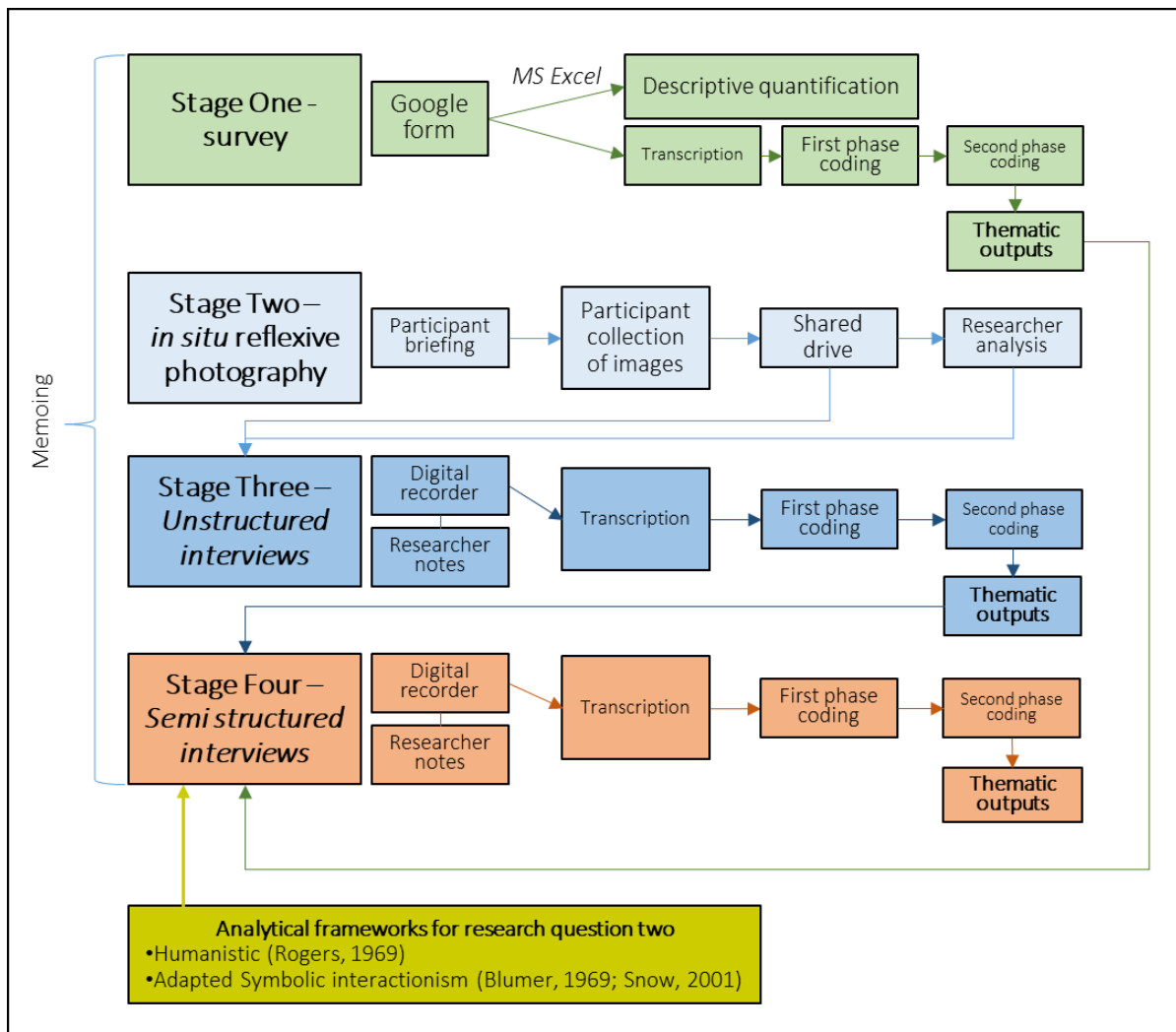
In May 2016, a pilot study was initiated with the objective of trialling the research tools that were proposed for the main study and, hence, assess their feasibility, ethical legitimacy, reliability and validity in the context of two research questions:

- How does the perception of creativity as an employability skill vary between HE students, academics and employers?
- How do the interactions within and between the three parties influence creative development?

The pilot study represented a valuable precursor to the main study, which provided an opportunity to '*assess the adequacy of the research design and of the instruments to be used for data collection*' (Wilson and Sapsford, 2006, p103) and, subsequently, reflect on their effectiveness thus leading to recommendations for the thesis method design. To maximise the validity of the testing, the pilot study was undertaken in the same setting as the main study, that being, the university (student and academic) and a regional organisation (employer).

Therefore, the methodological design of the pilot study replicated the four stages of the proposed main study, as can be seen in figure 3.5, and recruited a sample of participants with comparable criterion characteristics, however, fewer were recruited for feasibility reasons.

**Figure 3.5 – Pilot study design overview**



At stage one a 'purposeful sample' (Savin-Baden and Major, 2013) of 13 participants (two students, five academics and six employers) were recruited. Three participants were recruited (one student, one academic, one employer) for stage two, three and four. It was acknowledged that, with the relatively small sample size, an inherent limitation with regard to comparison between subject domains was created, however, the verification of the method practices (for example, the reflexive photography) as opposed to explanation of abstract results, was felt to have greater value and therefore took precedence. Indeed, as pointed out by Corbin and Strauss (2015), caution should be exercised when pilot testing not to add rigidity to later methods, as a underpinning tenet of Grounded Theory should be to allow concepts and findings to emerge via iterative processes of theoretical sampling. Therefore, the pilot study



focused on pragmatic operational issues and, in line with the work of Kim (2010), the *in situ* cultural aspects of interviewing, for example power relationships, the three different participant groups (student, academic, employer).

Further to the pilot testing being undertaken, personal reflections on the process and experience were considered, including participants' perceptions which were gathered at the end of stage four of the pilot test. Following reflection, adaptations to the main study method were incorporated. During the pilot study, the concepts of human interactions and organisational culture influences on creativity emerged from the data collection and analyses, prior to the initiation of research questions which aimed to analyse these concepts using the frameworks of Rogers (1969) and an adaptation of Blumer (1969/1986) and Snow (2001). Subsequently, the application of the frameworks and questions appeared to cause some surprise and consternation with participants, due to the change in approach from the inductive Grounded Theory approach to a more structured, deductive manner. As the two approaches in stage four seemingly were causing tension, the second research question (and related questioning) was not pursued in the main study and the more relevant methodological approach, which aligned to the epistemic position of the study, was given priority. The initial and remaining research question was also adjusted to ensure recognition of the assumption that creativity in an academic environment equates with creativity in an employment setting.

The transcribing of interview material from the digital voice recorder to a word processed document became highly time consuming during the pilot study and it became evident that researcher lacked the skills to efficiently and effectively convert the material to accurate records of the experiences. Issues of feasibility in this respect were also reflected on, particularly in the context of the researcher's mode of study and commitments external to the study, and rather more pertinently, the reliability of the transcriptions were also considered. Following these reflections and taking into account the arguments proposed by Halcomb and Davidson (2006), it was decided that audio material acquired during stage three and four interviews will be downloaded to QSR Nvivo Pro (v.11) and coded directly using the audio facility to maximise time efficiency and also provide a more '*authentic version of the truth*'

(Loubere, 2017, p6) with regard to the meanings expressed in the interviews. Further detail on this approach will be illustrated in section 3.10.

As noted in figure 3.5, theoretical sampling was not rigorously employed during the pilot testing, rather, it was undertaken more informally and spontaneously during the interviews. This tended to result in some of the lacuna in the pilot data set remaining unanswered by the end of stage four and, potentially, the validity of the questioning could have been increased further by the application of the theoretical sampling process. Therefore, a more formalised approach was taken to theoretical sampling in the main study, thus enhancing the congruence with the notions of Constructivist Ground Theory (Charmaz, 2014) and permitting deeper exploration of creativity.

Conversely, an analysis of the photographic images collected by the participants was undertaken by the researcher prior to the unstructured interviews and the findings of the initial researcher analysis were intended to be used as prompts during the stage three interview. This approach, seemingly had the negative effect of altering the interview to being less unstructured and inductive, and, at times, rather too led by the researcher with participants becoming less willing to share their thoughts without prompting. As noted by Bryman (2012), the meaning of an image as collected by a participant is not immediately obvious and can be easily misconstrued, therefore, in the main study the researcher did not undertake any direct analysis of the collected images prior to the unstructured interviews and only permitted participant led photo-elicitation.

The final reflection and update to the method following pilot testing, related to the internal validity of the emergent themes that resulted from the coding of the qualitative data at stage one, three and four of the method. In line with the inductive, bottom up ethos of Grounded Theory (Glaser and Strauss, 1967), the first and second phase coding approaches followed an *In Vivo, process* and *focused* style (Saldana, 2009) to draw out themes from the interview transcripts. Whilst justifiably in the first instance, this process lacked verification or checking of whether participant views had been misrepresented or accidentally omitted. It alleviate this situation, a further stage of *hypothesis* coding (Swift, 2006) was introduced hypothetically

tested the emergent themes against the original data set, thus providing enhanced validation of the thematic outputs and reducing the possibility of researcher bias.

In conclusion, the pilot testing appeared to achieve its objective and was effective in highlighting methodological issues which required further consideration prior to the main study. The design of the main study, beginning with the associated ethical considerations shall now be presented.

### **3.6 Participant recruitment**

As noted by Patton (1990), sampling in qualitative research tends towards the ‘purposeful’ (p169) selection of participants who can provide the most meaningful and rich information regarding the subject matter as opposed to randomised sampling usually associated by quantitative research. The current study was in alignment with the notions of purposeful sampling and for all stages of the method, contrived a sample of 158 participants based upon a criterion sampling (Savin-Baden and Major, 2013), therefore, the sampling strategy adopted in the current study can be categorised as non-probability (Cohen *et al.*, 2011). The criterion sampling strategy required all those involved in providing data (150 during stage one of the method and eight in stages two, three and four) to meet some form of requirement and for the current study, the criteria were grounded within the research question.

The research question explored in the current study was:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

Therefore, the criteria required to be met by participants focused on the defining characteristics evident within the research question; namely, being a HE student, academic or employer. These terms are, however, rather amorphous and required greater definition to be established so as to provide a level of validity to the data collection and analysis processes, in terms of both consistency across the participant groupings and with regard to the relevance of the lived experience of the participants.

The *student* participants engaged in this study were required to be undergraduate and in their final year of study (aligning to level 6 on the Framework for HE Qualifications (QAA, 2014b)), of the university this study was situated within. Level 6 students were selected for inclusion in this study due to their relatively long, in comparison to level 4 and 5 students, period of time in a HE environment and their forthcoming progression from their undergraduate course of study. Congruent with the notions of the qualitative nature of this study, the *academic* participants involved were required to be from the same university, that is, the same context as the student participants, thus promoting trustworthiness in the data collection and alignment between participant groups. Academic participants were also required to be actively teaching undergraduate students across levels 4, 5 and 6 for at least 3 academic years; thus having an appreciation of developing generic skills through a whole undergraduate students and experience of observing final year undergraduate students progress from academia into employment. *Employer* participants were required to fulfil the criteria of being employed by and represent the views of an organisation that recruits and employs graduates to that organisation (thus being defined as a *graduate employer*) from the university of this study and be based in the same geographical region as the university of this study; again promoting context and trustworthiness in the data. The employer participant themselves were required to hold a position which afforded them the responsibility of recruiting and selecting graduates for employment; in most examples, this was comparable to a human resources manager in larger organisations or company owners in smaller settings.

All participants of this study undertook the data collection tasks on a voluntary basis and were self-identifying; an important factor in recruiting the most appropriate participants as the study and its methodology is based upon understanding the constructions of those '*who have the most theoretical relevance*' (Gibson, 2010, p60) with regard to creativity and employability in a HE context. The study, therefore, situates itself in UK HE; a sector that is complex and multifaceted, with no two institutions within it being identical. Therefore, it is important to clearly identify and understand the characteristics of the university that was engaged in this study. The institution was established as a university following the Further and Higher Education Act (1992) emerging from a polytechnic, hence, delivering a broad range of subject areas and strategically seeing itself as a provider that contributes to all of the Higher Education

Statistics Agency's strategic approaches and infrastructure criteria (HESA, 2019b), including 'meeting regional skills needs' and 'meetings national skills needs'. Whilst the institution was not, *per se*, the subject of any form of analysis during this study and hence the pledge to 'meeting regional skills needs' and 'meetings national skills needs' was not evaluated, the commitment to meeting skills needs was a defining factor in the selection of this institution to base the study within, given the research question and intentions for the resultant findings. The institution could also be described as typical in terms of its student population (nationally 68<sup>th</sup> out of 154 in terms of the size of the undergraduate student population (HESA, *ibid*) and curriculum mix. This also influenced the selection of the institution for this study as, whilst appreciating the lack of generalisability incumbent with the methodology, it could be postulated that the views of the participants will be analogous to those in other similar institutions and that the recommendations resulting from the current study, could be applied in other similar institutions to inform teaching practice.

At the time of the method design and ethical approval, the university had approximately 11400 undergraduate students and almost 1000 academic staff (HESA, *ibid*), structured into three 'colleges': Science, Social Science and Arts. The organisational structure of the university was, coincidentally, in alignment with the frameworks employed work of Sternberg *et al.* (2002) and that of Simonton (2009) which provided a basis for more in depth investigation in the current study. The perceived differences of creativity between subject domains and the notion of transferability of creativity between subject domains has been debated in the associated literature (Bohm, 1968/2007; Sternberg *et al.*, 2002; Lebedeva *et al.*, 2019) with little conclusion. Therefore, in an attempt to explore the issue of transferability here, a quota sampling approach (Schofield, 2006) was adopted in the current study and hence participants were required to be distributed across the three colleges of the university or, in the case of the employers, be aligned to these broad subject domains.

Once recruited, the purposive sample of 158 participants undertook the current study's method in an attempt to inductively generate data and provide knowledge in relation to the research question. The specific elements of the four stages of the method will now be discussed.

### 3.7 Ethical considerations

The fundamental ethical consideration that a researcher must ensure, is that no harm comes to the participants as a result of interacting in with the research process (Oppenheim, 1992). In the current study, it was necessary for the researcher to understand and gain perspective of the basic principles of ethical data collection in the context of the four stages of the study's method; thus safeguarding the participants and the researcher. In this respect, ethical consideration was multifaceted and was required to take into account issues of participant well-being and confidentiality throughout the data collection; third party well-being and confidentiality; corporate confidentiality; data security and ethical issues related to being an insider researcher.

Evaluation of these issues was undertaken using two distinct, yet coinciding ethical codes: the University of Lincoln Research Ethics Policy (2013) and the British Educational Research Association (BERA) guidelines (2011) [versions current at the time of ethical approval and data collection]. The University of Lincoln Research Ethics Policy (2013) noted the three key ethical principles of '*respect for persons*', '*beneficence*' and '*justice*' (p1), essentially describing the requirement for research to be beneficial and considerate of any associated risks to participants. As such, this study applied this notion to the method design and maintained respect for participants during data collection; ideals supported by BERA (2011) which similarly suggested respect for '*the person, knowledge, democratic values, quality of educational research and academic freedom*' (p4).

The methodological position of this study, that being highly contextualised and emic in nature, necessitated that participants were fully aware of the nature of the study and were prepared to commit to voluntarily take part in the data collection. For this to occur in the initial stage of the data collection (online survey), clear explanation and guidance was provided for participants, with further information regarding the study available via hyperlinks on the survey which lead participants to the researcher's blog (see appendix C).

The final three stages of the data collection required more detailed consideration given the more intimate nature of the data collection and hence, in depth information was provided for participants via a range of information sheets (see appendix A) and a personal briefing with the researcher. This briefing not only allowed for clarification of understanding but also permitted the establishing of a relationship with participants and allowed the researcher the beginnings of '*entering research participants' worlds*' (Charmaz, 2014, p33), thus allowing an important rapport to be fostered, any issues of power relationships between the interviewer and participants to be lessened and a '*helping relationship*' (Rogers, 1967/2004, p39) of mutual trust and acceptance to be formed. In a practical sense, these briefings also facilitated participant confidence in the processes which supported voluntary consent to participate, anonymity throughout participation and confidentiality during data collection, analysis and subsequent dissemination.

Once satisfied, participants provided consent to participate by signing an informed consent form and participant information sheet (see appendix A) which included statements confirming confidentiality and that participants would not be identified in the write up of the study or any subsequent publication and confirmed the right to withdraw from the study up to the point of submission of the thesis. All participants received a signed copy of the forms for their records and again were directed to the researcher's blog where further copies of any relevant information were readily accessible.

Stage two of the method (*in situ* reflexive photography), potentially, gave the opportunity for third parties to be identified. Therefore, measures were taken to ensure an according level of confidentiality and anonymity for any such third parties, whereby, study participants sought their permission for the images to be included in any data processing or analysis. Similarly, and with particular reference to the employer participants, stage two of the method presented the potential for sensitive commercial '*trade secrets*' to be captured and subsequently discussed in stage three (unstructured interview) of the data collection. The briefing of the participants highlighted that all data will be held securely on a password protected area and that, in line with BERA (2011) guidelines, the researcher will ensure confidentiality and '*protect integrity*

*and reputation of educational research by ensuring they conduct their research to the highest standards' (p44).*

Due to stages two, three and four of the method, largely, being participant led, it was not anticipated that participants would undergo any undue stress or emotional anxiety during the interviews elements of the method. However, given the seemingly individualised perceptions of the subject under investigation and the contextualised nature of the participant experiences that were being discussed, a potential for participants to reflect upon and discuss upsetting scenarios was possible. Therefore, aligning to the general principle of respecting the person (University of Lincoln, 2013), it was made clear to participants prior to any interviews that the researcher held the right to stop an interview should they feel the participant was experiencing unnecessary upset; a notion supported by Oppenheim (1992) who stated that interviews should be abandoned to prevent further distress, should respondents become upset by the questioning.

As something of an *insider researcher* it was important, ethically, to disclose my positionality and ensure that participants were comfortable with my true identity (Greene, 2014) so as to develop a sense of trust but also to allay participant anxiety as to issues of confidentiality. Specific risks and strategies to mitigate against participant harm are noted in the ethical approval forms in appendix B. Prior to data collection in either the pilot study or main study, the measures noted above which attempted to meet the principles set out by the University of Lincoln and BERA, were granted approval from the School of Education Research Committee in Ethical approval in January 2016 (see appendix B). Data collection subsequently began for the pilot study in May 2016 and the main study in March 2017.



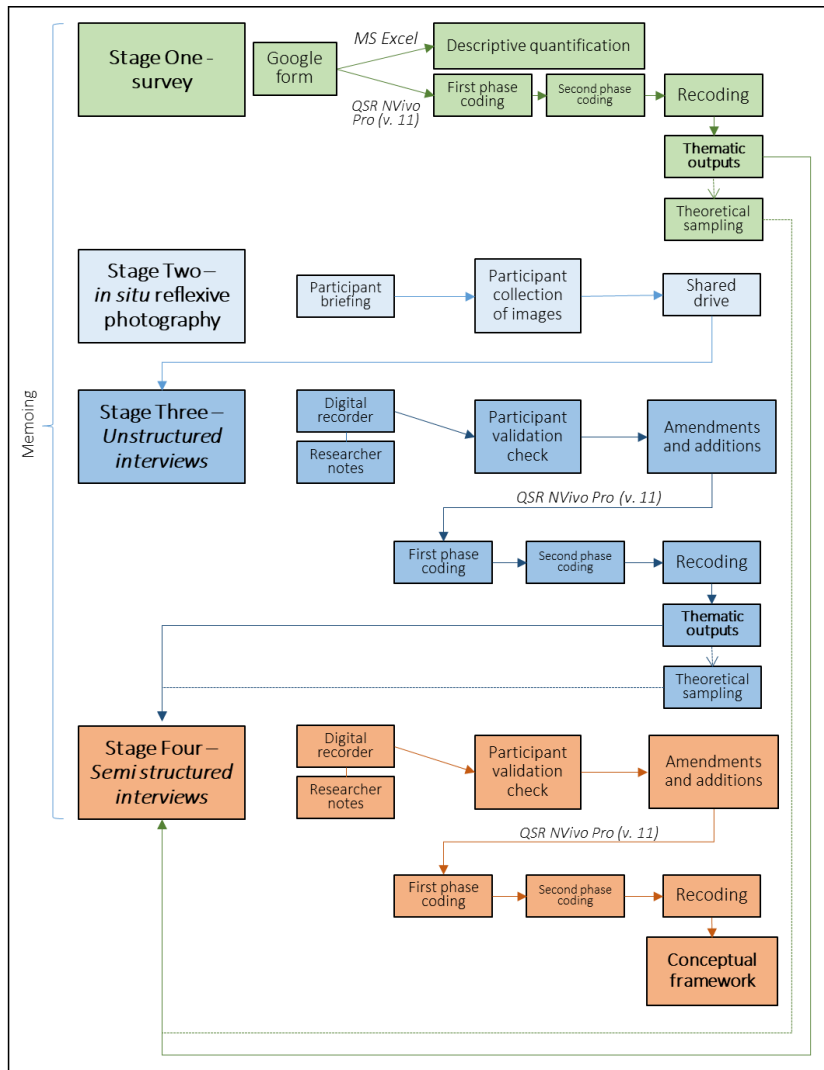
### 3.8 Method design

In keeping with the constructivist position of this study, a method design was contrived which was consistent with an inductive data collection approach as described previously in this chapter. Section 3.8 will now illustrate the sequential elements of the method undertaken during the 23 months of this study (inclusive of data processing and analysis) with figure 3.8 providing an overview of these stages.

The data collection strategy of the current study, was conceived subsequent to the pilot study being undertaken and adapted following reflection upon the experience of the pilot study. Four stages of data collection were undertaken in the current study, which were contrived to align with the theoretical underpinnings of the study and to provide data to address the research question, thus adding to the knowledge base associated with creativity as an employability skill. The methods employed were not, in themselves, novel in their design, however, their application to the field of creativity and employability could be considered as uncommon as few previous studies had undertaken data collection in such a manner. Figure 3.8 provides a schematic view of the method design, leading to the processing and analysis of the collected data.

The initial background research and method design of the study began in 2015, with ethical approval being sought from the University of Lincoln's School of Education's Ethical Approval Committee in December 2015. Concurrent to the research and designing of the study, a blog was created which provided a means of allowing open access to materials related to the study and permitted transparency as to, latterly, study progress and summary results. Ethical approval was granted in January 2016 and hence followed the pilot study in May 2016. Further to a critical thesis proposal defence by peers and confirmation of studies by the College Research Degrees Board, the main study began in March 2017 with the recruitment of the student, academic and employer participants. Congruent with the notions of contextualised, in depth exploration of a phenomena usually associated with a constructivist approach (Hartas, 2010) the study recruited students and academics from a single university and employers within the same regional geographic setting as the university.

Figure 3.8 – Method design overview



The recruitment of participants was facilitated by engaging with senior post holders within the university, namely Directors of Education for the faculties of Art, Social Science and Science, who subsequently contacted schools within their faculties to recruit students and employers to the study via advertisements on managed virtual learning environments. Similarly, the recruitment of employer participants was supported by the university’s Head of Careers and Employability in the first instance, with latter support being provided by the researcher’s own professional network of contacts in regional employers. The current study aimed to recruit 30 student, academic and employer participants (90 in total) determined by consideration of the likely possibility of participant recruitment and the feasibility of data processing (following pilot

testing evaluation) and mirroring similar studies in creativity in educational contexts such as Oliver *et al.*, (2006). In total, 84 students, 41 academics and 25 employers were recruited to the initial stage of the data collection.

### **3.8.1 Stage One – Online survey**

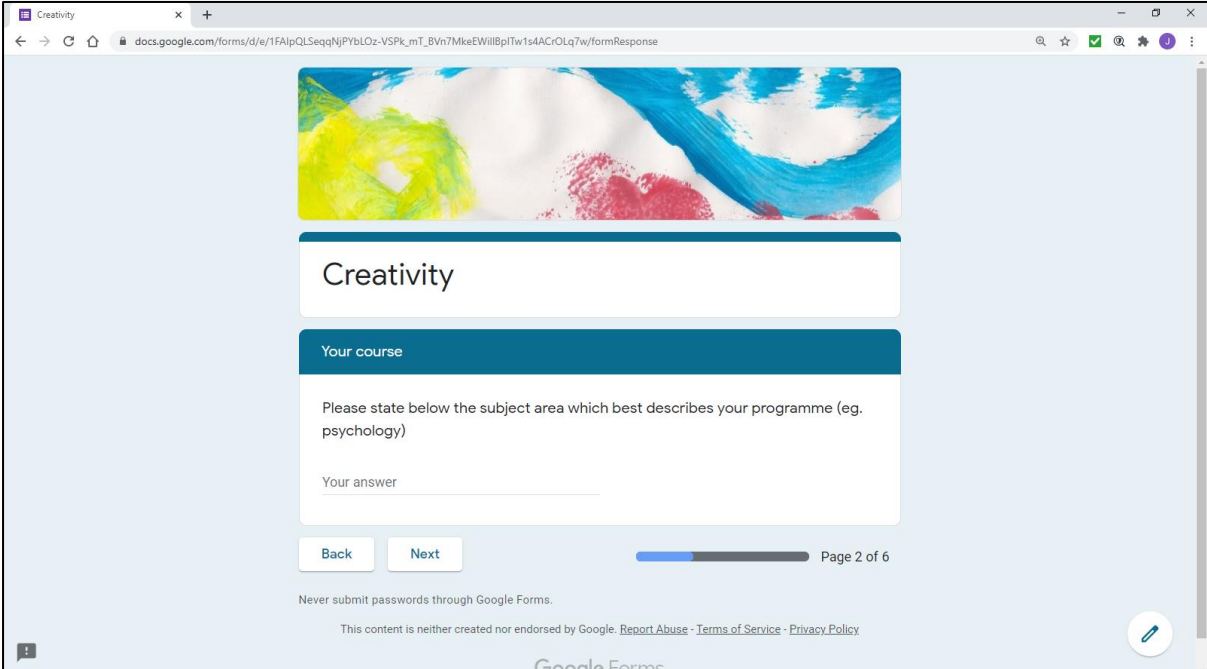
In an attempt to establish a measure of the perceived value afforded to creativity by academics, students and employers, hence giving weight to the rationale for the study, stage one) required participants to complete an online survey hosted via a Google Form, which was undertaken between April and June 2017. Clear and accessible information regarding the study as a whole and the stage one data collection was provided by an overview statement on the landing page of the survey, which also included details relating to informed consent and a link to the study's blog. As previously acknowledged, there was a potential conflict between the underpinning constructivist values that the current study advocates and the online survey approach, however, the survey did not intend to convey explanation or understanding related to creativity, rather, it aimed to highlight the consensus of reflections of the constructions of creativity. Thus, justification for this study was sought and furthermore, due to narrative based questions being open and minimising the intention to lead participants, a data set was gathered which permitted later theoretical sampling (Charmaz, 2014) and testing of data.

Bryman (2012) also illustrated that surveys which employ a '*web survey*' (p671) strategy of data collection have a greater potential for participant recruitment and provide the opportunity for increased aesthetics, thus increasing the likelihood of participant completion. Therefore, the design of the online survey of the current study attempted to provide a bright and colourful backdrop to encourage participation as illustrated in figure 3.8.1a. Furthermore, Groves *et al.* (2004) noted that the possibility of increases to internal validity and reliability, or dependability in a qualitative context (Lincoln and Guba, 1985), are likely when surveys are designed with clear and unambiguous questions which are also directly related to the research question. With this in mind, the online survey was designed to have as few questions as feasible and explore the key elements of the research question. The style and content of the survey was consistent

across the students, academics and employers surveys with relevant necessary details being altered to suit the particular participants group, for example, the student survey referred to *'creativity within your course'* whereas the academic survey noted *'creativity within the programme you teach.'*

An initial question enquired as to the subject area of students and academics or the employment sector and size, aligning to the UK Office of National Statistics (2016), of the employers, thus providing a level of meta-data to permit later categorisation and analysis.

**Figure 3.8.1a – An extract of the online survey**



The image shows a screenshot of a Google Forms survey titled "Creativity". The form is displayed in a web browser window. At the top, there is a header with the word "Creativity" in a large, bold font. Below the header, there is a section titled "Your course" with a dark blue background. The text in this section reads: "Please state below the subject area which best describes your programme (eg. psychology)". Below this text is a text input field labeled "Your answer". At the bottom of the form, there are two buttons: "Back" and "Next". To the right of the buttons, there is a progress indicator showing a blue bar and the text "Page 2 of 6". At the bottom of the page, there is a footer with the text "Never submit passwords through Google Forms." and "This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)". The Google Forms logo is visible at the bottom center.

A further question investigating the perceived level of importance of creativity was administered using a simple scaled response format, thus providing a feasible approach to data analysis given the large number of participants. To assist in the understanding of the participant responses related to the importance of creativity, an open follow up question which asked participants to provide reasoning to their answer was provided. Four further open questions were asked of participants which directly related to the current study's research

question. These open questions explored how participants define creativity; how they feel creativity manifests itself in their context; what attributes humans employ when they are being creative (as perceived by the participant) and, finally, what impact does creativity have or what does it achieve in their individual contexts. An example of the survey format and the question sets are provided in appendix D.

Subsequent to the closure of the survey, data was downloaded to MS Excel for descriptive statistical purposes and QSR Nvivo Pro (v.11) for analysis and later use as a verification tool for testing the emergent conceptual framework by employing the notions of constant comparison (Corbin and Strauss, 2015). For the initial quantitative element of the survey, all 150 participants' results were utilised for analysis as descriptive statistics permitted the averaging of data, thus reducing the impact of the heterogeneity of the participant group sizes. Descriptive surveys, *per se*, have been recognised as a means of '*fact finding and description*' (Oppenheim, 1992) and have the benefit of being able to gather data on a particular topic from a number of participants at a single point in time (Cohen *et al.*, 2011). Bryman (2012) noted, however, that the potential to establish causal relationships from survey data is questionable given the general inability to control variables and that unless participants are randomly sampled, external validity is compromised. In the current study it is accepted that the more positivistic notion of external validity could be described as low given the self-selecting participants who, in all likelihood as they have volunteered to participate, will have an interest in the subject matter, however, the constructivist intentions of the methodology prescribe greater importance to in depth understanding and, as put by Lincoln and Guba (1985), trustworthiness of the data rather than external validity.

The latter qualitative stage of the survey required participants to provide reflections with regard to their perceptions of creativity and therefore, in line with the ideals of Constructivist Grounded Theory (Charmaz, 2014), questions were open in style and designed to be as inductive as possible. To ensure that the differing number of respondents in each participant group did not bias the coding and resulting consensus of views, yet at the same time ensuring that subject domains were represented with parity, responses from 30 students, 30 academics

and 25 employers (85 in total, with student and academic participants being randomly selected by subject domain) were coded and analysed (see section 3.10). Table 3.8.1b below illustrates the breakdown of the participants' subject by domains in stage one of the data collection.

**Table 3.8.1b Participant Subject by Domains**

Students	Academics	Employers
Science		
<ul style="list-style-type: none"> <li>• Biology</li> <li>• Biomedical Science</li> <li>• Biochemistry</li> <li>• Chemistry</li> <li>• Pharmacy</li> <li>• Forensics</li> <li>• Zoology/Animal Behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Biology</li> <li>• Biomedical Science</li> <li>• Microbiology</li> <li>• Chemistry</li> <li>• Pharmacy</li> <li>• Food Science and Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Professional, Scientific and Technical activities</li> </ul>
Social Science		
<ul style="list-style-type: none"> <li>• Criminology</li> <li>• Psychology</li> <li>• Sociology</li> <li>• Social Policy</li> <li>• Complementary Medicine Law</li> <li>• Sport Coaching</li> </ul>	<ul style="list-style-type: none"> <li>• Law</li> <li>• Psychology</li> <li>• Sociology</li> <li>• Social Work</li> <li>• Health</li> <li>• Education</li> <li>• Sport</li> </ul>	<ul style="list-style-type: none"> <li>• Public Admin and Defence</li> <li>• Education</li> <li>• Health and Social Work</li> <li>• Financial and Insurance Activities</li> </ul>
Arts		
<ul style="list-style-type: none"> <li>• Heritage Conservation</li> <li>• Conservation</li> <li>• Graphic Design</li> <li>• Creative advertising</li> <li>• Fashion Advertising</li> <li>• Interactive design</li> <li>• Illustration</li> <li>• Animation</li> <li>• Architecture</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation of Cultural Heritage</li> <li>• History</li> <li>• Graphic design</li> <li>• Public relations</li> <li>• Fashion</li> <li>• Media</li> <li>• Music</li> <li>• Journalism</li> <li>• Dance</li> </ul>	<ul style="list-style-type: none"> <li>• Arts, Entertainment and Recreation</li> </ul>

To enable deeper exploration of the perceptions of creativity as an employability skill, the remaining three stages of the method necessitated the recruitment of a smaller sample of

participants and hence one participant from each participant group (student, academic, employer) and subject domain (art, social science, science), equating to nine in total, was planned for. Similar to stage one of the method design, participants were recruited by engaging with the same senior post holders at the university, the researcher's own professional networks and via invitation made at the end of the online survey. In total, nine participants (three students, three academics and three employers) were recruited to the latter three stages of the data collection, however, due to personal circumstances the social science based employer withdrew from the study prior to any data collection taking place and despite various attempts to engage with other graduate employers, no suitable replacement could be recruited. Therefore, eight participants undertook the stages two, three and four of the method design, therefore, 24 points of data collection were undertaken with 16 being purposive interviews. It could be argued that this sample size was relatively small when compared to other studies which employed Grounded Theory which, on average, employed 30 interviews (Thomson, 2011), however, the repeated interactions with the participants facilitated a depth of evidence to support the addressing of the research question and reaching the point of data saturation. Guest *et al.* (2006) suggested that 12 interviews is sufficient for research that aims to '*understand common perceptions and experiences*' (p79), however, Mason (2010) noted a range of 4 – 87 interviews (modal average 25) from a sample of 174 PhD studies which specifically used Grounded Theory. Whilst relatively small, the number of interviews undertaken in this study is not dissimilar to some other similar PhD research and as noted by Charmaz (2006), the rationale for the research should drive the method design and sample size; therefore, given the localised nature of this study's research aims and tentative outputs, the relatively small sample size would not seem inappropriate. Practically, the sample size was also designed to ensure the feasible collection and processing of data was achieved in a timely manner to permit sequential constant comparison and theme generation.

Acknowledgement is given to the seeming limitation resulting from the absence of the social science employer, including the restriction of direct comparisons between constructions of creativity between employers' subject domains. This apparent limitation was, to some extent, lessened by the overall method design employed in the current study, in that, stage one provided a breadth of employer views which included those from a social science background

and thus their views contributed to the shaping and interrogation of the emergent conceptual framework at stage four. Furthermore, the organisations of the employers who were involved in stages two, three and four of the data collection had organisational structures which employed graduates in roles usually aligned to social science disciplines, for example in human resources departments. Therefore, the employers engaged in stages two, three and four of the data collection also had the opportunity to comment and describe graduate employees more generically.

Prior to stages two, three and four of the data collection being undertaken by the participants, a consistent face to face briefing was provided for all of the participants and conducted by the researcher. Copies of materials used in the briefings are provided in appendix A. The briefing considered and conveyed the intention of the study, the specific stages of the method, pragmatic considerations, such as contact details and timings of activity and issues relating to potential harm or risk, with informed consent being obtained by participants signing an informed consent form and information sheet (subsequently counter signed by the researcher). The face to face meeting with the participants was held in the participants' own environment, for example the offices of the employers or the university library of the students, with the intention of putting the participant at ease and minimising any negative consequences of power dynamics (Wilson and Sapsford, 2006) that may have arisen. The briefing also afforded a valuable opportunity for the researcher to engage with the participants informally and build trust and rapport which, as noted by Blumer (1969/1986) is essential for open, honest and meaningful discussions to take place. The briefing also provided the most appropriate opportunity to give clarity as to specific requirements of the participants, specifically stage two of the method where participants were required to generate data independently of the researcher.

The specific approaches to data collection in stages two, three and four will now be explored in turn.



### 3.8.2 Stage Two – Participant reflexive photography

Stage two of the method maintained the notions of inductive data collection and was consistent with the principles of constructivist grounded theory (Charmaz, 2014), in that, an *in situ* approach to collecting perceptions was adopted. The use of photographic methods appears to have been first suggested in social science by Collier (1957) who noted that *'the material [data] obtained with photographs was precise and at times even encyclopedic'* (p856). Amerson and Livingston (2014) argued that using reflexive photography affords participants the opportunity to provide rich, *in situ* and contextualised data, which is devoid of researcher influence, which aligns with Warren (2005) who noted that the accessibility of the photo-elicitation approach gave participants a *'louder voice'* (p864) and permitted greater status in the research process thus allowing greater conveyance of feelings and emotions.

As such, during stage two of the method, participants were asked to collect a number of images using a process of reflexive photography (Amerson and Livingston, 2014) which, from their perspective, conveyed the meaning of creativity. The participants, commencing in July 2017, were asked to collect the images from an environment specific to their current context, that being, an employment scenario for the employer participants or the university for the students or academics. To remain congruent with Grounded Theory Principles (Glaser and Strauss 1967), in that, data should emerge organically from the participants with no preconceived thoughts or direction from the researcher, the instruction provided to the participants during the briefing of stage two of the method was intentionally broad and nebulous (*'collect images from their contexts which they felt best represented creativity'*) with the specific intention of minimising the impact of researcher bias or guidance, whilst also minimising the potential impact of the Hawthorne Effect (McCambridge *et al.*, 2014).

Given that an underpinning tenant of the current study is that of understanding creativity in a highly grounded manner, reflexive photography was ideally suited as a research tool that would create rich contextualised data directly from the participants' contexts. Furthermore, this approach also prevented, as Bryman (2012) expressed, *'observers [the researcher] disturbing the very situation being studied'* (p496) therefore maximising the internal

trustworthiness of this element of the data collection. Furthermore, the reflexive photography approach also encouraged trustworthiness in that it negated the necessity for participants to put into words situations or examples that were difficult to describe; as Collier (1957) noted

*'The graphic image can assist an informant who lacks fluency of words to make clear statements about complex processes and situations.'* (p858)

In an attempt to promote the ideals of a constructivistic qualitative research approach, the participants were permitted flexibility with regard to time allowances for collecting the images; thus allowing greater opportunity for participants to collect meaningful and valid data. As conveyed in the participant briefing, participants were asked to contact the researcher when they felt appropriate images were collected and, in most cases, participants responded within six to eight weeks of initiation of the activity. At this point, a mutually convenient time was agreed between the researcher and the participant to meet and discuss the collected images, and as per the initial briefing, the meeting was held in the environment of the participant.

Warren (2005) warned that images presented in photographs will inevitably have different meaning to different individuals due to variations in personal values, thus undermining the objectivity of the reflexive photography approach when used in isolation. Similarly, Bryman (2012) highlighted that an inherent limitation associated with the analysis of photographic evidence is of valorisation of the captured images and that true meaning may not be transmitted or may be misinterpreted by the researcher due to their values and biases. To counter this, the current study subsequently employed an unstructured interview with participants who collected images, apportion meaning to the images; thus developing the method from a reflexive photography position to a photo-elicitation technique. The unstructured interview strategy will now be explained.

### **3.8.3 Stage Three – unstructured interview**

Glaser (2001) reflected that *'all is data'* (p145), thus describing that all of the contexts and conditions surrounding research participants, for example social status, should be valued as data as much as the topic specific information. As previously noted, it could be argued that

creativity is emotive and has a multitude of influencing factors on an individual's perception of the subject, therefore, a strategy which best allowed these influences to emerge was deemed appropriate. Gibson (2010) noted that unstructured interviews are well suited to broader, more open research questions, as in the current study, with the style also being congruent with the underpinning inductive principles of Constructivist Grounded Theory (Charmaz, 2014) in that the participant is at the centre of the experience and not led by the researcher; as Warren (2005) puts it, the participant has '*a louder voice*' (p864). Whilst perhaps lacking in reliability (Savin-Baden and Major, 2013) due to the varied nature of the questioning, and the potential lack of comparability with other participants (Cohen *et al.*, 2011), the depth of understanding gathered from participants imbued the notions of the interpretivism and enhanced validity (trustworthiness) of the findings (Dash, 2005).

To allow dialogue between researcher and participant, and thus facilitate photo-elicitation (Bryman, 2012) to understand the participants' constructions of creativity in their contexts, an unstructured interview was undertaken with each of the eight participants. The use of an unstructured interview approach was, again, specifically employed to align with the notions of inductive research and Constructivist Grounded Theory (Charmaz, 2014) as the participants expressed their perceptions of creativity as an employability skill via explanation of the collected images, without direction or structure from the researcher, reducing the possibility of researcher bias or influence. Directive, structural questions (for example '*what is it about this image that represents creativity? Or 'is there anything else you'd like to discuss?'*') were necessary to ensure that information was received from the participants, and reflexive verification questions (Savin-Baden and Major, 2013) were also employed to check and test the researcher's understanding of the responses given by participants; with great caution being exercised to avoid any leading questions. All interviews were captured using a dictaphone, with researcher notes being taken and participant images being displayed on a tablet device. Stage three interviews began in October 2017.

Typically, the stage three unstructured interviews lasted for approximately an hour, took place in the participants' work or study environment and were digitally recorded using a dictaphone.

Following these unstructured interviews, each voice recording was shared with the associated participant who was asked to verify that the meanings conveyed during discussions were accurate reflections of their perceptions of creativity, thus promoting trustworthiness of the data. Once confirmation was received from participants, voice recordings were downloaded from the dictaphone to QSR Nvivo Pro (v.11) for coding (see section 3.10); with analyses, researcher notes and memos forming the beginnings of a localised conceptual model related to creativity as an employability skill.

The emergent themes of the stage one analysis and theoretical sampling (Charmaz, 2014) emerging from the memos created, provided a basis for further discussion with the participants to test, congruent with the principle of constant comparison and saturation (Corbin and Strauss, 2015), the conceptual model formed during stage three of the method. Given the various themes and influencing factors surrounding the emergent conceptual model, a semi structured interview approach was seemingly appropriate to undertake the testing of the conceptual model and upon completion of the analysis of data collected during stage three, a final meeting was arranged with participants to undertake stage four of the method. This approach will now be described.

#### **3.8.4 Stage Four – Semi-structured interview**

Gibson (2010) highlighted that in semi-structured interview approach, the '*central analytical interests*' (p62) provides a structure for the interview to explore the themes of the research, with Corbin and Strauss (2015) also noting that semi-structured interview techniques permit the researcher to maintain an element of control and consistency during each interview; an important aspect of the stage four method due to the consensus of all eight participants' constructions being tested and evaluated. Beginning in May 2018, the stage four interviews with participants were, therefore, semi-structured in nature and aimed to verify or dispute the conceptual themes identified in stage three of the methods, aligning to the Grounded Theory principle of constant comparison (Corbin and Strauss, *ibid*).

The question set was derived from the conceptual themes identified in stage three (the *central interest* (Gibson, 2010)), triangulating features of data acquired in stage one of the method and theoretical sampling (Charmaz, 2013) derived from the memos created by the researcher. The questions themselves or '*categories*' (McIntosh and Morse, 2015, p5) were designed to be open and reflexive in their nature, and were supplemented by evaluative and circular questions (Savin-Baden and Major, 2013) which were employed to encourage judgements and meta-cognition in the participants (for example '*in your opinion, was that effective?*' or '*how did that make you feel?*')

Whilst the consistency noted by Corbin and Strauss (2015) innately shifted the interviews from an '*informant interview*' (Hobson and Townsend, 2010, p 226) to more of a '*respondent interview*' (Hobson and Townsend, *ibid*) whereby more control is assumed by the interviewer, the researcher remained cognisant of the principles of Grounded Theory and the need to afford participants the ability to express their constructions of creativity via more flexible and open manner; thus limiting the impact of '*procedural reactivity*' (Wilson and Sapsford, 2006, p119). As noted by, amongst others, Woods (2011) one of the disadvantages of the semi-structured interview approach are the biases which are brought by the interviewer, potentially leading to a reduction in the trustworthiness due to findings being influenced by the previous experiences of the researcher. To minimise this potential, the researcher, as noted in section 3.3, maintained a highly reflexive approach during the administration of the interviews and utilised the research memos created to facilitate reflexivity during the preparation of the interviews. Wilson and Sapsford (2006) also cited issues of dependability as a possible disadvantage of semi-structured interviewing, noting that due to the increased flexibility of the interviewing style, the ability of the researcher to provide consistently structured questions is reduced, thus limiting dependability. Whilst this is seemingly true, the current study acknowledges and accepts the potential limitations with respect to dependability but thereby also promotes the trustworthiness of the meanings expressed by the participants and, as expressed by McIntosh and Morse (2015), participants should experience an equivalent expression of the meaning of the question as opposed to necessarily receiving a precise replication of a question.

The semi-structured interviews were approximately one hour in length, undertaken in an environment usually associated with the participant (for example, student participant in their university library) and were recorded on a digital voice recorder, which were subsequently shared with participants prior to analysis to verify that the meanings conveyed during discussions were accurate reflections of their perceptions of creativity, thus promoting trustworthiness of the data. Once participants had verified (concluding in February 2019) the content of their interview was uploaded to QSR Nvivo Pro (v.11) for coding and analysis (see section 3.10) to substantiate or refute the constructions offered by participants in stage three of the method by employing the notion of data saturation, that being, when the participant themes have provided previously and no new findings are emerging from the analyses (Charmaz, 2014). The stage four semi-structured interview not only sought saturation of the data but also, as Corbin and Strauss (2015) put it, aimed to show the '*development of concepts*' and highlight the '*dimensional variation*' (p134) in the nature of the concepts.

A potential limitation to the multistage approach of stages two, three and four is the concept of double hermeneutics as suggested by Giddens (1984), whereby participants and the researcher alter their behaviours as a result of being involved in the research. Whilst this concept was likely to apply in the current study, the impact of this was managed via the researcher employing the concept and practice of reflexivity, supported by memo writing, throughout the study. Furthermore, the grounded and inductive nature of the data collection tended to prevent participants' behaviour adapting towards a prescribed framework (as could be the case in a more deductive study), rather, the staged approach seemingly encouraged participants to reflect and consider creativity more and hence clarified their thoughts as opposed to changing their behaviours.

A key facilitator of the researcher's thinking and development of themes and concepts, was the use of memo writing at each stage of the method; a research tool which shall now be explored in the context of the current study.

### 3.9 Memoing

Glaser (1978) conveyed that writing memos is a fundamental aspect of Grounded Theory and that the researcher who moves between the analysis of data to writing up ideas are '*not doing Grounded Theory*' (p83). Similarly, Charmaz (2014) described how memo writing is a key part of the Constructivist Grounded Theory process and that it should be undertaken by the researcher between the data collection and writing phase to encourage the crystallisation of questions, areas of investigation and concepts.

Memos are, according to Corbin and Strauss (2015), informal notes, maintained by the researcher, which promote reflection, thought, comparisons, relationship building and creation of initial concepts; as the authors put it '*a dialogue is occurring in the mind of the researcher*' (p107). During the current study, starting just prior to the initiation of the pilot study, a reflective researcher journal was created that captured thoughts, ideas and feelings regarding not only the meaning of data but also reflections on the lived experience of data collection. An example of a memo can be found in appendix I. Latterly, the memo function embedded within QSR Nvivo Pro (v.11), became a useful tool in the creation of memos directly related to the data under analysis. As prescribed by various authors in the field of Grounded Theory (for example Glaser and Strauss, 1967; Corbin and Strauss, 2015), the researcher's memos should be proactively employed as a tool which takes thoughts and reflections, and uses them to clarify meaning and potential gaps in understanding in the data and therefore guide further data collection; a process referred to as theoretical sampling (Glaser, 1978). Whilst this approach may, seemingly, be at odds with the inductive underpinnings of the current study by employing something of a deductive style, theoretical sampling (and the resulting lines of enquiry) is based upon the initial data inductively gained from the participants and facilitates further inductive clarification of concepts, as opposed to the testing of hypotheses.

Linking to the notion of the validity of theoretical sampling, a further beneficial feature of maintaining reflective memos in a personal research journal, as illustrated by Charmaz (2014), is the facilitation of researcher reflexivity. It is suggested by Glaser (1978) and Charmaz (2014)

that memo writing affords the researcher the opportunity to reflect on their positionality and the potential impact this may have on the data; an important notion particularly during the analytical process of data analysis which shall now be described.

### **3.10 Analytical approach**

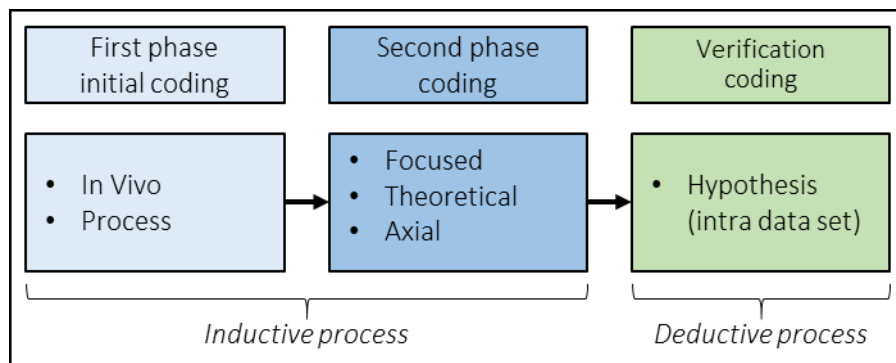
Subsequent to the collection of data from participants via survey and interview strategies, information was collated and analysed using computer based software; namely, Microsoft Excel to process overview quantitative information from the early stages of the survey and QSR Nvivo Pro (v.11) for qualitative data, including the latter survey information and all interview material. The use of this software permitted an efficient processing of information into findings and, for the qualitative data, the creation of subcategories and resulting conceptual themes via constant comparison in a timely manner. Given the sequential nature of the constructivist approach, this efficiency was paramount to the effective collection of subsequent data and the trustworthiness of later interviews.

The quantitative information acquired during stage one of the data collection was processed using basic descriptive statistical analyses; namely percentage scores and pie chart representations. As previously highlighted, the selection of what could be considered to be a positivist tool of analysis yet situated in a constructivistic study, would perhaps illustrate a misalignment between the underpinning epistemological premise of the data and the analytical method employed. However, to provide the necessary support for the study's rationale and to valid the existing background literature, that being a desire for creativity from students, academics and employers, a superficial descriptive conveyance of the underlying quantitative information was deemed appropriate. This analysis was not designed with the intention of attaching meaning nor explanation to the concept of creativity from the participants' perspective, rather, it merely served to illustrate pragmatically the consensus of value with regard to the subject and hence provide verification for further data collection and, on completion, permit clear explanation to local practitioners.



For the qualitative aspects of the stage one survey and for all interview data, a multiple coding approach (see figure 3.10a) was employed to maximise the trustworthiness of the qualitative analysis and facilitate the thematic analysis of the data in an attempt to explore participant consensus surrounding creativity.

**Figure 3.10a Stage one and three coding design**



During the first phase of coding data from stages one and three of the method, an initial line by line method was applied, specifically employing *In Vivo* and *Process* coding approaches which intended to identify the meaning participant attach to their views and to recognise contextual activity respectively (Charmaz, 2014). Subsequent to first phase coding, second phase techniques were applied to the data to permit a richer understanding of the views of participants, with three approaches being undertaken: *focused* coding, which allowed for the identification of frequently occurring phase one codes; *theoretical* coding which drew together commonly occurring codes into coherent themes and *axial* coding which permitted the review of the (theoretical) themes and connections made between them (Saldana, 2009). The first and second phase of the coding process, congruent with the grounded theory approach, was conducted in an inductive manner, that being, letting the themes emerge from the data as opposed to apply previously defined coda. To verify that coding processes undertaken in phases one and two were reliable, a final verification of the data was performed using *hypothesis* coding (Saldana, 2009) which assessed the created themes by reapplying them to the original data set (hence *intra data set*).

Figure 3.10b and 3.10c provides a visual overview of first phase initial coding using Nvivo and the process of theme creation from coding at stage one, respectively.

Figure 3.10b Example of first phase initial coding from stage one using Nvivo Pro (v.11)

The screenshot displays the Nvivo Pro (v.11) interface. At the top, there is a menu bar with options like 'Undock All', 'Bookmarks', 'Layout', 'List View', 'Coding Stripes', 'Highlight', 'See Also Links', 'Classification', 'Next', 'Close All', 'Close', 'Window', 'List View', 'Coding', 'Relationships', 'Report', 'Detail View', 'Reference', 'Color Scheme', and 'Visualization'. Below the menu bar is a search bar with 'Look for' and 'Search In' dropdowns, and buttons for 'Find Now', 'Clear', and 'Advanced Find'. The main area is divided into two sections: 'Nodes' and 'Q6'.

The 'Nodes' section contains a table with the following columns: Name, Sources, References, Created On, Created By, Modified On, and Modified By. The data is as follows:

Name	Sources	References	Created On	Created By	Modified On	Modified By
Connecting concepts and ideas		6	6 29/03/2018 20:43	JW	29/03/2018 20:55	JW
Connecting with others		24	40 07/03/2018 21:53	JW	27/03/2018 20:39	JW
Discovering new understanding		14	19 07/03/2018 21:52	JW	27/03/2018 20:36	JW
Empowering the individual		22	47 07/03/2018 21:52	JW	27/03/2018 20:35	JW
Engaging with a subject		11	17 07/03/2018 21:51	JW	27/03/2018 20:40	JW
Exploring theoretically and tangibly		35	57 07/03/2018 21:51	JW	27/03/2018 20:39	JW
Meeting an expectation		12	30 07/03/2018 21:53	JW	27/03/2018 20:31	JW
Processing fundamental skills		40	65 07/03/2018 21:52	JW	27/03/2018 20:39	JW

The 'Q6' section shows a participant response with the following text:

In my organisation, people are being creative when they  
 11 Find innovate solutions, many of which rely on people working together with open minds but with clear objectives  
 12 coalesce around the challenge  
 13 Invent ways to fix problems and create new products  
 14 Working with clients, and each other.  
 15 Are empowered to do the above and are suggesting and trialling new service

The text 'Find innovate solutions, many of which rely on people working together with open minds but with clear objectives' and 'coalesce around the challenge' are highlighted in yellow. The text 'Working with clients, and each other.' is highlighted in blue. The text 'Are empowered to do the above and are suggesting and trialling new service' is highlighted in green. The text 'coalesce around the challenge' is highlighted in orange.

On the right side of the 'Q6' section, there is a 'Coding Density' chart showing vertical bars of different colors representing different nodes. The nodes are: 'Connecting with others' (purple), 'Advancing a situation' (yellow), 'Synthesising at all levels' (blue), 'Meeting an expectation' (green), 'Engaging with a subject' (orange), 'Discovering new understanding' (red), 'Communicating thoughts and creations' (purple), 'Questioning boundaries' (yellow), 'Empowering the individual' (red), and 'Exploring' (green).

Four callout boxes with arrows point to specific elements in the screenshot:

- 'Code list' points to the 'Nodes' table.
- 'Code frequency' points to the 'References' column in the 'Nodes' table.
- 'Participant response' points to the text in the 'Q6' section.
- 'Highlighted text illustrating coded text ("connecting with others")' points to the yellow highlighted text in the 'Q6' section.
- 'Code stripes (visual reference)' points to the 'Coding Density' chart.

Figure 3.10c Example of the coding to conceptual theme process at stage one

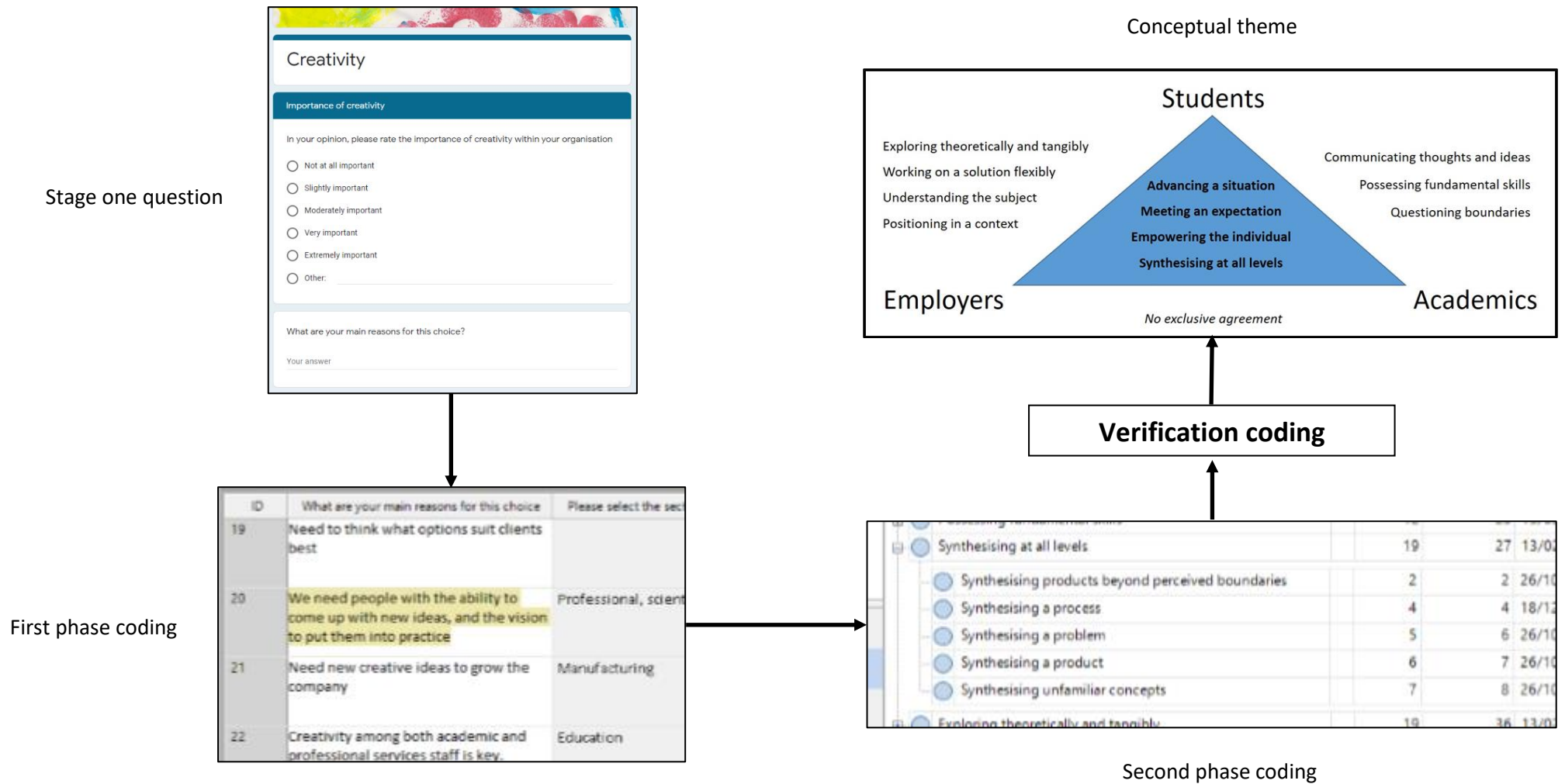


Figure 3.10d Overview and example of coding at stage three

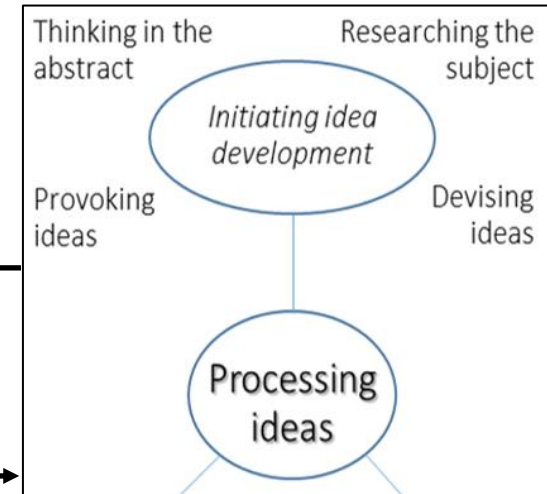
Participant image (stage two)



Conceptual theme generation

Sub code	Conceptual theme
Initiating idea development	Processing ideas
Developing ideas and forming methods	
Realising idea outputs	
Fulfilling requirements	

Second phase coding (theoretical)



Verification coding

Process			
Process	0	0	12/0
Enablers	0	0	12/0
Barriers	0	0	12/0
Really stupid idea	1	1	14/0
Visualising an idea	1	1	14/0
Finding balance between guidance and initiative	1	1	14/0
Adapting a current idea	1	2	14/0
Refining the idea	1	3	14/0
Synthesising an idea	1	1	14/0

First phase coding

Process			
Process	8	231	31/0
3. Latter	3	29	05/0
1.Early	7	70	05/0
Understanding concepts	1	1	05/0
Got to do the rubbish to get to the good	1	1	05/0
Exploring parameters	1	1	05/0
Get further by thinking wide to begin with then pairing back	1	1	05/0
Break through of simple design change	2	2	29/0
Identifying and addressing a problem or opportunity	4	4	05/0
Devising ideas	3	10	05/0
Thinking in the abstract	3	10	05/0
Researching the subject	3	10	05/0
Provoking ideas	6	30	29/0
Really stupid idea	1	1	05/0
Multiple initial ideas	1	1	31/0
Brain wave	1	1	29/0

Second phase coding (focused)

Figure 3.10d illustrates an example of stage three coding and conceptual theme generation. The resultant themes that emerged from stage three of the data, supported by the findings of stage one and ongoing theoretical sampling, formed the basis of discussions in the semi-structured interview with participants at stage four. Therefore, the style of coding was adapted to suit the analyses required, aligning to the developmental nature of the sequential aspects of the method and in a ‘*constant comparison*’ style as suggested by Corbin and Strauss (2015). With this in mind, the first phase coding of stage four data was undertaken in a manner akin to inter data set *hypothesis* coding, in that, the ethos was one of assessing and verifying the themes created in stages one and three by applying them to the data set.

Figure 3.10e illustrates the stages of coding that were undertaken at stage four of the data analysis. Similar to stage one and three, *In Vivo* and *process* coding was undertaken during first phase coding to facilitate detailed understanding of the participants’ views and the actions (*gerund* analysis) which surrounded them. *Focused* coding was also included in the first phase as it was felt important that common sub themes emergent in the data were brought together within the theoretical themes generated in stages one and three. Phase two coding at stage four adopted an *extrapolation* method which analysed the *patterns* within the data set, with the purpose of understanding the logic that relates elements identified in earlier analysis and coding (Krippendorf, 2013). As in stage three, a final verification check was made using a *hypothesis* style coding (Saldana, 2009) to maximise the dependability of the findings and the resultant conceptual framework which emerged.

**Figure 3.10e Stage four coding design**

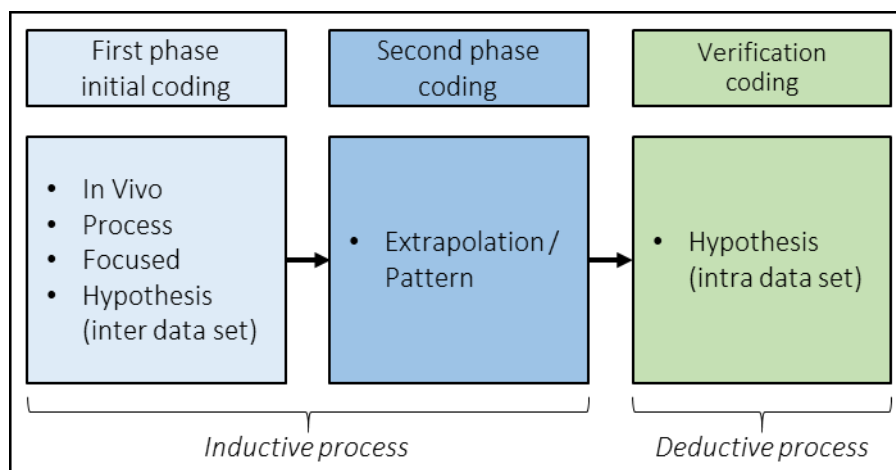


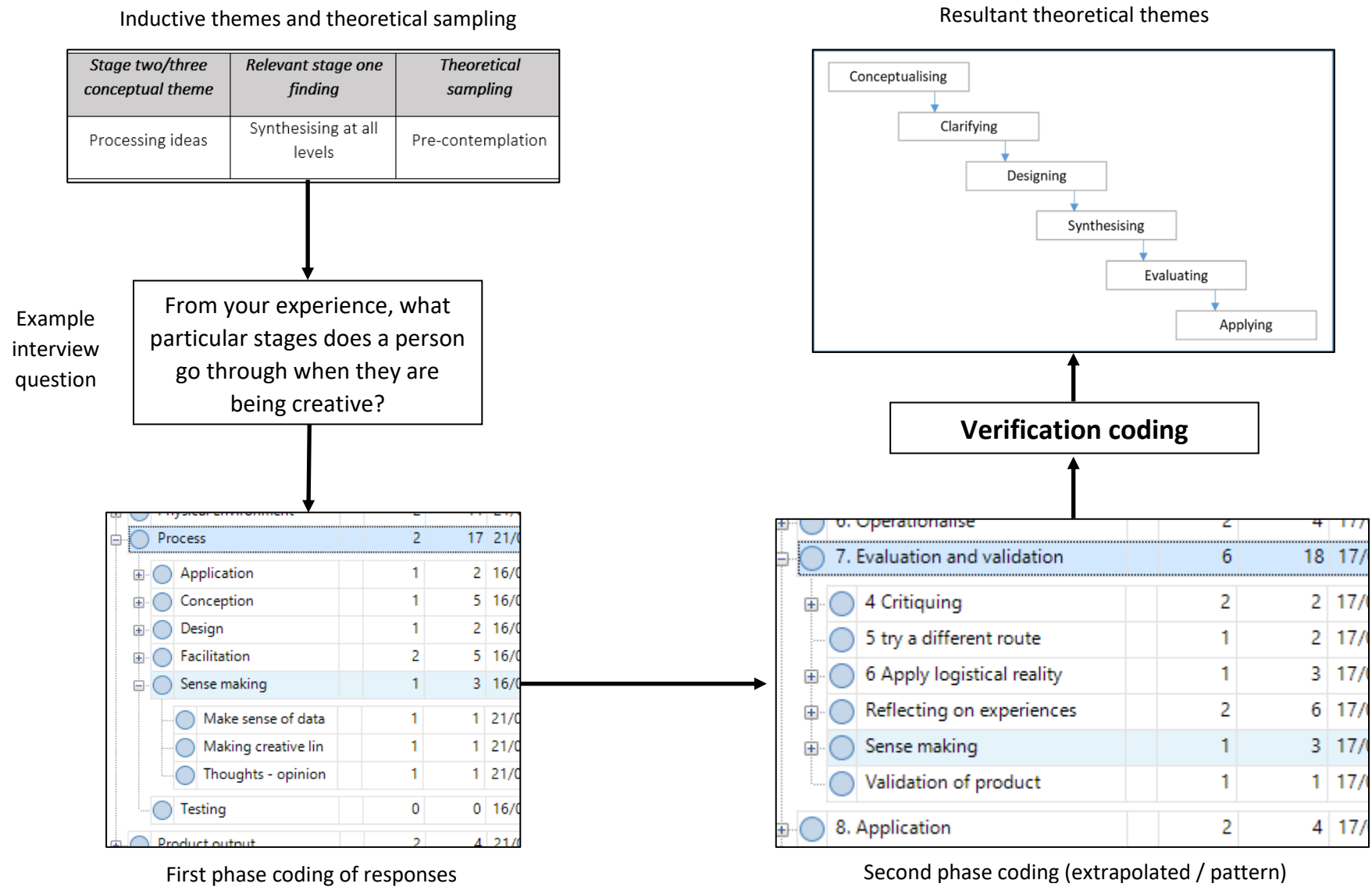
Figure 3.10f Example of second phase coding from stage four using Nvivo Pro (v.11)

The screenshot displays the Nvivo Pro v.11 interface during a second phase coding session. The top section shows an audio waveform with a 'Coding Density' graph below it. A 'Coded dialogue' box highlights a segment of the audio, and a 'Coding stripe (with code label)' box points to a colored bar labeled '3. Clarify the problem' on the waveform. Below the audio, a text area contains phrases like 'unexpected can work - find new answers', 'Discovery the unexpected', 'no motivation to change', 'stagnation', 'Validation of product', '6. Operationalise', and '7. Evaluation and validation'. A 'Basis of previous knowledge' section is also visible.

The bottom section shows a 'Nodes' list with columns for Name, Sources, References, Created On, Created By, Modified On, and Modified By. The list includes nodes such as '4. Method design', '5. Testing of method', '6. Operationalise', '7. Evaluation and validati', '8. Application', and 'Constraints'. A 'Participant colour reference' box points to a colored dot in the 'Modified By' column. To the right, a 'Memo notes' box points to a text area containing the following text: 'The process of solving a problem can be varied and multifaceted but will reach a solution. In many ways this is positive as it allows personal strengths to be harnessed. Produce though is very subjective so if the "end users" is involved in this process in some way and defines it, the product should be more valued. Even if they are not, establishing the most appropriate process will assist in the value of the product.'

Other annotations include 'Audio file (participant interview)' pointing to the waveform and 'Extrapolated / patterned codes' pointing to the 'Nodes' list.

Figure 3.10g Overview and example of coding at stage four



Figures 3.10f and 3.10g show, respectively, an example of stage four coding using Nvivo Pro and an overview of theoretical theme generation from theoretical sampling and interview question response.

### 3.11 Conclusion

The narrative provided here in chapter three has provided a critical description of the methodology and method of the current study; exploring the philosophical positionality of the study and the researcher, the underpinnings of the methodology, the specifics of the method and the approaches employed during the analysis of the findings.

To investigate the research question posed in the current study, that being *How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*, the method was situated within a qualitative, phenomenographic and inductive paradigm that engaged with the principles of Constructivist Grounded Theory to seek meaning and understanding from the participants involved in the study. A multi method approach was undertaken to elicit perceptions of creativity, which involved participants being actively engaged in the data collection via survey activity, reflexive photography, unstructured interviewing and semi-structured interviews. Having established the rationale for the study via the survey activity, reflexive photography afforded participants the licence to provide a *'rich and deep understanding of individuals and groups'* (Gotschi *et al.*, 2009, p290) with the subsequent unstructured interview providing a platform for in depth elicitation discussion which contributed to the development of a local conceptual framework, which was subsequently critiqued during semi-structured interviews. From the outset, this chapter highlighted that depth of participant understanding was the *modus operandi* of the current study, thereby acknowledging that generalisability across the HE sector seemingly cannot, necessarily, be assumed. However, as this chapter progressed from the philosophical underpinnings through to the methodological specifics and analytical techniques, the researcher emphasises an appropriate paradigmatic alignment between the reported fundamental principles of creativity and the data collection techniques of the current study,



resulting in data which is rich in meaning thus leading to practical recommendations, high in contextual trustworthiness.

Chapter four shall now illustrate perceptions of participants and the emergent constructions elicited from the three stakeholder groups.

## Chapter Four – Participant perceptions and emergent constructions

### 4.1 Introduction

Chapter four of this thesis will convey a distilled indication of the views, thoughts, opinions and constructions gathered via the constructivist grounded theory from the employer, student and academic participants situated within this study and thus will address the research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The findings will be presented here in two sections: firstly, the initial data gathered via stage one of the study using a survey tool will be employed to demonstrate the relevance and necessity of this study within the local context it is situated in. The first element of the chapter will also begin, in a very naïve sense due to the superficial nature of the survey tool, to inform a conceptual framework to define creativity as an employability skill in HE.

Second, building upon the initial, more generalised findings of stage one; chapter four will explore in depth the constructions held by a smaller group of participating employers, students and academics which influence their perception of creativity in the employment context. The second element of the chapter will be conveyed in a manner that, consistent with the notions of Grounded Theory (Glazer and Strauss, 1967), shall allow the emergent themes of the data and their analysis to take precedence, as opposed to any categorisation or pre-determined structuring. Presentation and analysis of the emergent themes should facilitate the most appropriate and trustworthy approach to addressing the research question and the underpinning tenant of that question; hence the distilled themes will indicate the common views of the participants' perceptions. The second section will further explore and develop the conceptual framework of creativity as an employability skill in HE, to a point which should allow students and academics to better understand the agreed concepts of creativity and promote their development in an educational context.

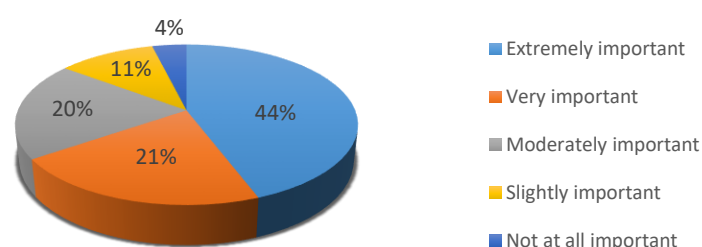
## 4.2 Initial participant perceptions

In this section of the chapter, findings from the survey element (stage one) of the study will be presented. The initial data set is quantitative in its nature, which would appear to be contrary to the underpinning constructivist paradigm that this study advocates, however, the inclusion of this data set is intended to provide an indication of the perceived importance to students, academics and employers of creativity, and thus, support the rationale for the study. The initial quantitative data set in section 4.2 is not intended to convey explanation or understanding to answer the research question; rather, it aims to illustrate the consensus of reflections of the constructions of creativity in a pragmatic manner, thus allowing justification both at the outset of the study and on completion when the practical outputs will require validation in a local context.

### 4.2.1 Overall participant perceptions of creativity – quantitative findings from stage one

The participants who undertook the survey element of stage one of the study appear to perceive creativity with high levels of importance as illustrated in chart 4.2.1a. This would tend to agree, in general, with the established literature in the field of creativity (Mednick, 1962) and more contemporaneous studies such as Jules and Sundberg (2018) who noted that creativity is critical for individual and companies if they are to innovate their outputs and ways of working.

Chart 4.2.1a - overall participant perception of the value of creativity (n=154)

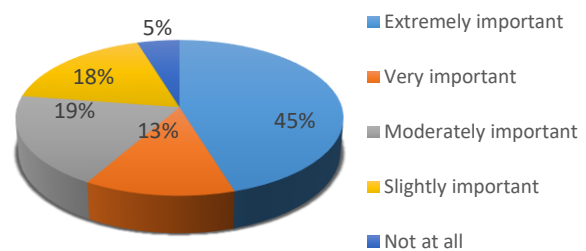


Separation of the three participant groups, as noted in charts 4.2.1b, 4.2.1c and 4.2.1d demonstrated that the perceptions held by employers, students and academics are those

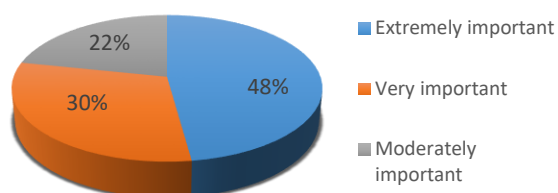
which value creativity as important, however, it is evident that academics perceive it to be of higher value (combined score of 78% for extremely important or very important perception) than students (58%) or employers (68%). Clarke (2017) illustrated that universities have, for some 30 years, been obligated by UK governments to produce graduates who are technically competent and knowledgeable but also can display generic employability skills; hence it could be argued that the results evident here reflect the academics' greater desire and necessity to develop higher order skills in students (Jackson, 2016) and their embracing of freedom and creativity as a necessary aspect of the HE student experience, embedded prior to metrification and performativity (Neary, 2010).

Chart 4.2.1b illustrates that, whilst high overall (combined score of 77% for extremely important, very important or moderately important perception), 23% of students deemed creativity to be only slightly important or not at all important. Further analysis (see appendix E) reveals that students situated in science and social science subject domains account for this relatively high proportion and that the most frequent perception of creativity for science students was *'slightly important'*. This occurrence tends to agree with Simonton (2009), as does the perceptions of the vast majority of students in arts based subject who perceive creativity to be *'extremely important'*. Also congruent with Simonton (ibid), social science students tending towards *'moderately important'* as the most common perception of creativity.

**Chart 4.2.1b - students' perception of the value of creativity (n=84)**



**Chart 4.2.1c - academics' perception of the value of creativity (n=45)**



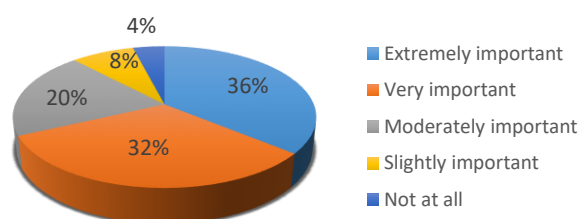
As highlighted in a phenomenographic study by Kleiman (2008), the manner with which academics understand creativity is rich and complex and the findings here would tend to align with Kleiman’s (ibid) conclusion. The social science academics who undertook the survey exhibited a more positive perception,

with 20% of respondents perceiving creativity as being ‘*extremely important*’ and 60% as ‘*very important*.’ The perceptions of science academics were split, with 50% deeming creativity to be ‘*extremely*’ (30%) or ‘*very important*’ (20%), with 50% also feeling that is ‘*moderately important*.’ 26% of the science based students surveys, rated creativity as only ‘*slightly important*’ or ‘*not at all [important]*’ potentially indicating that academics appreciate a measured need for creativity to seek new solutions and approaches to problems, as opposed to the student viewpoint which dictates more of a conservative stance.

It is interesting to observe that when comparing academics and student views from social science and science subject domains, the academic perception is one category higher than the associated students (‘*moderately important*’ and ‘*very important*’ respectively). As the research question focusses on differing perceptions of creativity, this observation is worthy of further focus in later sections of chapter four. Congruence is, however, noted between arts based academics and students who, overall, agree in their perception that creativity is ‘*extremely important*’.

The findings of the quantitative stage one data collection also reveal that academics appear to hold greater value in creativity than employers. Whilst still positive overall, some employers perceived creativity to be only ‘*slightly important*’ or ‘*not important at all*’, in stark contrast to no academics holding these views. The employers’

**Chart 4.2.1d- employers' perception of the value of creativity (n=25)**



perspective, generally, shows (Chart 4.2.1d) a similar distribution pattern to those of the students but tended to be more positive with lower percentage responses in the *'slightly important'* or *'not important at all'* categories. As illustrated by the World Economic Forum (Gray, 2016), and Rampersad and Patel (2014) employers do tend to recognise the value of creativity in graduates and the findings of this study would suggest that the employers of the Lincolnshire region would align with this.

A deeper exploration of the employers' perceptions illustrates that those employers from a social science related sector would appear to perceive creativity with greatest importance, as 75% of participants in that sector reported creativity to be *'extremely'* or *'very important'*. The majority of employers from a science related sector deemed that creativity is *'moderately important'*; a position which mirrors the views of science based academics. Whilst caution should be exercised in the findings due to only one arts based employer participant undertaking the survey, this arts based employer felt that creativity was only *'slightly important'* offering a highly contradictory stance to arts based academics or students. The arts based employer position is also contradictory to the associated literature and therefore is worthy of further exploration in the later stages of the data collection and analysis.

When considering the size of an employer (expressed as a function of the number of people employed) it is evident that, irrespective of size, employers do perceive creativity as positive with 68% of participating employers regarding creativity as either *'very important'* or *'extremely important'*. Participant feedback also illustrates that the smaller organisations, that is, those with fewer than 250 employees, tend to hold creativity in higher regard than those employers with in excess of 250 employees. This tends to agree with Zhou (2018) who suggested that newer start-up business, particularly those with a technology base, rely on employees with a creative skill set and that growth in the number of small and medium sized businesses led by *'creative entrepreneurs'* (p20) was rapid.

The initial section of the findings has conveyed the perceptions of the value of creativity from the perspective of the students, academics and employers of this study. The findings illustrate that, whilst variation is apparent across the data set, all participant groupings value creativity and deem it to be an important skill. These preliminary findings tend to agree with the general research literature associated with the subject of creativity (for example Lauder, 2015; Nevin, 2016; ISE, 2018) and demonstrate that the views of the localised participant groups of this study are similar to those of wider data sets and contexts identified in previous studies, although the subdivision of participants, particularly employers, by subject domain is not routinely reported in the literature. The overall aim and methodology employed in this study have been designed to explore, in depth, the perceptions of creativity from the standpoint of students, academics and employers in a local context and provide guidance as to how creativity can be fostered as an employability skill; in essence, generalisability of findings was not an aim or motivation. However, as the initial findings illustrated in section 4.2.1 do tend to indicate agreement with a more global data set, it could be argued that, to some degree, the findings here within could contribute to the literature base surrounding creativity more widely.

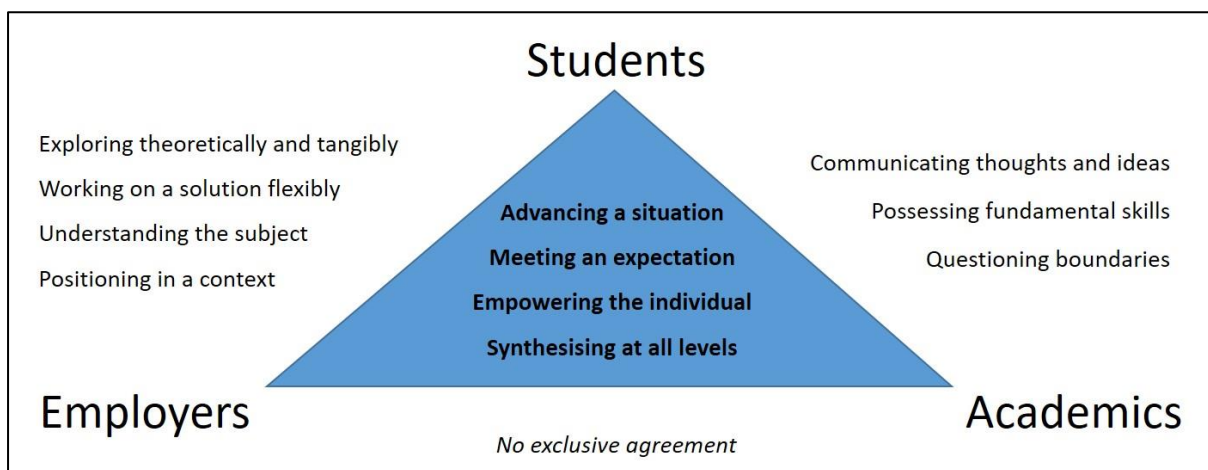
Whilst this preliminary quantitative data set appears to conclude that creativity is, for the majority, important and thus provides an initial justification for this study and differences in values also illustrate further investigation is required as the quantitative data does not explain participants' perception of *what* creativity is and how they define it. The proceeding section will present the thoughts and opinions of participants from the stage one data collection with regard to creativity and will, cautiously, begin to draw together a view of the constructions held by participants when defining creativity. These constructs will then begin to form an initial, localised theoretical framework of creativity which will subsequently be refined by the later stages of the method.

#### **4.2.2 Initial participant constructions of creativity – qualitative findings from stage one**

Whilst gathering information regarding participants' perceptions of the importance of creativity, stage one of the method also began to tentatively explore the constructs by which students, academics and employers define creativity. As indicated in chapter three, this

analysis was undertaken on a subset of the overall participant sample (n=85) for reasons of feasibility and to establish a balance of students, academics and employers, and their subject groupings. As also illustrated in chapter 3, following initial coding (in vivo and process, Charmaz (2014)) of the participant responses to the open questioning in stage one, focused and axial coding followed. A subsequent ‘top down’ re-coding to ensure validity was undertaken. A number of themes were established from the data which pointed towards how students, academics and employers construct creativity and, perhaps more importantly, where illustrated where agreement between the parties exists, as illustrated in figure 4.2.2 below.

Figure 4.2.2 – Stage one student, academic and employer constructions of creativity



As illustrated in figure 4.2.2, four common constructs resulted from the thematic analysis: ‘*advancing a situation*’, ‘*meeting an expectation*’, ‘*empowering the individual*’ and ‘*synthesising at all levels*’.

‘*Advancing a situation*’ and ‘*meeting an expectation*’ would tend to agree with much of the literature base in that most conceptual frameworks place emphasis on the production or improvement of a product (for example Sternberg *et al.*, 2002; Jackson, 2006; Medeiros *et al.*, 2014), be that a material product or theoretical output. McCabe and de Waal Malefyt (2015) refer to this approach as ‘*backward thinking creative*’ (p48) whereby the product of creativity rather than an indeterminate process of creativity is sought. These two common constructs



would, on first appraisal, tend to agree with the backward thinking theory, however, additional analysis would seem necessary to ensure that the valuing of more intrinsic goals or processes (Ingold and Hallam, 2007) are not being conveyed by the participants here.

To understand further the participants' interpretation of the meaning given to *'meeting an expectation'*, it is important to delineate and explore the two key elements within this construct; meeting and expectation. The participants of this study were agreed that *'meeting'* related to the process of creativity fulfilling, satisfying or reaching a threshold of sorts; with *'expectation'* being explained by the participants as that threshold and related to a minimum standard, defined either by a co-actor, an internal context or externally driven such as a statutory requirement. Whilst the data sets of the three participating groups tends towards consensus in this respect, the domain specific examples do vary between the participant groups.

Students were inclined to view the construct of *'meeting an expectation'* as one which related to passing their course or element thereof, with course tutors or assessors usually being the co-actors who define the expectation, often in the form of a marking criteria. In contrast to this, academics tended to form their constructions using examples such as knowledge, research, academic skills, teaching and scholarly development as the expectation, with either colleagues, students or their respective subject peers being the defining co-actors. The employer participants appeared to, largely, adopt a stance which acknowledged external motivations, such as financial profit, as constructions of *'meeting an expectation'* and their clients as the co-actors responsible for defining the expectation. For example, an employer noted that:

*'... we provide carefully tailored solutions to meet specific customer needs – which relies inherently on creativity.'*

This employer interpretation recognises the customer as the external co-actor who defines their requirements and seemingly acknowledges the low locus of control in defining the expectation to be met.

Exploring the construct of *'advancing a situation'* further in the context of this study's participants, it is important to appreciate the two key terms; *advancing* and *situation*. Participants perceived *'advancing'* as relating to a positive progression or making something more worthy, and quote examples such as:

*'...while the creativity of professional staff enable the university to develop new and hopefully less onerous ways of doing things'* (academic participant).

*'With every new object there you have to deal with different problems. Creativity is essential to find the most suitable solution'* (employer participant).

*'Finding approaches that improve effectiveness, efficiency and economy'* (student participant).

These examples, and the construct overall, tend to agree with the virtuous nature of creativity cited by much of the background literature (for example Guilford, 1950; Škerlavaj *et al.*, 2014; Alencar, 2015) and support the idea that creativity is positive for an individual, society and in employment contexts. Whilst participants reflected this stand point overwhelmingly, one student participant did, however, make reference to what Furnham (2015) referred to as the *'dark side'* (p39) of creativity and noted:

*'...criminals minds are creative so catching them needs creativity.'*

This, perhaps, indicates that whilst the agreement regarding how creativity is constructed is evident, the underpinning values held by participants as to that construct can be variable, and are worthy of further investigation if a pragmatic understanding of creativity is to be established.

The *'situation'* noted in this construct seemingly refers, as defined by participants, to a problem, artefact or scenario. For example, an academic stated that:

*'Developing novel distance learning teaching and evaluation strategies to meet the ever growing demand of the food manufacturers for highly skilled staff and developing new products.'*

Whilst the context of this example is specific to the scenario it is situated within, the reference made in terms of the *situation* (here being distance learning and a rapidly developing industrial sector) is not untypical across the many of the participants of this study and is also congruent with much of the associated research literature (Runco, 2010; Barbot *et al.*, 2011) in that it implies that creativity has an end point and results in the production of an output if it is to have value.

A similar notion was identified as a further tripartite (that is, all three participant groups) construct; that of *'synthesising at all levels'*. Whilst similar in terms of the implication that an entity will result from a creative act, this construct appears to be distinct to *'advancing a situation'* in two ways: firstly, participants seemingly share the perception that an individual is being creative when they contrive something new by combining previously understood conceptual or physical components. One academic commented:

*'Rich critical responses to literary texts are always in part a creative act built from making new conjunctions, connections and conclusions during research, analysis and writing.'*

This finding is in agreement with the findings of Jackson (2014) who noted that HE academics identified *'making new thigs'* (p10) as being creative. Furthermore, the general notion of synthesis as highlighted by related research literature, for example Mednick (1962), is of a single end point of an entity of creation, resulting from the combination of pre-existing components. In contrast to this, the student and academic participants of this study, appeared to view synthesis in a more holistic manner and apply the notion at various stages of the creative journey, such as, research question generation, hypothesis formation, literary review strategies and method design, tending to agree with Jules and Sundberg (2018) who suggested creativity can be more abstract and less concerned with a product synthesis. The employer participants made no such inferences or gave no such examples and thus tended to agree with more traditional, output notions of creativity as suggested by Wallis (1926/2014). Whilst the agreement surrounding synthesis is interesting, stage one of the data collection did not, however, illustrate how this synthesising occurs or if any sequencing of the creative process is necessary. This in tandem with the contrast in employer views and general literature base,

became worthy of further investigation in the later stages through theoretical sampling (Corbin and Strauss, 2008).

The final construct commonly identified by the students, academics and employers was *'empowering the individual'*. This construct is interesting as it goes beyond a mere definition of creativity and appears to illustrate that participants give recognition to the notion that creativity exists in, and is limited by, the social and cultural context it is situated within. This would tend to agree with Glăveanu (2010) who contended that creativity does not exist as its own subjective phenomena but is situation specific and shaped by the tensions between existing cultural artefacts and new creations.

In the context of this data, participants seemingly refer to the *'individual'* as any person within their given context; that being a university or place of employment. At no point in the data did the idea of empowering a *'collective'* to be creative emerge and, superficially, participants only made reference to themselves and other individuals, such as fellow students or employees. The notion of *'empowering'* appeared to be perceived by participants as relating to the enabling of personal agency within a social structure and allowing the personal characteristics of the individual to flourish in the pursuit of new ideas. For example, some participants noted:

*'Creativity is enhanced by providing the space and resources [in HE] to support the individual to thrive'* (employer participant).

*'...allow students to approach the unique conservation issues which historic objects pose independently, thus empowering them to be active in their own learning, and developing their confidence as emerging professionals'* (academic participant).

*'Freedom to express thoughts and opinions without fear of being wrong'* (student participant).

It appears that participants are agreed that empowerment and the removal of the fear of failure is a key facilitating factor of creativity and to some extent, it could be postulated that without the *'empowering the individual'*, the three previous agreed constructs become inconsequential as without the agency to act, an individual could not, for example, *'synthesise*

*at all levels*'. The construct of *'empowering the individual'* now begins to illustrate that the definition of creativity, from the participants' point of view, gives value to not only the output or product but also the facilitating factors that enable a creative process to occur.

Contrary to the beneficial notion this construct implies, it could be argued that there is an implicit assumption that the *'individual'* has the capacity and is motivated to undertake creative activities. Findings from stage one of this study do not make reference to an individual's capacity to be creative or motivation; concepts that Guilford (1950), Sternberg (2006) and Runco (2009) suggested are important underpinning factors and hence, this tacit assumption was worthy of further investigation.

As noted on figure 4.2.2, four tripartite constructs are evident in the data received during stage one and thus begin to address the research question. It is also evident that a number of constructs are agreed between students and academics, and students and employers, but most interestingly, no direct agreement between purely employers and academics was evident. This does, perhaps, propose an interesting dichotomy given the political emphasis placed upon academics to prepare students for employment and, furthermore, does raise the question of how well do HEIs and employers communicate on a common goal. This is initial finding seemingly further enhances the rationale for this study.

In summary, stage one of this study began to address the research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

Quantitative aspects of the data collection illustrated that the overwhelming perception of creativity from a student, academic and employer perspective, shown in figure 4.2.1a, is one of high value. Investigating the way in which students, academics and employers understand creativity, the qualitative element of the stage one method gathered data which suggested a

variety of perceptions, however, agreement was evident in the constructs of '*advancing a situation*', '*meeting an expectation*', '*empowering the individual*' and '*synthesising at all levels*'.

These initial findings give support to the rationale for this study and suggest deeper exploration of how creativity is perceived by the participant groups is required, hence, section 4.3 of this chapter will convey the findings of the initial stages of this deeper exploration.

### **4.3 Emergent participant constructions – findings from stages two and three**

In this section of chapter four, findings from stages two and three of the method will be presented, analysed and discussed. Findings collected via stage one of the method and reported in section 4.2, provided justification of the value of creativity from the position of a larger sample of students, academics and employers. Following this validation, stages two and three of the method used reflexive photography to engage participants in *in-situ* data collection (stage two) and subsequent unstructured interviews to elicit thoughts, views and opinions that explain participants' perceptions of creativity (stage three). A more focused sample of participants (three students, three academics and two employers) were employed for stages two and three of the method, thus allowing for greater depth of exploration, richness of data and greater understanding to be gained. The resulting data is highly qualitative, subjective and trustworthy for these participants in their contexts; thus aligning with the principles of Constructivist Grounded Theory (Charmaz, 2014), in that, findings were permitted to occur without bias or prejudice from myself as the researcher or any previous conceptual framework.

As highlighted in chapter three of this study, the outputs of stage two were not explicitly analysed in isolation due to the likelihood of misinterpreting participants' representations of creativity (Bryman, 2012) and potential of conflicting with the notions of Grounded Theory; rather, they formed the integral basis for discussions within the unstructured interviews of stage three. Therefore, the findings presented here are outcomes of the unstructured interviews and the resulting consensus of constructions held by participants with regard to

creativity. Examples of images collected by participants during stage two can be seen in appendix F.

The maintenance of participant anonymity is a requirement of the ethical clearance permitted for this study, as defined by the University of Lincoln’s Research Ethics Guidelines (2013), and hence, the eight participants will be referred to by the pseudonyms in table 4.3 from this point forwards.

**Table 4.3 Participant pseudonyms and characteristics**

Participant	Pseudonym	Participant group	Subject domain
Employer one	Chris	Employer	Science
Employer two	Leslie		Arts
Academic one	Aubrey	Academic	Science
Academic two	Lindsay		Social Science
Academic three	Francis		Arts
Student one	Charlie	Student	Science
Student two	Sam		Arts
Student three	Jesse		Social science

#### **4.3.1 *In-situ* participant constructions of creativity**

As illustrated in chapter three, interview recordings were uploaded to and analysed via Nvivo 11 where initial coding (in vivo and process) was subsequently developed by focused and axial coding. Similar to stage one, a ‘top down’ re-coding exercise was undertaken to increase the validity of the resulting codes and conceptual themes; an overview of which is presented here in figure 4.3b, stratified from most to least participant agreement.

**Table 4.3.1 – Stage three student, academic and employer constructions of creativity**

Sub code	Conceptual theme
Initiating idea development Developing ideas and forming methods Realising idea outputs	Processing ideas
Fulfilling a requirement Synthesis of a physical entity Improving a given scenario	Producing a valued entity
Enabling personal agency Acknowledging individuality Enabling environment	Facilitating factors of creativity
Complying with perceived personal barriers Restricting development due to financial cost Conforming to tradition Operating in a negative environment Conflicting drivers and motivations	Limiting factors of creativity
Working with others Communicating effectively Possessing trust	Collaborating with others
Permitting own agency Working relentlessly Reflecting personally	Characteristics of creative individuals
Baseline understanding of the subject Confidence with subject matter	Understanding the subject

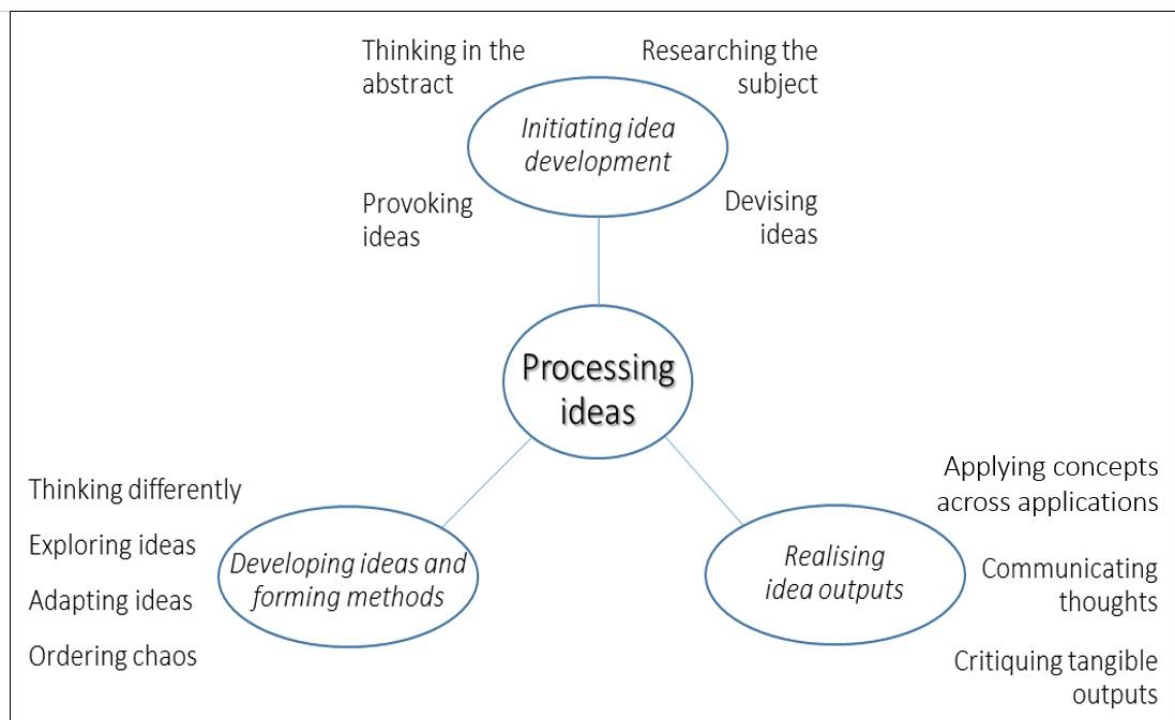
As highlighted above in table 4.3.1, seven conceptual themes emerged from the stage three unstructured interviews. Aligning with much of the literature associated with creativity, the notions of *product* and *process* emerged as constructs, mutually agreed by the participants,



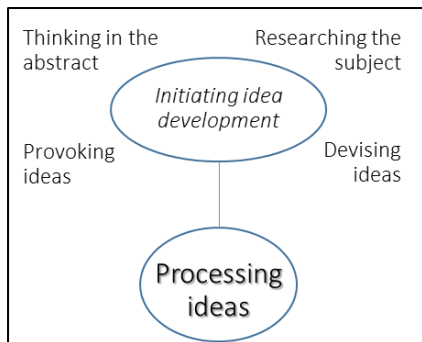
however, other factors were apparent that are less consistent with the research base. This will now be discussed.

All participants, regardless of subgrouping, highlighted that to arrive at a creative output, a process of initiating and then developing an idea through a process is necessary. Superficially, in terms of a general view, this position aligns with established theories of creativity such as Wallas (1926/2014), Guilford (1950), Campbell (1960), Plucker *et al.* (2004) and Jules and Sundberg (2018) yet the specific elements and principles do appear to differ. Figure 4.3.1a provides an overview of the contributory constructs, and their informants, to the theme of *Processing Ideas* which will now be explained in greater depth.

**Figure 4.3.1a – Underpinning constructs of the *Processing Ideas* theme**



## Initiating Idea Development



**Figure 4.3.1b – the initiating idea development**

During the unstructured interview stage of the current study, the participants identified ‘*initiating idea development*’ as the first element of the creative process which tended to focus on less constrained and free flowing activity. Similar to Guilford’s (1967) theory of divergent thinking, participants perceived that in the initial stages of the creative process, ideas should be provoked (*provoking ideas*), allowing multiple ‘*really stupid ideas*’ (Charlie) to grow without limitation and to seek a variety of options. As Leslie put it:

*‘...it’s that blank canvas; that not yet created thing that you’ve got to, from nothing, create something. And I think, the heart of creativity, that’s what you do.’*

At this stage of the creative process, participants gave examples which highlighted that thinking in an abstract manner (*thinking in the abstract*) facilitated this free flowing approach and produced creative thoughts. Citing an example from an image which detailed a teaching context where students were asked to create a film set with limited resources, Francis noted:

*‘...they have that window open, they’ve stuck a few fake trees behind there so you get that sense there is a garden beyond, beyond the window so they are starting to think outside of the space and about how it’s all going to come together.’*

An image provided by Jesse (image 4.3.1 below), which suggested how reality can be viewed differently when seen through different lenses (of a set of sunglasses), gave a further example of this notion of thinking in the abstract. Jesse noted that to overcome external influences that may constrain a person’s thinking, such as social role models or peers, viewing reality through ‘*glasses*’ allows you to think in your own abstract way and be more creative.

Image 4.3.1 – Image provided by Jesse



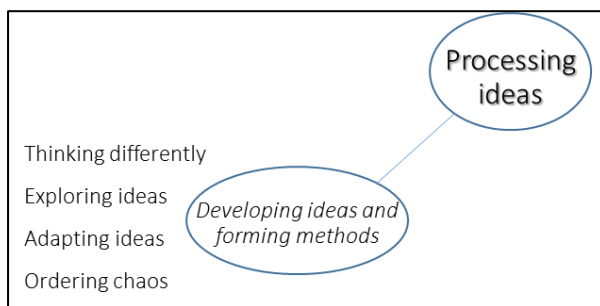
Furthermore, Sam and Leslie provided examples that suggested sensory stimulation is also facilitative in the divergent thinking element and noted that this can be provided from a visual, auditory or tactile sources. Interestingly, whilst participants were agreed in identifying this divergent and abstract space for generating creative ideas, it is also evident that no participants highlighted where or what the motivation for undertaking this idea generation, in the first place, is. Understanding this pre-contemplation genesis of creativity is, perhaps, important and therefore became worthy of further sampling in stage four of the data collection, as the literature surrounding creative processes (for example Rhodes, 1961; Amabile, 1983; Glăveanu, 2013) tend to acknowledge the initiating stages of a process but not how an individual begins that process and what might influences this initiation.

Within the initiating stage, participants went further and subsequently identified that the initial divergent ideas are then refined and explored (*devising ideas*), in an attempt to devise more established, valid and realistic thoughts. Lindsay and Jesse highlighted examples that illustrated, even at this early stage, there is a necessity to be self-critical and evaluative of whether initial ideas would work in practice and can be justified. Likewise, Leslie and Francis made similar reference to this justification but expressed that this is more effectively achieved in a tangible way rather than theoretically as suggested by Lindsay and Jesse.

The final aspect of the initiating idea development element which appeared to show agreement across participants was that of *researching the subject* area related to generated and refined ideas. Participants seemingly recognise the importance of understanding the underpinning concepts of the generated ideas to ensure that, going forwards, ideas are

credible to an external audience, justifiable with regard to planning how the idea would work in practice and to think differently, thus viewing the idea from a further perspective. Participants suggest that this aids the preliminary selection of an idea, from the divergent array of ideas, for further development and possible application.

### ***Developing ideas and forming methods***



**Figure 4.3.1c – the *developing ideas and forming methods* construct**

A subsequent element identified by the participants within the conceptual theme of *processing ideas* was ‘*developing ideas and forming methods*’. In essence, here the participants convey the notion that once ideas have been generated, distilled and initially refined in the ‘*initiating idea development*’ element, the idea will then be

developed further into a physical or abstract output. Four key elements related to this were evident in the data set produced during the unstructured interviews with participants: *ordering chaos, exploring ideas, thinking differently* and *adapting ideas*.

When attempting to bring order to the divergent chaos of the creative process, participants perceive the recognition and defining of parameters to bound ideas and work within as important, which tends to align with Runco (2010) who argued that too much divergent thinking can create strange and irrelevant ideas that are not conducive to efficiency or effectiveness. Participants implied that the basis for these parameters are derived from a range of sources, including credible scientific protocols (Aubrey), pragmatic resource implications (Francis), and commercial experience (Chris), and their application to the creative process will facilitate the idea ‘*what they are reaching towards*’ (Francis) and achieving an output. The suggested confinement noted above could be viewed as, potentially, contrary to creativity due to the possible limits placed on individuals, however, Gołowska *et al.* (2014) concluded that the seeming need for structure and chaos avoidance is an individual psychological trait and based upon the ‘*person need for structure (PNS)*’ (p960).

Participants viewed the exploring of the idea as important and in this element related the *exploration* to the transformation of abstract thought into tangible, or in some instances concrete, artefacts. Data suggests that this is by no means a simple conversion of theory to reality, but rather an interactive process of experimentation, repeated testing and discovery through an interactive experience, for example:

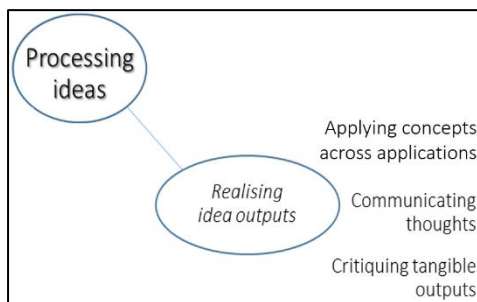
*'...a close loop of understanding with the customer and quite a lot of interaction so it became a very productive, more collaborative venture rather than just making a proposal then knocking it, then sending it back and say it doesn't do this x, y and z it was a much more interactive development process'* (Chris).

It is also worthy of note the divergence in approach here between the social science and other participants, in that, Lindsay and Jesse presented abstract notions at this point and referred to the development of ideas as theoretical, affective entities such as transforming personal thinking and viewing the world differently (Lindsay), rather than tangible artefacts.

The next element in the *'developing ideas and forming methods'* noted by participants was a further evaluative element which pointed towards thinking about the selected idea in different ways. Seemingly, importance is given by participants to the notion that endeavouring to view an idea objectively or from *'a bird's eye view'* (Jesse) and challenging traditions and accepted norms gives greater credibility to creative process and thereby the refined idea. The final element which informed the *'developing ideas and forming methods'* code appears to draw together the previous three sections and culminate in adapting the current idea, based on the ordering of the chaos, the exploration of the idea and the objective evaluation. Students, academics and employers concurred that this element of the process is concerned with making improvements, affecting ongoing enhancements, refining ideas still further, developing derivatives from the original and honing in on a path of action. Very interestingly, the notion that creativity does not equate to originality was highlighted by the Chris and Charlie (science based), and linked to this element of the process. The employer noted that creative ideas which lead to an effective output are often *'not breaking new ground'* and when referring to the image collected, the student illustrated that the output in the picture was new, had not been seen or produced before, was highly effective but was a copy of other products.

This notion, generally, was worthy of further investigation due to the given the variance in the subject domain grouping and the debate in the associate literature where, for example, Plucker *et al.* (2004) and Sternberg (2006) view creativity as the contriving of novel products whereas, amongst others, Barbot *et al.* (2011) and Stein and Harper (2012) contest creativity is the genesis of a completely new, never seen before entity.

### ***Realising Idea Outputs***



**Figure 4.3.1d – the *realising idea outputs* construct**

The final contributory construct identified by participants which informed the *Processing Ideas* theme, was that of *Realising Idea Outputs*.

Divergence is noticed here, however, following the two former elements of the *processing ideas* constructs.

Academics and employers appear to emphasise a requirement for this final stage in the creative process whereby critique, communication and further synthesis are necessary to validate and convey the creative outputs; whereas students did not report this as a construct and solely focused on the initial and developmental elements. This finding was therefore worthy of further analysis and investigation at a later stage of this study’s method.

Participants conveyed that critiquing the results of creative ideas, the *tangible outputs*, is an important facet of the creative process, thus finding agreement with many of the conceptual frameworks within the literature base (Wallas, 1926/2014; Guilford, 1950; Bowden, 2004). Both employers and academics made reference to the importance of reflecting on and analysing what has been produced either by the use of some industry standards, marking criteria or the theoretical concepts to interrogate ideas to, again, bring validity and credibility to the output.

*Communicating thoughts* was an agreed construct which also underpinned the *realising outputs* theme. Participants conveyed a belief that creative thoughts and the outputs resulting

from those thoughts require communicating to others; superficially implying that creativity is of little use (externally) if others are not aware of or do not realise its external output, be that a tangible artefact or the expression of an internalised thought. Generating visualisations of creative thoughts appeared to be of importance, as participants conveyed that this moves creativity from the abstract to the tangible and gives the observer (that being the person being communicated to) an opportunity to realise the creative idea. For example, Lindsay described a creative (as they perceived it) piece of student work that used a metaphorical approach to communicate notions of ontological security via the drawing of a comfort blanket. Francis gave an example which agreed with the idea of transforming an abstract thought into a tangible, viewable object but the approach the communication took was more practical and concrete in its manner; in this instance, the creation of a film set to convey a 1960's fictional situation.

Lindsay and Francis suggested that the creative graduate tends to be able to access a range of different ways of communicating thoughts and ideas, so as to make clear their thoughts, views and ideas accessible to a wider range of audiences. This finding is interesting as it implies that participants view creativity as something rather more objective and external to the person, and whilst not necessarily suggesting that participants deny the existence of internal creativity, the notion that creativity is only valuable if conveyed and expressed to others external to the self is implied. This notion tends to contradict theory presented by Kaufman and Beghetto (2009) which values personal, internal '*mini -c*' creativity, as it permits small every day challenges to be overcome by individuals.

The *communicating thoughts* subcategory of *realising outputs* was identified by the social science and arts based academics. This meta-information was interesting and worthy of further investigation as it could be postulated that the theoretical concepts evident in science based subjects may require different methods of communication to convey creativity when compared to social science and arts based domains. However, this was not highlighted by the Chris or Charlie (science based).

The final contributory sub code conveyed by participants, particularly academics, was that of *applying concepts across applications*. Participants expressed that whilst the production of an output is valuable in its own right, the creative process goes further and should propose, theoretically, how the output could extend beyond its own context, situation and transcend subject disciplines. Lindsay noted of a creative graduate:

*'...research they've been doing about a completely different condition, yes, but they can see how these concepts apply across the different situations.'*

This tendency holds general alignment with the work of Awang and Ramly (2008) and Sternberg *et al.* (2002) but is perhaps distinct in that these authors view this transcendence as an initial purpose of creativity, as opposed to the participants here who viewed it as a latter part of the whole creative process.

Akin to the notions of *Processing Ideas*, the participants were in general agreement with regard to creativity having an association to *Product*. '*Producing a valued entity*' was associated to creativity by the participants and the intersecting coding that fed this concept tended to focus upon three main tenets '*Fulfilling a requirement*', '*Synthesis of a physical entity*' and '*Improving a given scenario*'. Whilst all participants, irrespective of role or subject domain sub groupings, recognised that creativity is required to have output of value; an example cited by Chris noted:

*'[commercial in confidence] standards for new equipment came in 2014 and we won a contract, we developed a system to meet his [the customer] performance targets and have been supplying systems since that date.'*

In this instance, the Chris illustrated that creativity must have an output (the supplied systems) and that the output has value, that being, the supplied system meets a statutory industrial standard and thereby the customer's performance target. A plethora of similar examples are noted by other participants, highlighting the concepts of output and value, however, variability is evident in terms of defining what constitutes an output, how value it is defined and who defines this value.



The perceptual differences that are emergent within the data set tend to centre on role groupings (students, academics, employers) as opposed to subject domain groupings (science, social science, arts). Employers' construction of an output resulting from creativity, tended to be represented by tangible artefacts or physical items, and whilst the employer did value the physical artefacts discussed, the contextualised value was defined by the client they were producing the artefact for. Aubrey concurred with this perception, however, this and the other two academics showed greater tendency towards defining an output in more abstract terms, citing examples such as the development of personal skills such as problem solving or independence. Interestingly, the locus of control regarding the value of the output as perceived by academics was seemingly internal, that is, self-defined. In contrast, student participants generally perceived the value as being defined by external co-actors, particularly their tutors via marking schemes for assessed pieces of work, and that the output of creativity is usually a physical item. This highlights an interesting and unexpected contradiction in the relationship between academics and students, whereby academics perceive the output of creativity to be more abstract, however, the people whom they are giving an education to perceive it much more tangibly. It could be postulated that the academic skills of reflection may not be fully developed or valued by students, who are likely to be more sensitive to the pressures of consumerism, the need for tangible gain and, as identified by Twenge (2017), current students are increasingly anxious and apprehensive than in previous generations. This tended to be supported by Yetzke (2019) who noted that students who can be categorised as 'generation Z' (p34) place a great deal of importance on the grading of their academic performance.

Further to the underpinnings of *Processing ideas* and *Producing a valued entity* the participants identified a number of factors which seemingly feed and, to some degree, enable the concepts of process and products. The first area of agreement was that of *facilitating factors of creativity* whereby participants recognised factors related to securing an environment which enable the individual to be creative. *Enabling personal agency* was a contributory sub code which supported the *facilitating factors* theme and, from the participants' position, emerged from the notions of allowing individuals to experiment, to explore, to run with ideas and to explore through failure. Chris reflected on a situation which they deemed to be a creative incident and

which was funded to have *'...quite a wide scope where we could simply experiment.'* Similarly, Francis describe a teaching situation where:

*'another team [of students] were experimenting with this spot light idea and this just became a lovely little discovery on the way.'*

Jesse also identified what they considered to be a creative environment and described designing an artefact as:

*'...we're gonna do anything with it. We're just gonna like, in the design stage, just be sort of like having a play...'*

Leslie also concurred with the idea of unbounded freedom and the notion that creativity thrives in this environment. They noted of an employee that:

*'[employee name] was having to look at typography books and design books and his desk is a trash but I love it. That's proper creativity...'*

Whilst Aubrey agreed with the notion of allowing freedom in this respect, they also highlighted that the experimentation is required to be managed or constrained to some degree and this, perhaps perversely, facilitates creativity. This position tends to align with Medieros *et al.* (2014), however, other participants made no mention of this at this stage, therefore making this worthy of later theoretical sampling.

*Facilitating factors* was also underpinned by the participants' position of *acknowledging individuality*; agreeing that students, employees and colleagues have different approaches and strategies when being creative, and that this variety should be permitted and encouraged. Using the sunglasses image (where viewing through one lens is in colour and the other is black and white), Jesse took a metaphorical approach to describing individuality in the creative context and noted that where a situation:

*'...doesn't give you the chance to express yourself or, just, analyse or think for yourself really, you're always going to see the black and white.'*

Leslie tended to agree with this and illustrated an example whereby an individual's approach to working within a creative situation should be trusted and that, in this specific example, education should be more flexible and trust people rather than imposing predefined views. Chris also concurred with this stance and gave examples of two employees who the employer deemed to be creative but are different in their nature; one being '*extrovert and loves to hog the whiteboard*', whilst the other being '*introverted but quite outspoken.*' This is an interesting alignment given the disparity in the backgrounds of the employers, as it could be suggested that Leslie (arts based) would tend towards individuality but Chris (science based) may permit less flexibility due to the highly structured underpinnings of their subject.

The final subcategory of *facilitating factors* was that of *enabling environment*. Participants' perceptions in this respect tended to focus on the culture of an environment and how this promotes creativity, and although this brought some distinction with the previous subcategory of *enabling personal agency*, the relationship between the two subcategories at this stage was unclear. In the *enabling environment* subcategory, participants employed their images to convey the notion that the contrived environment in which humans operate, can assist in facilitating creative behaviours and enable personal agency to be creative. The overall perceptions demonstrated by all participants expressed that creativity can be fostered in an environment that presents reduced risks in terms of behaviours and thoughts, but also acknowledged that this freedom may result in compromises on performativity and output. Lindsay provided an example of and explained about a risk free environment (designed in a seminar) which had encouraged creativity and resulted in unexpected tangible outputs. Lindsay also noted that much as though the environment was risk free, they felt (and therefore provided in the seminar) clarity of the focus and aim of the activity. Francis concurred with the notion of operating with freedom and reduced risk, yet also conveyed that this will often compromise perfection and absolute accuracy but this is a concession worth making given the value of the creative output.

In a similar vein, Chris appreciated the potential of operating with '*high degrees of freedom and working in a very unstructured...very unstructured, collaborative organisation*' but later

acknowledged that, for example, when describing the early stages of the a new design, stakeholders (usually customers or managers) had to accept the potential that nothing would be gained from the exercise. Leslie had comparable thoughts with regard to the aspect of freedom and make various references to allowing their employees to *'take a break'* or *'get some air'* to encourage creativity. Whilst Leslie demonstrated this agreement, focus was given to the physical environment; mentioning music, nature and physical activity as possible facilitators of creativity. It is interesting to note that, at this stage of the data collection, Leslie (with an arts subject base) was the only participant to mention positive physical aspects and features, indeed, not even Sam raised similar notions; perhaps suggesting that the physical environment is so inextricably linked to creativity that, in a tacit way, participants did not highlight it as important. Alternatively, Leslie's variation from other participants could be, simply, a personal preference or a reflection of the specific subject domain in an employment context. Irrespective, this variation was worthy of further investigation in stage four.

The student participants illustrated, via the examples in their images, agreement with the idea that for creativity to occur, a sense of freedom is required by those attempting to be creative. Charlie expressed that creativity was enhanced when they were working in an environment which allowed for *'trial and error'* and which allowed them to freedom to *'learn individually'*, and similarly Jesse made reference to personal freedom but in a more abstract sense compared to Charlie; perhaps due to Charlie having a science background and Jesse being based in the social sciences. Referring to freedom to be creative, Jesse noted that:

*'...the environment that you're in needs to respect, like, needs to respect the need, just the basic human need to think and think for themselves.'*

In contrast to the *facilitating factors* identified by participants, tripartite agreement was also identified with regard to the *limiting factors of creativity*, and in many respects, these tended to be dichotomous to the issues relayed in the *facilitating factors* category, with the exception of *restricting development due to financial cost*.

The issue of financial cost was raised by participants as a limiting factors to creativity in two rather distinct ways. Firstly, Sam identified that a minimum level of resource, and therefore

financial input, was a limiting factor to creativity and, interestingly the employers and science based participants identified this issue most strongly. Leslie made the point that:

*'...on a scale of one to ten, I think our work is probably a seven. I think it's very, very good standard; very, very good for what the client is paying. Exceptional for what the client is paying. But is it the best in the world? No. Because? The budgets and the time isn't there for us to invest the time we need to make it even better.'*

Chris supported this stance and discussed that due to the high financial turnover:

*'...the systems and procedures and controls and processes, tend to, its quiet hard to control those and manage those in a way that don't actually stifle creativity because the scope for getting things wrong is considerably reduced; as the cost implications of getting things wrong, kind of, mitigate against, kind of, just experimenting.'*

The second element of the financial cost subcategory was raised by Aubrey and related to the funding of research, as they felt that creativity was being limited by the way in which funding was allocated to projects which guaranteed a definite outcome rather than exploratory investigations. Whilst not specifically discussing the same issue, the stance of Aubrey coincidences with the comments made by Chris in when financial concerns are introduced to a scenario, aversion to risk and a desire to obtain an output or tangible gain take precedence over creative thought and exploration.

Aside from financial constraints, further subcategories contributed to *limiting factors* and as mentioned previously, these tended towards a direct opposition to the *facilitating factors* and, hence, table 4.3.1b (below) illustrates the conflicts between facilitation and limiting factors of creativity as identified by participants of this study.

Table 4.3.1b – Opposing facilitating and limiting factors of creativity.

Facilitating	Limiting
Enabling environment	Operating in a negative environment
Enabling personal agency	Complying with perceived personal barriers Conflicting drivers and motivations
Acknowledging individuality	Conforming to tradition

In an identical manner to the facilitating factors, participants perceived the environment as a key determinant of personal creativity and identified both cultural and physical aspects as contributory elements of this subcategory. Culturally, participants felt that creativity was limited by an environment that attempted to satisfy a demand from external stakeholders and as noted by Aubrey:

*'You're less free. If you have to satisfy a demand your objective is already set for you so you don't have the creative process of either yourself setting your objective, which is a creative process, [or] but even better for me you don't know what's going to happen. This is the best!'*

Sam acknowledged that when in a student's position, following guidance from academics is often required. However, Sam perceived that reliance on guidance, by default, limits creativity and builds a dependence on structure and conformity which subsequently breeds a lethargy towards being creative. Aubrey concurred with this train of thought and noted that research topics, be they academic research or student dissertations, are *'now given, not researched'* in response to external stakeholders or the inability of students to be creative.

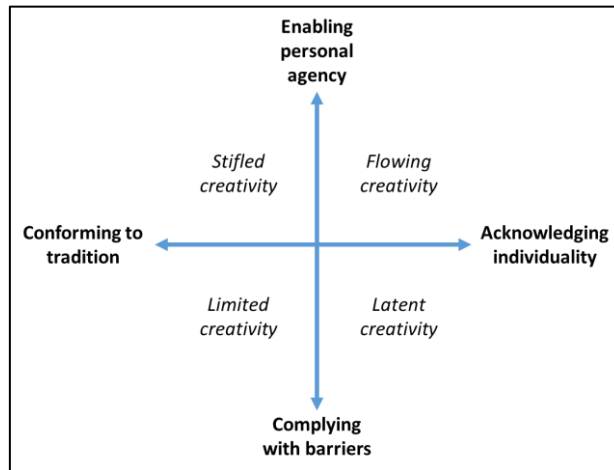
With respect to the physical environment Leslie offered perceptions that suggested a dark physical environment was counterproductive to creativity, but as before, these views were in isolation of other participants. Given the vast array of physical environments participants operate within however, and the links made between creativity and the environment in work such as Amabile (2012) and Dul *et al.* (2011), this issue was considered for further exploration in the latter stages of the data collection.

Further conflicts between the perceived facilitating and limiting factors of creativity were evident in the unstructured interviews; where participants conveyed *enabling personal agency* to be a facilitating factor, they perceived *complying with perceived personal barriers* and *conflicting drivers and motivations* to be antitheses to this. *Perceived personal barriers* were identified by participants as those factors which could be considered autonomous, for example, nerves or panic, or those which are of a more learned nature such as preconceived ideas of one's own ability or a fear of failure. Conflicts in motivation were also identified as opposing to *enabling personal agency*, with participants perceiving such issues as performativity in education (for example not taking risks in assessment design), conformism with capitalist values (for example operating in a lean rather than divergent manner) and external expectations (for example targets from customers).

Similarly, participants also highlighted a conflict between *acknowledging individuality* and *conforming to tradition* when discussing their perceptions of creativity. Sam perceived a conflict between being an individual and 'socially fitting in' when describing creativity and this was supported by Francis who perceived that creativity in students is limited when they work to the limitations that they see when, in this case, designing a film studio. Aubrey also highlighted similar issues relating to the individual but also felt that creativity is stifled by factors external to the self, including a very specific example whereby a tradition of using mathematical modelling to estimate naturally occurring behaviour had limited the opportunity for creative research.

When the perceived facilitating and limiting factors of creativity as identified by the participants and their provided examples are reconciled, a relationship which defines the resulting creativity could be suggested as illustrated in figure 4.3.1e.

Figure 4.3.1.e – Potential relationship and outcomes of facilitating and limiting factors of creativity



This relationship suggests that, based on the participants’ perceptions, for personal creativity to be maximised, a person’s individuality should be permitted and that their personal agency enabled by co-actors and the environment which surround them. It could be postulated, however, that the relationship in figure 4.3.1e is highly abstract and potentially lacks the context to be meaningful in study or employment situation; for example an individual may be completely free from tradition and have agency but the result of the creativity has no value or worth in the domain they are working within. Lassig (2020) tended to align with the general notions of figure 4.3.1e, noting that creativity can be encourage and fostered in an environment that provides cognitive and affective support and that the effect of this social environment was significant in this respect. This question was further pursued as theoretical sampling in stage four of the data collection.

During stage three, all participants agreed that *collaborating with others* played a key role in creativity, a notion strongly supported by Lucas *et al.* (2013) and this perception appeared to follow three distinct pathways: *working with others*, *communicating effectively* and *possessing trust*. Participants concurred that *working with others* could contribute to being creative; indeed in the images provided by Chris (equipment designs), all four were a result of a number of individuals working together. Whilst the images provided by Leslie did not immediately point to collaboration, subsequent discussions highlighted that in their arts based industry, it is necessary for teams of individuals to work together to form creative outputs. Aubrey, Lindsay



and Francis all gathered at least one image each which illustrated or related to groups of individuals working together to contrive a creative output and furthermore reiterated, in conversation, that collaboration with others is important; for example, Aubrey described a teaching scenario where students were working together to produce a new method:

*'...this enthusiasm there; they [the students] go back and forth and challenge. They was three teams and I make them assess each other and challenge, critique each other and they come up with stuff that would be fantastic...'*

Jesse concurred and expressed that from their experience, being creative was easier when working with others as it allowed them (Jesse) to develop as others would *'impart their knowledge on you.'* The *'others'* in this participant's view were fellow students, other peers and academic staff and, similarly, co-actors such as employers, employees and customers were also identified in the same vein by other participants.

The second identified subcategory of *collaborating with others* related to *communicating effectively* where participants realised and conveyed the value of individuals being able to express a thought or notion to a collaborator with clarity, thus promoting understanding and facilitating creativity. This idea of being able to communicate an idea clearly seemingly draws a parallel with the earlier category of *realising ideas outputs (processing ideas)*. Whilst discussing an image which conveyed a teaching activity, Lindsay went on to note that this activity had subsequently been communicated to colleagues and the ensuing discussion resulted in colleagues developing similarly creative activities. Leslie seemingly showed agreement with the perception of *communicating effectively* and provided a contextualised example which emphasises the perceived value they place upon communication:

*'I've gone into agencies before and have seen banks of designers, all with their earphones on. I've actually gone in and said "can you all get off it? We actually need to have some creative debate".'*

In line with this, Francis highlighted an example, via a description of an image, where students were faced with a problem but via collaborative discussion they designed a creative solution to meet the requirements of the situation. It would appear that agreement is evident, from

the perceptions conveyed, that *communicating effectively* is an important element of *collaborating with others*, however, it is also clear that the examples provided only identify verbal communication and as noted by Griffin (2012), communication is complex and underpinned by various theories pertaining to non-verbal communication. This raises the question as to whether the identification of only verbal communication was an oversight by participants or whether verbal communication in isolation is key to collaborating with others.

The final subcategory identified by participants contributing to *collaborating with others* was that of *possessing trust*. Chris explained the process of designing one of the products in a presented image and noted that the collaborators had a '*baseline of trust*' which had been developed over a number of years, and thus promoted less inhibited creativity. Aubrey, who as with Chris, was from a science based background, similarly talked of '*trusting the people in the field to make the right decision*', appearing to show that collaboration can only be effective when trust has been established between all stakeholders.

Whilst in general agreement, the perspective offered by Leslie and Francis (arts based employer and academic) is subtly different and, though still maintaining trust as a central tenant, views it as more of having confidence in a critical relationship. Both Leslie and Francis illustrated that part of the creative process is critique and evaluation by others and therefore stakeholders need to trust in each other that critical evaluation can be given and duly received to positively influence creative outputs. Leslie described this in the context of employees or students and said:

*'...the ones that have clicked it [understood the concept], have done really well because I'll go "when I come round and judge your ideas I'm not having a go at you personally, I am purely commenting on why that idea isn't right for this particular task and I will help you come up with some solutions. You will end up with a much better piece of creative work by taking on board by what I say".'*

Francis explained that in a learning (university) and professional environment, if students are to be successful in creating an output of value, they must be able to trust their colleagues, invite their critique and receive their evaluations. Francis provided an example of where

students had not developed this trust and were therefore not able to work collaboratively on a creative task and hence did less well than others.

Lindsay used an interesting example to explain the notion of trust in a collaborative, creative student endeavour, which involved contributions to a virtual learning platform, specifically a discussion board, noting:

*'...you'd hope that the group knows each other well enough; cohesive enough that they would feel like they could drop things into a discussion board.'*

Similar to other participants, Lindsay conveyed the notion that for creative collaboration to take place, the stakeholders need to have trust in one another for this to be effective and in the example cited above, the creative activity failed due to students feeling that they would be negatively judged on their contributions. At this stage of the analysis, the idea of *trust* appears to be something of a generic term and does not necessarily express with enough clarity the perceptions of the participants. In the examples cited above, *trust* could be interpreted as trust in a stakeholders' experience, skills, or knowledge, but it could also convey a more humanistic meaning of motivation, sincerity or loyalty. This was further investigated with more targeted questions in stage four of the data collection and analysis.

The penultimate theme which emerged from the data set, following the unstructured interviews, was relating to human behaviours and was labelled as *characteristics of creative individuals*. Similar, yet distinct, to the theme of *enabling personal agency*, a *characteristic* identified by participants was that of *permitting own agency*; that is, an individual having confidence in their creative abilities and thoughts, being resilient to critique and scepticism, and being comfortable to engage in the creative process. This subcategory appears to be distinct from the *enabling personal agency* in that the locus of control is internalised by the individual rather than being external and controlled by other co-actors. Leslie provided examples where they emphasised the personal confidence and self-efficacy in somebody, who they perceive as creative, has when developing thoughts and ideas. This employer provided an image of a blank page in a designer's sketch book and explained that a creative person has the confidence to see the space as an opportunity, noting:

*'It's less about the blank sheet and more about what we can put on it.'*

Chris concurred with this notion of personal agency and also discussed how this then develops into confidence to resist scepticism, providing an example of where an employee had devised a successful product but during the process of designing the item was met with some doubt and uncertainty from others. Chris noted:

*'...and then he suddenly said, I think I've come up with an idea that will work. When he showed me I didn't think it would but he proved me wrong.'*

Lindsay gave a further example of a teaching situation where students had been more creative when they had had the confidence to volunteer themselves to completely engage in a creative process and, conversely describe how those students who had felt inhibited and less willing to engage fully were less, as this academic perceived it, creative in their outputs. As a collective, these concepts identified by the participants tend to illustrate that to be creative, a person is required to have a sense of personal belief in their ability to contrive something, whilst also being willing to engage in the process and having confidence to maintain focus on their ideas despite the critique of others who may not agree with them. The examples given by participants appear to support this, however, a conflict is perhaps evident with the previous theme of *trust* which tended to indicate that a creative person can trust and, thereby, believe the critiques of collaborators.

A rather less elegant subcategory agreed upon by the participants with regard to the *characteristics of creative individuals* was that of *working relentlessly*. As suggested by the title of the subcategory, participants perceived that creative individuals tend to be hard working and diligent when generating an idea but moreover when they are developing an idea or an output. Chris noted of an employee who successfully created a valued product that during the creative process *'he [the employee] experimented quite long and hard to get there'* and similarly that a different, but equally successful, colleague *'just kept beavering away'* on a product developed until it was complete. Leslie evidently was in agreement with this notion and presented a contextualised view of creativity from their perspective, stating:

*'Kids that come in thinking they can just lob it down [designs on a piece of paper] and its all inspiration and fluffy; no it's not. Its sleeves rolled up, hard graft.'*

This employer made repeated references to *'working through the night'*, again emphasising the relentless nature of a creative situation, however, it could be suggested that this was more a function of the demands placed upon them by external stakeholders to meet a deadline, rather than necessarily being creative. Irrespective of this, it is interesting to note that the two employers of this study were the most fervent in this respect perhaps illustrating that in an employment scenario, where the financial impact of not reaching a valued output is higher, *working relentlessly* provides a higher potential for creativity to be effective. These issue were further investigated during stage four of the method.

Interestingly, in this particular theme, whilst student participants did perceive these subcategories as important to being creative, it was the academics and employers that repeatedly identified it more. It could be suggested that this is due to the students not, as yet, having fully experienced a graduate employment opportunity (as identified during interviewing) and applying their perceptions of creativity in the workplace. Again, this was further explored in stage four.

The final subcategory of *characteristics of creative individuals*, as perceived by participants, was *reflecting personally*. In the earlier theme of *critiquing tangible outputs*, reflective evaluation of an output of the creative process emerged from the participant interviews, however, this element of personal reflection appears to be a rather more generic personal characteristic, as opposed to a defined task or part of a process, whereby a creative individual is one who is deemed to constantly reflect on their position in a metacognitive way. Chris's perceptions noted that the creative individual is someone who can receive and reflect on critiques and challenges to their thoughts and work which emanate from both humans and other sources. For example, Chris cited a situation where a perceived creative employee had designed piece of equipment which had repeatedly failed to work as required, receiving negative feedback from other test equipment. The employee subsequently reflected on the feedback in the

context of their thoughts and ideas, and improved the design until successful by meeting stakeholder expectations.

Leslie and Lindsay also suggested that *reflecting personally* is important in a subtly different way to Chris; with Leslie expressing that continually reflecting and overcoming personal biases is an essential characteristic of being a creative individual and noted an example from their employment context (in the following passage the term '*creative people*' refers to people who work in an arts based scenario, as opposed to the perceived ideal creative individual that the employer was describing):

*'What happens to a lot of creative people they get precious to [about] their ideas, because they like that idea. I'm guilty of it sometimes; I'll do what I did and think "oh I quite like that" and actually I need to slap myself and go "it's not right for the client".'*

Similarly, Lindsay identified that personal reflection is important to being a creative individual, however, differed slightly from Leslie in that where the employer referred to overcoming a bias of perhaps ill placed confidence, whereas Lindsay referred to this reflection as a means of addressing ill placed insecurities. Furthermore, Lindsay perceived a creative individual as a person who can reflect and overcome perceived personal limitations and highlighted this via examples of teaching activities where students were asked to create a visual interpretation of an abstract concept using craft based resources (for example felt, glue sticks, sequins, tissue paper). Lindsay identified that those students who could overcome their insecurities and perceived limitations surrounding this unusual teaching situation were those who produced, in the perception of Lindsay, more creative and meaningful outputs.

The examples and explanations cited from the participants illustrate that an ability to undertake deep personal reflections on feedback and consider personal biases and insecurities, appear to facilitate creativity in an individual. Various authors (Wallas, 1926/2014; Guilford, 1950; Amabile, 1983; Glăveanu, 2013) tended to agree with this finding in the more general sense of the creative process needing a reflective stage, however, these theoretical models seemingly did not focus on the personal characteristics of the individuals involved. Ward and Kolomyts

(2019) did explore evaluation from a more cognitive perspective and identified that '*design fixation*' (p183), whereby individuals who have exposure to examples of previous designs do not reflect on them fully, limited creativity in students across various disciplines. The aspect of personal insecurities and their impact on individual creativity does not appear, however, to receive attention in the creativity literature base. The findings here do, seemingly, suggest something of an emerging conflict between the notions of reflection and personal critique, as noted above, and the previously identified ideals of personal agency and resilience to critique. This paradox was further explored in stage four of the method.

The closing theme relating to creativity as an employability skill from stage two and three of the method, as highlighted by participants, was that of *understanding the subject*. Two subcategories were apparent in the data set, those being: *baseline understanding of the subject* and *confidence with subject matter*.

Participants perceived that for an individual to be creative, at least a *baseline understanding of the subject* is required; the *subject* being the context in which the individual is attempting to be creative and *understanding* being greater than a knowledge of a subject, rather, the ability to comprehend and explain a subject. Implicitly within the images provided and the subsequent conversations held, the participants identified that a *baseline understanding of the subject* is required as examples given involved, or were explained from the stance of, protagonists who had a fundamental understanding of the topic. For example, Jesse provided an image of a building and related the creativity to the architect who designed it; Aubrey cited an image of a laboratory experiment that was arranged by a principal lecturer experienced in that field; Chris gave an example of a piece of engineering equipment designed by a specialist engineer.

In support of these implied references, participants also paid specific attention to the importance of underpinning subject understanding as a key attribute of creativity. In Francis's explanation of an image which depicted a student's assessment activity that required students

to create a film set, the academic discussed how specific subject knowledge of lighting theory assisted the students in being, as the academic perceived it, more creative and producing outputs of greater value, in this case, the realism of the film set.

Leslie also made reference to subject understanding being a key component of creativity and relayed their education and training as the basis of their subject understanding, noting '*so I trained as a graphic designer; I did a BTEC National Diploma, I then did a HND.*' Leslie perceived that this development contributed to their success in their sector which required, as this employer perceives it, creativity. Chris concurred with this notion of an educated and informed subject understanding that contributes to creativity, and provided an example of situation where a problem existed that was solved creatively by an engineer with an academic scientific background. Chris went on to note that '*you could credit him for several breakthroughs*' and implied that his creativity would not have been possible without his subject understanding.

Charlie referred to an example of a piece of equipment being created that provided, as they deemed it, a practical creative solution to a problem that was contrived by an individual who required subject understanding. In this instance, the piece of equipment (a feeding mechanism for a household pet) was not related to the student's field of study or subject domain and the creative output, seemingly, was only valued by its creator. In contrast to the employer participants and Lindsay, the individual identified by Charlie demonstrated subject understanding but was not formally educated or trained in this field. Interestingly from these examples, it appears that those with this more formal educated grounding appear to produce outputs which are equally creative but more valued by others, so it could be postulated, at this point, that a deeper subject understanding does not necessarily make an individual more creative but it does appear to make the outputs of their creative process more valued to a wider audience. Ward and Kolomyts (2019) showed general agreement with this finding as they concluded that mechanical engineers who, it could be argued, are categorised as science based students, tended to employ subject specific understanding more readily; with design students (arts based) tending to be guided by '*surface level knowledge*' (p184). The perceived value of the creative output in relation to subject knowledge, however, does not appear to



receive much attention in the literature base and therefore, in association with theoretical sampling based on this study's findings, the concept of subject understanding was further investigated in stage four of the method.

In association with *subject understanding* participants also illustrated, albeit to a lesser extent, *confidence with subject matter* as a key element of being creative. When discussing an image of a piece of scientific engineering equipment, Chris highlighted an example of where an employee had been creative, as they perceived it, and noted that the individual not only had subject understanding but had such confidence with the subject matter that they could apply their theory and physically build the piece of equipment. Whilst Chris was confident in this stance and cited further examples, they also suggested that on occasion this confidence and depth of understanding can put the individual '*too close to the problem*' and that divergent thinking can become compromised.

During the interview, Aubrey reflected, via an image and subsequent explanation, a situation where a colleague had created a '*fantastic resource*' for teaching purposes and cited this as an example of creativity; not from the perspective of the resource itself but from a perception which holds that mastery of the subject permits creativity. The academic described how a colleague had studied, in depth, a particular aspect of a syllabus which the colleague had not previously been confident about, prior to teaching the subject to under graduates. Aubrey noted:

*'He created this as a support for teaching to the students; that was his creation...so that was an excellent example of, only after, he was not confident to come up with it [the resource] before he mastered it [the subject]. He didn't feel he could do a good job about it. And that was going in the sense of you need to know what you're on about before creativity can happen.'*

Leslie concurred with this position and suggested that creativity, in their context, has its foundations in research and having confidence in knowing and understanding the subject matter. Leslie highlighted that:

*'...yes, you have to come up with a bit of inspiration but you have to work through a lot of dour research and insight to spot the gems before the creativity.'*

It is also worthy of note that this subcategory tended to arise from the employers and academics involved in this study, perhaps emphasising the requirement, in an employment context, for individuals to have a developed confidence already in place due to the financial and legislative implications of a workplace environment. It could be argued, in contrast, that students view their contexts as rather more developmental and fostering, and hence the aspect of confidence is less apparent in their interviews. This hypothesis does tend to draw a parallel with the earlier perceptions of a risk free environment, in so much as, the employers appear to be more risk averse and less accepting of development in comparison to students. These relationships were further investigated in stage four of the method.

In summary, stage two and three of the method produced an initial outline of participants' perceptions of creativity via a reflexive photo collection and subsequent photo elicitation interviewing. The findings tend to suggest that process and product are important contributory elements to creativity and that certain facilitating factors, be they personal or environmental, are also causative. Whilst many findings are interesting at this stage, saturation of data had not been entirely achieved and various questions remained; therefore, stage four of the method was undertaken and all participants were interviewed again using a semi-structured questioning approach which permitted theoretical sampling and further establishing of findings. The proceeding section illustrates the findings of this stage.

#### **4.4 Developing participant constructions – findings from stage four**

In section 4.4, perceptions of creativity from the position of the eight participants will be conveyed in an attempt to address the research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

Further to section 4.3, where participants expressed their perceptions of creativity through the medium of reflexive photography and subsequent photo elicitation via unstructured interview, section 4.4 will illustrate the outputs of stage four of the method, that being, developed

participant themes on the subject of creativity which were informed by semi structured interviews. Stage four of the method aimed to test the emergent constructs from stage three and attempted to clarify uncertainties that were apparent from the participants' unstructured interviews; thus aligning with the principles of data saturation and theoretical sampling as is customary when employing a Grounded Theory approach (Corbin and Strauss, 2015). Furthermore, the initial, broader findings that emerged through stage one of the method (highlighted in section 4.2) were employed to triangulate and verify findings through a process in line with the principles of constant comparison (Charmaz, 2014).

Subsequently, a local model of creativity from the perspective of the student, academic and employer participants of this study was formed as is expressed in section 5. Table 4.3.1 highlighted the emergent participant constructions of creativity, generated during stages two and three of the data collection and analysis. As per the method and semi-structured questioning of stage four of the method, each of the above conceptual themes will now be explored via alignment to relevant findings from stage one and any theoretical sampling that appeared to be relevant.

#### **4.4.1 Processing ideas**

As described in section 4.3 of this chapter, stages two and three of the method revealed that consensus between participants was shown with regard to the *processing of ideas* when describing creativity. Whilst not directly triangulating with this perception, the finding of *synthesising at all levels* illustrated in stage one of the method is relevant to the *processing of ideas* in so much as participants noted that synthesis could, they felt, occur at various stages of the creative process, and hence this was investigated further during stage four of the method. Similarly, stages two and three were also inconclusive with regard to the initial, pre-contemplation phase of the creative process and therefore was also explored in stage four via a semi-structured questioning technique, as summarised in table 4.4.1.

Table 4.4.1 – Stage one, two and three themes and theoretical sampling relating to processing ideas and the resulting developed conceptual theme

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Processing ideas	Synthesising at all levels	Pre-contemplation	Processing thoughts

All participants further agreed that creativity is, ultimately, a sequential process, thus aligning to a variety of creativity related literature (Wallas, 1926/2014; Guilford, 1950; Rhodes, 1961; Amabile, 1983), however, the key stages of the process identified by the participants of this study did vary from previous models and is illustrated in figure 4.4.1a.

Figure 4.4.1a – Participant Constructions of the Creative Process

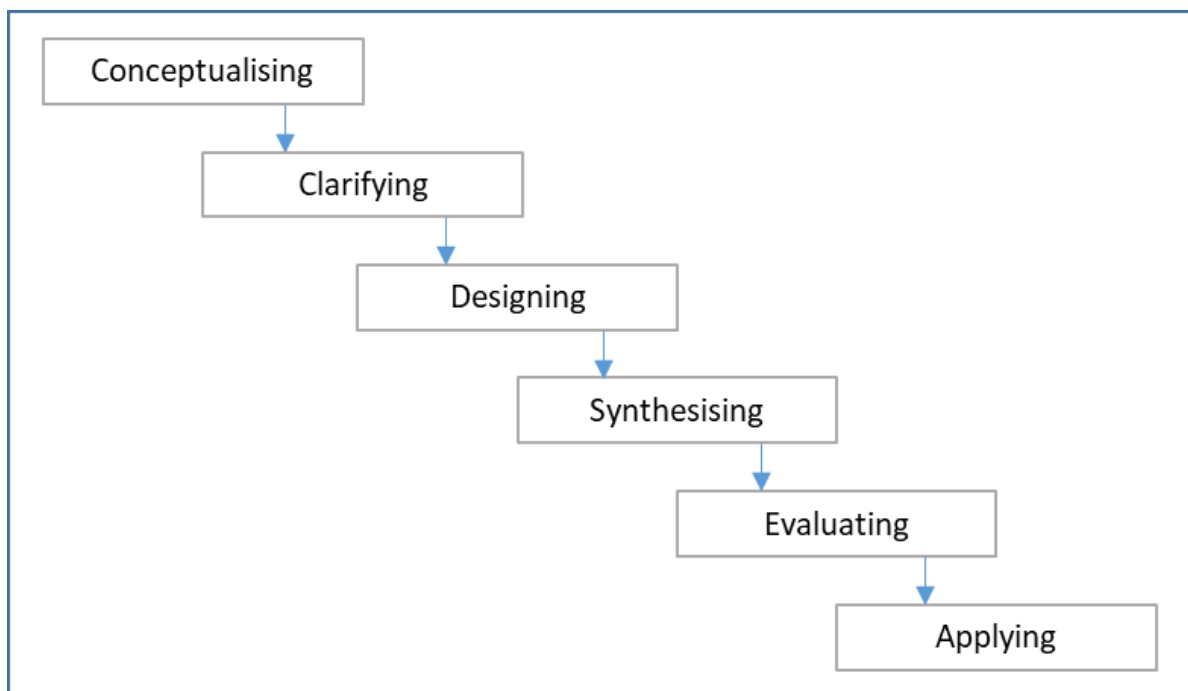
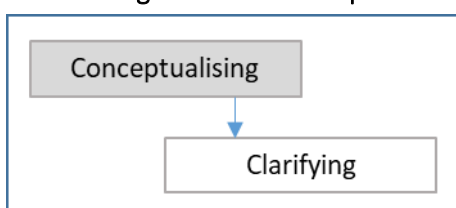


Figure 4.4.1b – Conceptualising: initial stage of the creative process



Participants identified that *conceptualising* is the first, initiating element of the creative process and were agreed that this stage is the genesis of individual ideas and initial thinking. Whilst agreement across the participants in stage four of the method was established

which indicated this *conceptualising* phase, variation as to its specific meaning was interestingly evident between the subject groupings; with Sam, Francis and Leslie expressing that *conceptualising* of creativity is the stimulated of a person's senses by other creative artefacts or others' thoughts. Sam noted that

*'...to really produce something worthwhile, this may sound clichéd, but it's [the stimulation] not something that is found in text books or searching online, it's something that's physical...'*

In contrast to this, when asked about the initiators of the creative process, Lindsay (social science based) responded *'...for me it would be particular theorists that I have read that have encouraged me to think differently'* and latterly also noted that *'...to be creative you also probably need some inspiration from other people, books, conferences, experience.'* Supported by the Jesse, this position emphasised a more conceptual starting point to the creative process for social science participants, potentially due to the nature of this domain being more abstract or less tangible than the arts or the sciences. Whilst Baer (2015) and other authors are clear in their support for the theory of domain specific creativity, which the above finding would also suggest, the specifics of how people within social science or other domains behave is less clear.

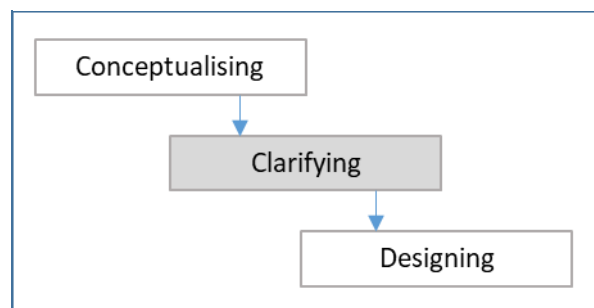
The interviews with the science based participants (Chris, Aubrey and Charlie), demonstrated consensus surrounding the idea of problem solving as the genesis for creative *conceptualising*. Given the generally positivistic environment that this domain tends to operate within, being highly structured and controlled, the emphasis on a clear and unambiguous problem to solve is not surprising. Chris expressed that a clear challenge is required to begin creative thinking and perceived that the more abstract this challenge is, the less productive the conceptualisation will be. Similarly, Charlie noted that the *'trigger'* for creativity is an engagement with a problem or having an issue to resolve; a view which is corroborated by Aubrey who highlighted that a clear problem is required at the outset. It is interesting to note that at the conceptualisation stage of the creative process, the science based participants made no reference to previous literature or thinking, indeed Aubrey was clear that at this initial stage *'...I will not look at what people have done and I will think myself 'how am I going to do this.' That's my creativity.'*

It would appear that all participants are agreed that a *conceptualising* stage initiates the creative process and that this conceptualisation has a basis of some sorts. However, this basis for initiation seemingly varies between subject domains and appears to be something of a spectrum ranging from sensory stimulation (arts), to conceptual theorising (social science) to pragmatic tangible problem solving (science).

These findings tend, to some extent, to align with Guilford's (1950) notion of *sensitivity to problems* in so much as the shared idea of problem solving identified by the science participants, however, Guilford seemed to be emphasising that a problem is necessary for creativity to be initiated which appears contrary to the social science and arts based participants. The findings of this study also challenge the BVSR theory (Campbell, 1960) in that the initiation of creativity is not *blind* but is underpinned in some way.

The second element of the creative process confirmed by participants during stage four of the method was that of *clarifying* if the *conceptualising* has validity, refining the initial thoughts and defining the aim of the creativity. Participants felt that this stage of the creative process is informed by previous knowledge, that being either personal

**Figure 4.4.1c – Clarifying: second stage of the creative process**



knowledge or from external sources such as published research. Jesse provided an applied example of this whereby they described how the subject of their dissertation had changed due to this notion of *clarifying* the purpose of the creativity; in essence, the initial proposal of the dissertation lacked value following research and reflection on personal experience. Lindsay cited examples of creative student work which, post conceptualisation, had '*iteratively narrowed down*' individuals' thinking prior to commencement of the subsequent creative processes. Sam concurred with this concept and noted that:

*'So my creative process is getting a very fat idea and then slowly slimming it down almost like a marble statue; you start off with a very crude outline and then with a*

*slow chiselling process hopefully you can get a result similar to Michael Angelo's David.'*

Aubrey discussed a scenario from their research where a particular scientific process was creatively redesigned to solve an analytical problem and stated that the basis for the creativity was founded on previous research. Furthermore, Aubrey went on to note the temporal nature of the *clarifying* element in this example but also reiterated the value of the aim, stating that:

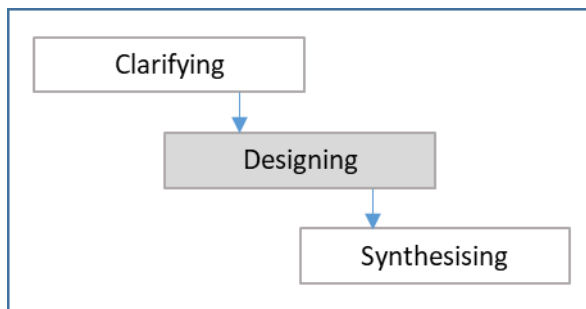
*'...the timeframe is, is because maybe there is no need, as well. At the time there was a need and this is why I have done it. It was a topical thing and we come back to the aim; there's a need; there's an aim; there is a drive there. So it is worth investing in.'*

The consensus demonstrated by participants in the data set tends to illustrate that subsequent to the *conceptualising* element, where initial ideas arise, individuals refine and give validity to these ideas through an iterative process of comparison to previous knowledge or experience. Interestingly, this validating process tended to be more internalised from the perspective of the arts based participants, for example accepting of feelings and experiences, whereas the science based participants were more inclined to rely on empirical research; again, in line with the epistemological stance of the subject domain. Seemingly from the examples cited, this difference in position, whether internalised or externally validating, does not limit nor promote the creative capacity of any of individuals working within the three general subject domains involved in this study which, perhaps, contradicts the notions proposed by Simonton (2009) which suggested that science based individuals are more inhibited than social science individuals and, sequentially, arts based individuals.

Also interesting is the seemingly convergent thinking stage (*clarifying*) subsequent to a period of divergent thinking (*conceptualising*) which tends to conflict with the research of, for example, Amabile (1983) and Baer and Kaufman (2006) who proposed that convergence tends to occur but towards the end of the creative process. Mumford *et al.* (2002) imply that convergent approaches are required during the creative process, however, this tended to be from a more pragmatic, rather than theoretical perspective. The participants of this study

tended to indicate that some honing of thinking is important at a much earlier stage to facilitate greater focus and giving some bounding parameters to the creative task ahead.

**Figure 4.4.1d – Designing: third stage of the creative process**



improvise thoughts and adapt, theoretically, previously gained knowledge and understanding to the given scenario.

Aubrey reflected that at this point of the process individuals should, whilst working within the *clarified* parameters, not allow limitations of previous experiences or knowledge to stifle creativity; something that they felt occurred in their curriculum. They noted:

*‘So many people rely on what was done before. “Did you look at these guys?” “Why don’t you do it like these guys?” it’s the frustration but we do this with the students! We say “you need to reference this” and when there is no reference we say “there is no reference” [the student replies] “but I thought of it myself” and maybe they did but we penalise them. Should we? I don’t think so.’*

Francis provided a similar view and illustrated how students often feel constrained by their perception of resources they have to work with, rather than *designing* what they want to create and then, theoretically adapting the resources to match. Lindsay concurred that the *designing* stage, from their perspective, usually focused upon thinking about methods and that students can find this problematic, often leading to *‘fear and anxiety.’* Lindsay felt this apprehension was due to students thinking in a fixed way about methodological approaches and when challenged to explore theoretical alternatives, students struggle with the non-tangible nature of this and become anxious.



Similarly, Charlie discussed how previous methodological approaches are often thought about but, in contrast, went on to note how they can be explored and theoretically adapted during this *designing* stage; also making reference to how nature can be a source of inspiration, noting:

*'...so we had, for example, done ballistics this semester; it was basically just observing what nature does for example catching a fly, like for a spider; we adapted this to catch the bullets.'*

Jesse agreed with the notion of methodological consideration at this stage and emphasised that establishing the approach is important as it *'builds trust'* and *'gives stability'* to the individual and others around them to then develop ideas further. Conversely, Leslie illustrated a less abstract approach and highlighted the idea of insightfulness in the *designing* stage coming from data and research, as opposed to internalised thought and exploration. In a similar manner, Chris noted that externally focused motivators, such as customer requirements, tend to influence the *designing* stage more than theoretical investigation.

The general position of the academics and students, as opposed to the stance of the employers appears to infer a divide in the perception within the *designing* stage of the creative process and potentially suggests that employers are less likely to be deliberately divergent at this stage; instead being guided by convergent external factors, such as financial risk, and hence have more constraining boundaries to work within. Whilst academics are clear on their appreciation of creativity at the design stage, they also expressed reservations as to the capacity to undertake *designing* in a creative way due to perceptions of needing to follow previous approaches. Superficially, student perceptions appeared to be less concerned in this respect, however, Lindsay's experience of working with students is in contraction with the students' position and Jesse's statement noting *'trust'* and *'stability'* seemingly emphasises the notion of safety rather than risk taking exploration; aligning with the academics concerns.

Whilst this variability in perception maybe the case, the examples of perceived creativity provided by all participants would tend to suggest that creative outputs still occur, although it

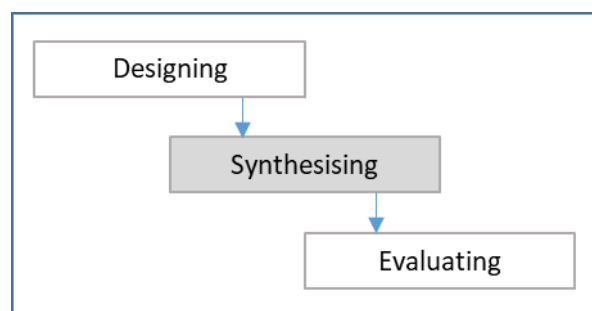
could be postulated that due to the employers' parameters being imposed rather than chosen, the potential for broader and more existential creativity will be less when considering longer timescales as opposed to an immediate situation. Chris noted that:

*'Organisations of a certain size or of a relatively long standing are good at incremental innovation or development. I don't think they are the most innovative organisations, they become, a degree to which they become risk averse.... There's a recognition that actually genuine step change innovation often comes from start-up organisation where people maybe spin out of university or maybe just a group of individuals who get together.'*

The lack of research into employer perceptions of creativity makes a direct comparison to the employer views of this study highly challenging, however, a generalised comparison here to Glăveanu (2013) is valid. The 'affordances' referred to in Glăveanu's (ibid) 5 A's model refer to the perception of environments which, it could be argued, is highlighted here by the participants of this study; the employers have a different perception of the sociocultural factors compared to the academics and students. The *designing* stage itself, tends to align with Guilford's (1950) 'fluency' (p452) and Amabile's (1983) 'response generation' (p367) phase.

*Synthesising* was perceived by participants as the next element of the creative process, subsequent to *designing*. Further to the parameters of creativity being established and mapped out, *synthesising* was felt by the participants to be the stage where individuals contrive artefacts or thoughts to meet the requirements of the *designing* stage; as

**Figure 4.4.1e – Synthesising: fourth stage of the creative process**



Aubrey put it 'I need to make it happen.' The data suggested that participants viewed *synthesising* as an act of combining conceptual ideas together in the abstract or combining physical concrete entities to form something new. Chris illustrated that greater interest rest in the adaptation of current products as opposed to the complete genesis of new entities; a conceptual view held by all other participants and expressed by Francis as:

*'An individual's uniqueness is where creativity comes in and that is where the creativity lies. Some texts have been adapted so many times and yet there is new and fresh perspective on all of those. It's even when a series of people are adapting the same material, it can be wildly different and innovative and exciting.'*

Seemingly as part of this stage, the participants suggested that trying and testing ideas on an ongoing basis via synthesis is key. Charlie cited a practical example where new resources for a scientific laboratory method were synthesised but had to be repeatedly tested to ensure their appropriateness and reliability. Similarly, Francis expressed that *'testing ideas out'* was important when creating physical entities (a film set was an example provided) or when contriving more abstract products such as a character in a play, who would be *'taken for a walk'* by their creator to test their validity; meaning the student who created the character would imagine them walking alongside them and would imagine their reaction to certain situations. Leslie supported this idea and noted that:

*'There's always different routes to a solution there's always lots of ways to get to it. I am able to, because of my experience, go "I really need to find a flip to this" and you come up with lots of solutions that are really nice.'*

This emphasises the notion of testing and refining ideas during this *synthesising* phase and as noted in these examples, it would appear that arts based participants undertake this synthesis and testing in a more abstract, internalised manner compared to the more physically practical science participants. During a final interview with Aubrey the following passage is evident in the data which further supports this apparent dichotomy:

[interviewer] *'...when you say "find along the way", is there a particular point in the process when that happens or is it all the way through, and these "little chinks", are they found when you're doing the lit revs or [Aubrey interrupts]*

[Aubrey] *'no, no, no it's when you do the experiment. Yeah, yeah, yeah; it's not the literary review no, no, no. It's when you do the experiment, yes.'*

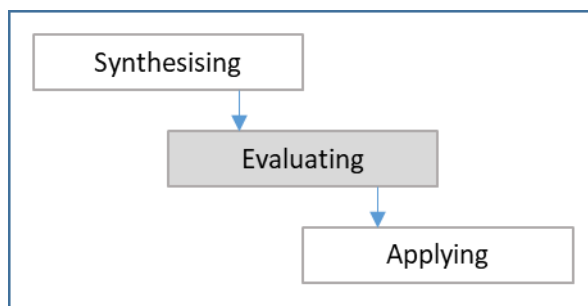
With regard to the question of practical versus abstract testing of ideas, the social science participants offered interesting views, in that, whilst not prescribing to the highly practical scientific position, they did not report such an extreme abstract thought process as the arts based participants and tended towards reflection on actual personal experiences to guide their

testing. For example, Jesse described how reflecting on experience in lectures and other teaching situations had greatly changed their dissertation subject matter, from what the participant deemed to be a mundane topic to a study which they perceived to be more creative and valuable. Similarly, Lindsay noted that as part of this creative synthesising stage, individuals are required to reflect not only their experience of the subject matter but also reflect on how experiences effect their self-conceptualisation and '*being able to think of themselves a little bit differently*' was perceived as being important when attempting to be creative.

In summary, *synthesising* was identified by all participants as being a crucial stage in the creative process and data suggests a tendency towards a combining of concepts to create something new as opposed to the generation of completely novel ideas or products. This appears to suggest an admission that creativity in its purest sense, that being the creation of something completely original, is unachievable and that creativity focusses on the individual and their personalised slant on the current concepts rather than the creation of new concepts. The evident variability between subject groupings in relation to the ongoing testing of these syntheses is interesting as it highlights, once more, that overall process consensus is apparent between participants but application is diverse. In this particular context, the varying subject domain positions seemingly align with their natural ontological stances, that is, science based participants being positivistic; arts based participants being interpretivist and social scientists being post positivist.

Whilst the work of Simonton (2009) shows some agreement with the general notion that subject domains have differing requirements of creativity, the ontological alignment was not reviewed in Simonton's research, however, Glăveanu (2013) stated that the actions of an individual are influenced by the underpinnings of the subject domain they are working within. As illustrated in chapter two, the debate as to whether creativity pertains to an artefact that is '*new*' (Kaufman and Glăveanu, 2019, p27) or something novel or '*unobvious*' (Plucker *et al.*, 2004, p88) is yet to be concluded. The consensus shown by the participants in this study tend to support the latter view.

Figure 4.4.1f – Evaluating: fifth stage of the creative process



however, this was rather more *in situ* and iterative as ideas emerge; whereas this *evaluating* stage is distinct in that it is more summative and critiques the whole result rather than component parts.

Consensus and saturation was noticed in the data set with regard to the critiquing of the creative outputs, and participants were clear that this is a necessary stage of the creative process whereby consideration then redesigning or reformulating of ideas or artefacts occurs. Aubrey and Charlie made clear reference in their interviews to the evaluation and updating of scientific methods in the very practical sense of whether new protocols were successful or otherwise. Similarly, the arts based participants recognised the importance of critiquing creative outputs to ensure their validity; as Francis noted:

*'...and then it's sort of testing those ideas out and bouncing those ideas around a bit, and also knowing that even if they [the student] develop an idea for quite a length of time, if they get to the end of it and they just think "I can't do this with the logistics I've got" or it's actually "I've got this far with it and I don't think it's going to work" that's just as valid. Knowing when to reverse out of this route and try a different route; that's an important part as well.'*

Whilst agreeing with the notion of *evaluating*, social science participants attributed greater importance to '*sense making*', that being, understanding the reasons which underpin an experience, alongside recognising the outputs. The social science participants also went on to note the importance of using this *evaluating* stage to make '*creative leaps*' (Lindsay) and perceived that creativity is also concerned with making connections between theoretical concepts both within the specific subject area and across subject domains, to some extent

disagreeing with Baer (2012) who noted that to be creative, a person requires expertise in the associated subject domain. The arts based participants concurred with the notion of making theoretical links and expressed the necessity of being able to draw upon and engage with different practical sources of information (Leslie and Francis) and use diverse theoretical concepts (Sam) when refining an output. Whilst not contradicting this, the science based participants tended less towards making such abstract, trans-domain connections and were inclined to make smaller, more cognate subject connections within their subject area; perhaps aligning with Simonton (2009) in that science based domains are less likely to require or be cognisant of creativity.

The *evaluating* stage of the creative process, as perceived by the participants, tends to illustrate that critiquing creative outputs and redefining those outputs, with an underpinning of connections to other concepts or products, is important. Seemingly, arts and social science participants permit greater breadth of transcendence with differing concepts or products whereas science based participants were less likely to undertake such varied connections. To understand the possible reasons that underpin this difference between subject disciplines, it is perhaps important to recognise the co-actors involved in this stage of the process and the measures by which success is defined.

With the arts based participants, it was evident to note that critique, whilst also internalised by the individual, tended to be undertaken by peers or persons holding a higher responsibility (tutor or employer) which seemingly promotes a broader outlook and connections. This is possibly also enabled by the highly subjective nature of the parameters of value in the creative context; as Leslie said '*...but the end result is still subjective.*' Social science participants were similar, in this respect, in that much peer and critical colleague interaction at the *evaluating* stage are evident. Whilst the frameworks for defining success within the social sciences, as perceived by the participants, are structured, objective and requiring more justification than in the arts, it was felt that they are still very much open to interpretation and argument, therefore permitting greater space for creative connectivity between concepts. As Lindsay noted:

*'We're fairly open to the use of "I". I know some disciplines don't like people saying "I, this that and the next thing"; but we're fairly open to that but you still have to do it in a particular way.'*

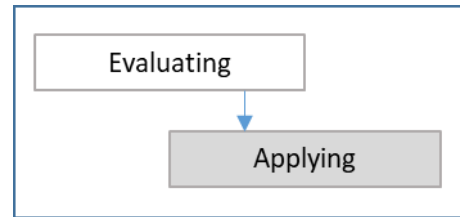
However, science based participants tended to undertake the *evaluating* stage on a more personal basis and whilst (from the student perspective) tutors were available to advise at this stage, this appeared to be more voluntary than prescribed, therefore making critique more internalised; a notion supported by the Aubrey and Chris. In contrast to the arts based and social science based participants, the parameters for creative success in the science context are highly structured, focusing on reliability and internal validity, which, it could be suggested, tends towards limiting connectivity with broader concepts. Whilst giving recognition to this concept, Aubrey (science) also acknowledged the potential limitations and stated:

*'...the fact that they [scientists] have the knowledge; that fact that they know that's going to work or that's not going to work, and if they have a good solution that they have applied for years and they always know that works – why change? The risk is to be set in your ways and not needed to be pushed...'*

From the comments provided by the participants, it could be suggested that evaluation undertaken in a manner more external to an individual, could promote greater levels of creativity as the evaluations of syntheses have, perhaps, wider external validity. As will be discussed later, collaboration with others was identified by participants as a contributory factor to creativity and, hence, the value of greater external contribution at the evaluation would, seemingly, be accurate. O'Byrne *et al.* (2018) and Jordanous and Keller (2016) do tend to support this finding in that they argued for external validation of the end product of creativity, however, Bowden (2004) and Gilhooly *et al.* (2013) maintain that the individual's perspectives are highly important to establishing the perceived value of the creative output. In the context of the present study, taking into account the differing views of the associated literature, the results would suggest that an individual's subject grouping has a bearing on how the value of a creative entity is established.

The final element of the creative process, as defined by the participants, was *applying*. At this point, following the *evaluating* stage, participants believed that individuals who are being creative would now apply the refined artefact or thought to a situation or situations.

Figure 4.4.1g – Applying: final stage of the creative process



The employer participants were clear that being able to apply creative ideas and artefacts to required situations is crucial as without this final stage the purpose of the creative process is lost; in essence expressing that the creative process must lead to an output of some description. Aubrey supported this view and noted that the output of thoughts and subsequent scientific method creation must be externally applicable ‘...otherwise it will be worthless; it needs to work in the field.’ A similar perception was demonstrated by Francis who described how the products of the creative process in an arts context must be applied with ‘logistical reality’, essentially conveying the notion that for a creative thought or artefact to be valued it must be effective in its particular context. Lindsay (social science) employed a more applied example in this scenario, but to the same end, and described how following the creative process, thoughts of students and academics are often valued and applied in employment contexts such as policy based jobs or governmental organisations. Jesse concurred with this and, in a similar vein, noted their hope that the dissertation they creatively produced would be applied to future practice in the educational context in which it was situated.

Charlie and Sam were also supportive of the notion of *applying*, however, despite prompting during the interviews in line with the concept of theoretical sampling (Charmaz, 2014), this final stage of the creative process tended to be less important to these students and more credence was given to the earlier stages, particularly *synthesising* and *evaluating*. Meta data collected during the interviews illustrated that neither of these students undertook employment currently, as opposed to Jesse who had, and therefore it could be suggested that these students are yet to realise the potential applications of their creativity. It is, perhaps, likely that these students, being in year three of study and not in employment, were also at a particular stage in their academic journey which did not permit the application of their ideas into actual practice beyond that of their course of study and, hence, resulted in a lack of



confidence to or an awareness of applying creativity in this respect; a notion seemingly supported when reviewing the QAA degree classification descriptions (QAA, 2019) which make no reference to applying in practice, even for 1<sup>st</sup> class honours degree students.

Section 4.4.1 has illustrated the consensus shown in relation to the participants’ views of the creative process and it is apparent that the various stages of the creative process are sequential and lead to the application of a creative output to a situation. The thoughts of the participants suggest, in line with much of the associated literature, that the output of the creative process is required to be valued by related stakeholders if it is to be appreciated and employed. This notion of producing a value output or entity, in the context of creativity, will now be further explored in section 4.4.2.

#### 4.4.2 Producing a valued entity

The perceived sequence of actions related to creativity, as identified by the participants of this study, concluded with the *applying* the output of the creative process. Stages two and three of the data collection demonstrated that for this output or entity to be deemed as creative, it is required to be *valued* by relevant stakeholders; with stage one also identifying that the entity should *meet an expectation* and assist in *advancing a situation*.

**Table 4.4.2a – Stage one, two and three themes and theoretical sampling relating to producing a valued entity and the resulting developed conceptual theme**

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Producing a valued entity	Meeting an expectation	Creativity does not equate to originality.	Producing a valued entity
	Advancing a situation	Unfettered freedom and agency.	

Through triangulation and analysis of data from stages one, two and three, theoretical sampling also emerged which pointed towards uncertainty in the data with regard to originality and agency in the context of the output of creativity, as illustrated in table 4.4.2a. Therefore, theoretical sampling and findings from the initial stages were combined to inform stage four of the method (semi-structured interviews) and clarify the fundamental perceptions of the creative entity.

All participants, with the exception of Aubrey (science), directly identified during interviews that the value attached to the creative entity is highly subjective and dependent upon the stakeholder’s views; with Chris noting that customer (stakeholder) values are often hard to identify thus making the creation of the product challenging. Whilst Aubrey did not directly identify stakeholder subjectivity, a number of variables from their experience relating to the value of the creative entity were identified by this participant (for example cost, speed, reliability) and therefore indirectly implies possible stakeholder subjectivity. The subjective values identified by the participants of this study tended to fall into one of two categories, the practical or the humanist, and are illustrated in figure 4.4.2b below.

**Table 4.4.2b – Subjective values of the creative entity**

<b>Practical values</b>	Cost / financial	<b>Humanist values</b>	Persuasive
	Feasibility		Interesting
	Reliability		Emotional connection
	Speed		Challenge thinking
	Problem solving		Physical form
	Synthesis		

In terms of *practical* subjectivity, it is evident in the data set that these values have emerged via consensus noticed in science based participants and employers, with the exception of Jesse (social science) who independently identified *feasibility* as a *practical* value but offered only humanist values thereafter. Many of the *practical* values agreed by employers and science

based participants tended to relate to capitalist or positivistic underpinnings, that being, those which are tangible and concerned with efficiency of time and monetary expense. Interestingly, the valuing of a synthesised, as opposed to a truly novel, entity was also identified by the science based participants and employers; suggesting a recognition that in an environment constrained by rigid structure or financial risks novel creations are less likely and perhaps undesirably due to the conflict with innate constraints of the subject domain or employment context. Triangulating with the early stages of the creative process, the science based participants agreed that for an entity to be valued, the output must be *problem solving* in some way. The more generalised literature surrounding the value of creative outputs (for example Glăveanu *et al.*, 2013; Jordanous and Keller, 2016), whilst not conclusive in terms of the prioritisation of personal or external value, is in agreement that the product of creativity should be valuable. However, specific literature related to the perceptual differences of the values of creativity by subject domain and the humanist-capitalist divide is not forthcoming, although Jules and Sundberg (2018) suggested, pragmatically, that the output of creativity is not specific to a domain and should be viewed as more generic, for example being creative when undertaking data analysis, seemingly in contradiction to the findings of this study.

In contrast, the social science and arts based participants identified the values of a creativity entity as being more humanistic and highly subjective compared to the science based participants. For example, the social science and arts based participants described how creative outputs should be persuasive and interesting, that is, requiring stakeholders to consider the creative entity and subsequently make a judgement about it; as opposed to the science based values which rather more dichotomous, for example, is the creative output feasible or not. This also appears to be true of the *challenge thinking* value which deems that a creative entity will make an individual evaluate their underpinning thoughts and reconsider their position; as Lindsay noted:

*‘That kind of idea of challenging how we think and being encouraged to think differently and think how about how we accept particular knowledge as true and as valid.’*

The data apparent in this study clearly suggests that for an output to be deemed as creative, it must be valued by stakeholders in some way. The schism that is evident between participants based in the sciences and those with arts or social science based, and the differences of specific opinion within the subject groupings, appears to give rise to the notion that the values attached to the creative entity is highly personal and subjective. However, it would also seem the case that whilst subjectivity is evident across the subject domains, the science based values have greater objectivity and measurability when compared to the arts based and social science participants.

To some extent, this tends to address the theoretical sampling issue of creative freedom and agency, in that, findings suggest that the subjective nature of social science and arts based subjects would permit greater freedom and agency as the measurability is limited or not possible. Elements of meta-data that were noticed during the data collection of this study would seemingly support this. For example, the arts and social science student participants collected three and four images, respectively, during stage two of the method whereas the Charlie collected only one and cited that *'I didn't really know how to put it [creativity] in an image'*. Furthermore, the single image collected by Charlie was of a concrete object that was specifically designed for a purpose, as opposed to the abstract images that were presented by the other two students. In a similar vein, Chris (science base) provided images of precision engineering and then specifically discussed why these pieces of machinery were creative, whereas, the Leslie presented a variety of abstract and concrete images but used them in a figurative manner to describe their view of creativity.

Seemingly aligning with the social science and arts participants, the work of Makel (2009), noted that the values of creativity are not allied to the notions of accountability and quantification. Glăveanu and Kaufman (2019) tend to side with the science participants in that their view suggested creativity is shifting from personal well-being to productivity. Whilst generally related to the area of the value of creativity, these research pieces do not identify or necessarily represent subject specific domains and, hence, the findings gained from this study

perhaps present new understanding that highlights consensus that the product of creativity required value but differentiation (by subject domain) in terms of what these values are.

The participants of this study identified two core elements to creativity as an employability skill: firstly, the processing of thoughts and the various stages there within and, subsequently, the producing of a valued entity, whether that is a tangible product or a creative thought that has been communicated. In associated with these two core principles, key concepts gained consensus and were perceived by participants as facilitators of both the processing of thoughts and the producing of a valued entity; what follows is an exploration of these perceptions.

#### **4.4.3 Facilitating factors of creativity**

The participants engaged in stages two and three of the method identified *facilitating factors of creativity* as a key concept of creativity and related such notions as enabling personal agency, acknowledging individuality and an enabling environment as contributory factors. Participants who undertook stage one of the method also contributed a similar theme of *empowering the individual* which expressed the view that an individual is required to feel that they have the authority but also the knowledge and skills to be creative in a particular environment. Whilst these findings tend to triangulate, uncertainty surrounding how the *empowerment* and its resulting freedom is practically promoted and managed was still evident; as was the impact of the physical environment on the individual and their capacity to be creative. Table 4.4.3 summarises the triangulating themes and theoretical sampling employed during stage four interviewing and the resultant developed conceptual theme.

Table 4.4.3 – Stage one, two and three themes and theoretical sampling relating to facilitating factors of creativity and the resulting developed conceptual theme

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Facilitating factors of creativity	Empowering the individual	Managing or constraining creativity.  Physical environment.	Facilitating the cultural environment

The semi-structured interviews at stage four made constant comparison with previous findings of this study and, through the questioning, in situ with the responses of the participants. The responses from interviewees with regard to the physical environment, illustrated very little consensus across either the subject domains of the participant groupings and whilst participants could describe what they deemed to be an environment that facilitated creativity, there were no commonly identifiable themes. A response from a participant, in conjunction with a meta-view of the collective responses points towards the only finding of value in this respect. Leslie noted that a creative physical space is ‘*a very personal thing*’ and when considering the variety of participant responses as to how this look and felt to them, this would appear to be the case.

In contrast to this, the perceptions of the *cultural environment* did demonstrate participant agreement as an influencing factor to creativity. The data suggested that participants viewed the *cultural environment* as constructions of norms and beliefs that influence the individuals who operate in the context they were describing (the university or employment scenario). There was a shared view that for creativity to be realised, the acceptance of failure must pervade from within an organisation and be culturally embedded for all employees. Aubrey talked of a ‘*flat hierarchy*’ in this respect, with Sam mentioning an ‘*egalitarian approach*’ and Chris also noted that a culture of creativity is for all employees and ‘*not just for the elite or select few.*’ Chris also went on to note that the system and procedures of an organisation must also reflect and support this culture, for example, annual performance appraisals which have creativity as an element to be discussed between employee and their line manager, and the

clear stating of organisational goals that can be creatively worked towards. Sam concurred with the notion that an unambiguous common goal being clearly articulated for individuals to work towards promotes creativity, which was further supported by Leslie who noted that giving direction to individuals in this respect is important. Interestingly, this employer also highlighted that this direction or goal can be to encourage individuals to be more or less creative as the situation dictates thus emphasising the importance of managing creativity.

In a similar manner, Charlie also expressed a need for continued clarity of the purpose to promote creativity but also stated that creativity can be increased via *'long term managed pressure'* whereby, for example, realistic yet challenging deadlines are set for work to be completed thus necessitating individual to be creative to meet the set requirement. Sam agreed with this idea and noted that a realistic and demanding deadline *'energises people to be proactive'* and provides a necessary *'cut off for creative playing or experimentation.'* These perceptions seemingly indicate that creativity and being creative are not an amorphous acts and require some definition and direction to be effective, as supported by Berg (2019). The *affordances* as suggested by Glăveanu's (2013) five A's model also tends towards supporting the participants' views, however, the varying malleability within the social affordances in any given context should be acknowledged.

It is interesting to note that whilst all participants are agreed on a supportive culture to promote creativity, the interviews appear to illustrate that academics have a greater sense of freedom in the management of creativity and appear to be less stringent in their recognition of boundaries and parameters. Employers and students, in contrast, tended to be more cognisant and, to some degree, welcoming of these parameters to support their creativity; perhaps suggesting that the demands of administering a business or achieving a qualification require greater perceived management, whereas academics seemingly are happy to encourage independent management of creativity as this is congruent with the traditional notions of HE. Medeiros *et al.* (2014) tended to support the view of the employers and students in this respect, noting that simple task objective constraints were assistive in the creative process, however, this did not align with the views of the academic participants of this study.

#### 4.4.4 Limiting factors of creativity

The limiting factors which emerged from stages two and three of the method were further interrogated during stage four and supplemented by the theoretical sampling particularly focusing on the proposition made in figure 4.3.1e where personal agency and barrier compliance, then individuality and conformity appear to be opposing factors. Furthermore, understanding the perceptions of risk aversion with regard to creativity was sought.

**Table 4.4.4 – Stage one, two and three themes and theoretical sampling relating to limiting factors of creativity and the resulting developed conceptual theme**

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Limiting factors of creativity	<i>Meeting an expectation</i>	Managing or constraining creativity.  Risk averse, developed confidence versus freedom and fostering.	Facilitating the cultural environment

As noted in table 4.4.4, aside from *meeting an expectation*, stage one of the data collection did not provide data which triangulated with the notion of *limiting factors of creativity*, however, it should be recognised that the open questioning at stage one required participants to describe what creativity is, as opposed to what it is not. Therefore, it could be suggested that implicit reference to limiting factors are made by assuming an opposite position to the positive, congruent factors identified.

Beginning with the potential limitations to creativity, the participant interviews revealed that the perceived barriers tended to focus upon external factors and did not illustrate with any consensus with regard to perceived personal barriers, such as nerves, panic or limiting beliefs about one’s own abilities. Instead, agreement was noticed in the participants’ perceptions of three key external factors: *the short term pressure of external demands, financial constraints and directional inconsistency*. Previous studies tended to be in agreement with the opinions



expressed by the participants of this study, for example, Hoever *et al.* (2012) who stated that facilitating an individual's creativity was depended upon a range of conditions but acknowledged that these conditions are yet to be fully understood. Specifically, Makel (2009) noted that the culture which surrounds HE increasingly places importance on accountability rather than creativity, tended to agree with the reported *financial constraints*, and in relation to *directional inconsistency*, Bryon and Khazanchi (2012) concluded that a person's motivation to be creative is apparently increased when other stakeholders provide, amongst other things, clarity of expectation in relation to the task in hand. *Short term pressure of demands* was contrived and employed by Medeiros *et al.* (2014) who concluded that simple constraints are be facilitative of creative rather than limiting, but also noted that too many constraints are counterproductive in this respect. Kleiman (2008) also discovered perceptions from academics in UK HE directly relating creativity and constraints, identifying that often this relationship is positive in that the constraint motivates creativity and that

*'its [creativity] existence, to a lesser or greater extent, rather like matter and anti-matter, on the presence of its opposite' (p213).*

Charlie explained that whilst longer term demands from external stakeholders, in this case course tutors, was assistive in promoting creativity, short term pressure created by a requirement to comply with an external demand limited creativity and was replaced with compliant, routine behaviour. Jesse concurred with this stance and also confirmed that as deadlines approach and the pressure to meet a requirement grows, the timescales for being creative, developing thoughts and operationalising ideas are reduced to a point which does not permit creativity. As Jesse reported that as a deadline approached:

*'I don't think the ability to be creative will go down but I think actually following on, following up on those creative thoughts would decrease.'*

This tended to support the notion of *latent creativity* in figure 4.3.1e. Leslie also noted that from their perspective and experience, too much immediate short term pressure is limiting to creativity; as is an oppressive environment where personal freedom of thought and space to develop ideas are discouraged or prohibited, thus contradicting the findings of Medeiros *et al.*

(2014) but finding agreement with Glăveanu (2013) which suggested that creativity can be governed by how flexible individuals perceive their environment to be.

Complying with *financial constraints* were cited by participants as a perceived limiting factor to creativity, with the interpretation of this taking two forms: firstly, in the context of having sufficient financial support to provide the necessary resources to be creative and secondly, being wary of the innate financial risks attached to creativity, whereby creative processes do not produce anything of value. Aubrey articulated both of the interpretations when illustrating the constraints to creativity in relation to funding for research activity, initially citing that for creative endeavours in their field high levels of costly resources are often required, as are staffing costs. Perhaps more interesting, both this academic and Lindsay cited experiences where funding for research is often only to be available for projects where the outcomes are seemingly known prior to the research beginning, thus preventing or limiting creativity. Aubrey noted:

*'Blue sky research without any aim is not funded...it's going to have to [have] a concrete measurement, which is awful in a way because, and I must have said that before, nowadays to have grants you almost need to tell them [the research funders] the answer already. "We're gonna find that, don't worry we're gonna find that" where is the creativity? It's a bit hypocritical; it's not research. It's a series of experiments where you already know the answer at the end.'*

Similarly, Lindsay concurred and noted that:

*'...also, just in terms of being creative about things; there's such a lot of limitation in research. I think in terms of stuff I'm doing and what the funders want and what their political and financial priorities are and then that just means you are often having to think about things in a very particular way or at least talk about them in a very particular way.'*

Chris and Leslie agreed with this position and highlighted that due to the innate risks to their organisations' financial security and the uncertainty creativity can bring, often creativity has to be curtailed to ensure a valued output. This corroborated the employers' position on this issue illustrated in stage three of this study's method and that of the student participants.

The financial factor illustrated here, indicates something of a conflict between the values of knowledge discovery and those of financial security, and this tension is an example of the final, more general, external factor that participants perceived to be a limitation to creativity; *directional inconsistency*. Diametrically opposed to the facilitating factor of a common organisational goal, directional inconsistency was highlighted by participants as a barrier to creativity; implying that where inconsistencies in aims, values or approaches are perceived creativity is limited. Aubrey provided an example of where the intrinsic alignment of a department of academics was not congruent and that this resulted in the isolation of some team members and individuals having to conform to a direction that they were not motivated towards. Aubrey further noted that these conflicts in aims and values were *'very discouraging'* and led to creativity in his research being limited. Chris supported the view that creativity can become stifled if the direction of a company is not consistent and suggested that the alignment of values becomes the *'fabric of the organisation'* for creativity to be enabled. Lindsay further concurred with this position and noted that where different priorities occur this can be:

*'...difficult to manage sometimes and can mean that perhaps you don't always get to do everything you wanted to do and they have a slightly different perspective on things which can change the nature of the project.'*

It is interesting to note that in the examples cited by the academic participants, both relayed notions of conflicts with power relationships, that being, senior colleagues in positions of responsibility being able to assert views and value that, in the examples given, were not congruent with the perception of agreed values. Whilst not citing specific examples, other participants tended to indicate implicit agreement with this via explanation of their contexts which, in all cases, included a senior stakeholder setting the context and parameters of operation. For example, student participants highlighted lecturers or tutors as the senior stakeholder; with academics and employers making similar reference to line managers and clients respectively.

These three key factors, as perceived by the participants, illustrate that the meeting of externally generated expectations can, to a greater or lesser degree, limit the creative process and therefore creative outputs, and that co-actors in positions of responsibility appear to play a key role in managing these expectations. Participants similarly identified that conformity with perceived traditions is also a limiter of creativity and illustrated conformity as the antithesis to individuality and the creative potential it brings. Leslie imbued this position very clearly and stated that:

*'I like to let the individual be the individual for who they are, so I don't tell anybody how to have their desks'*

and expressed that individuality, rather than conformity to tradition and norms, is highly important to the creative process. Jesse was also of this opinion and gave examples of conformity to tradition from their educational experience which they perceived had limited their creativity. For example, Jesse stated that *'a lot of tutors still kinda try to reiterate the fact that we are marking to mark schemes'* and thus perceived formal assessment marking schemes had stunted the potential to be creative as relevant thoughts about work went outside of the marking scheme parameters. Jesse also went on to discuss what they perceived as examples of creativity when they had conveyed individual views during seminar work and not followed standard or traditional lines of thought. This concurred with a view held by Charlie whereby they felt that they were being more creative when they had a *'sense of being heard,'* pertaining to a feeling of standing out from a norm and being recognised as an individual. It is evident from the vast majority of the established and contemporary research related to creativity, the individual is fundamental to any creative process and Glăveanu (2013) noted that this *actor* exists in and is influenced by a social context, alongside their personal traits. The notions of individuality (and the importance placed on them) raised by Jesse and Charlie are pertinent in illustrating that how the *actor* feels regarding their perceived level of ownership affects creativity.

Aubrey agreed with this position of standing out from normal, accepted values and provided a very specific example of how creativity in their research and therefore discovery of new

knowledge had been limited by conforming to normative values. Explaining how the application of algorithm modelling is common place in their area of research, Aubrey noted that any data situated outside of the normative data set is often disregarded leading to, in their perception, a reduction in creativity as the exceptions to the algorithm are not investigated or explored; exceptions which could yield interesting findings. Aubrey went on to discuss and acknowledge that whilst *'the unpredictability is good'* and the exploration as described here is creative, the *'chaos'* caused must return to some form of order to ensure that creative outputs are valued. Similarly, Francis noted that there are *'limitations of reality'* and described that students need to learn to manage the chaos if they are going to be successful in the industry related to Francis's subject (creative media). Indeed, Francis described a situation where negative normalisation of chaotic behaviour, held under the guise of creativity, had been detrimental to students' learning experience:

*'...it was the four female students who were keeping everything organised and getting really frustrated, and the four male students who were just going feral and just weren't turning up, were messing about and all the rest of it. And of course within that group was the director and the writer, and all the people who are responsible for those key elements of the production that the producer, who was one of the female students, needed.'*

Lindsay tended to agree with this stance and noted that boundaries have to exist for students to work creatively within; in this particular instance, Lindsay conveyed that these boundaries were those of *'academic rigour,'* for example, presenting creative thoughts through a clear, ordered academic argument. Concurring with this notion, Leslie posed the rhetorical question (during the stage four interview) of *'The end product. Interestingly, isn't it always ordered?'* and went on further to describe how there is a need for chaos and an equal need for order, and in their experience, in alternating phases throughout a project. Whilst this alternating pattern was not described by other participants, the notion of *'order to chaos'* does tend to align with the *evaluating* stage of the creative process.

Chris summarised that the relationship between creative chaos and order is defined by the values of the organisation and the *'appetite for risk'* that the organisation is happy to accept. It would appear that in terms of recognising the limiting factors of creativity, in the context

terms of model proposed in 4.3e, that creativity as an employability skill is less about locating an idealistic operating point on the model and is, instead, about acknowledging the polarity of the aspects of the model as a whole, recognising the ‘*appetite for risk*’ of any given context and then operating effectively within those parameters.

#### 4.4.5 Collaborating with others

Stages two and three of the method within this study identified agreement between participants with regard to *collaborating with others* as an element of creativity and theoretical sampling relating to forms of communication and trust were emergent. Findings from stage one of the method did not indicate specific reference to the notion of *collaborating* as noted in table 4.4.5, however, within the stage one theme of *empowering the individual*, contributory sub codes relating to *collaborating* were apparent and were considered when undertaking stage four interviewing.

**Table 4.4.5 – Stage one, two and three themes and theoretical sampling relating to collaborating with others and the resulting developed conceptual theme**

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Collaborating with others	No specific reference	Forms of communication.  Trusting humanistic characteristics.	Collaborating with others

The stage four interviews triangulated two specific areas which underpinned the value of *collaborating with others* to the creative process: *developing ideas* and *humanistic safety*. Furthermore, agreement was noticed in the perceptions of participants with regard to *practical enablers* of collaboration; that is, those factors which promote collaborating in a creative sense.

With reference to *developing ideas*, the student participants were unanimous that collaboration is a valuable contributory factor when going through the creative process, with

all students highlighting that *collaborating with others* permits the *'playing'* with ideas to form meaningful entities. Charlie described a process of *'playing with'* and *'testing ideas'* in a collaborative manner which ended in some of their ideas being discarded but ultimately resulted in a valid output. Jesse noted that *'I prefer to work in a group because I can bounce my ideas off other people and they can do the same with me,'* which was supported by Leslie who said:

*'If you come up with ideas and you want to bounce ideas around; "oh what about this and what about that," often collaboration is brilliant because you're bouncing ideas around.'*

Sam also concurred with the notion of *'playing with ideas, play does encourage good creativity'* and highlighted examples from their undergraduate programme whereby paired (assessed) work resulted in many valuable creative outputs. Jesse further noted a specific situation from their final year of study where they had worked individually on a project and, whilst feeling a greater sense of situational control, they perceived the experience to be *'far less rich'* in terms of creativity and developing ideas.

Whilst collaborative idea development tended to be cited as supportive to the creative process, it was also illustrated by participants that creativity is not always solely undertaken in a collaborative manner. Jesse felt that an appreciation of different forms of creative working (group and individual) should be recognised and Leslie concurred that:

*'It depends on the nature of what creativity you're doing. I think if somebody is writing a classical score piece very quietly, they might just be on their own...there is a time and place for a bit of quiet thinking to make sure things are right'.*

Lindsay was also in agreement and noted that both students and academics, when attempting to be creative, need to know when to *'go it alone'* but highlighted that this tends to be situation specific with no particular formula as to when work individually or collaboratively. All interviewed participants, but particularly the employers and Charlie, noted something of an oscillating pattern with respect to collaboration versus individuality; whereby individuals,

whilst attempting to be creative, will work by themselves but then convene with colleagues, and then repeat this cycle until an agreed end point is achieved.

It is interesting to note that, whilst supported by all interviewed participants of this study, the concept of *developing ideas* tends to have greater importance to student participants, possibly due to the journey of discovery and learning they are on and the relative lack of experience in their sector area. The academic and employer participants tended to put more emphasis on the humanistic elements of collaboration, that being, factors which encourage individuals to feel valued and safe, thus facilitating participation in the collaborative development of creative ideas.

All interviewed participants, perceived the need for *humanistic safety* when undertaking creative collaborative work and identified that this safety emerges from the fellow collaborators; being contextualised by student participants to be fellow students; by academics as colleagues and post graduate research students; and by employers to be colleagues, employees and, in some cases, customers. The underpinning tenet that emerged from the data set in this respect, was having a sense of trust in collaborators with respect to a freedom to express views in a confidential environment and to be free from pejorative judgement when developing ideas. Francis described examples of where collaborative environments have allowed students to '*normalise*' any insecurities of working in a group scenario and that:

*'they [students] generally support each other in that, they're all very aware that they worry that their idea sounds daft or might sound unrealistic or something like, but there's quite a nice support network that quickly builds up even when working in a two or a three when they are talking about those things.'*

Lindsay concurred with this and perceived that creative student collaborations tended to be more successful when the group gave confidence to individuals to discuss and try out ideas. Both Lindsay and Jesse also agreed that this concept of open and supportive discourse is more effective when the group has fewer issues of hierarchy or ego, although this, in the opinion of Lindsay, cannot be completely overcome, noting:



*'Yes, it's about trust and about knowing those people and being able to work with those people but there are always things going on in groups of people in terms of power hierarchies, how you know those people in terms of those relationship you have with them, so therefore what you can and can't say.'*

Chris supported this idea of status free collaboration and noted that:

*'in a collaborative session there are people of different levels responsibility or status within a hierarchy and so almost in that setting those external maps and that baggage needs setting aside and people need to trust they can speak freely without alienating or in any way compromising their position or alienating themselves with their superiors or with their subordinates.'*

Student participants also concurred with this position and each expressed that a critical part of a collaborative scenario is the valuing of others and their ideas; both in the sense of being appreciative of co-actors knowledge and experiences but also in terms of being polite and welcoming, thus creating a more creative situation. Jesse noted from personal examples of positive collaborative experiences during their study that:

*'We're all supporting each other's ideas. Not that there is "no bad idea", but there's an appreciation of where it [the idea] is coming from.'*

Similar to the concept of *playing* when collaboratively developing ideas, boundless support and freedom within collaborative scenarios appeared not to be valued by participants and, as noted above, the notion that there is *'no bad idea'* did not hold true with participants. Sam noted that in the context of collaboration *'friendship does not equate to quality of work'* and Leslie made clear that whilst the discussing and adaptation of new ideas is valuable, it also requires focus and direction, thus working towards a valued output. Jesse and Leslie concurred that, ultimately, a considered decision that draws together the collaborative creativity into a productive entity will be required to ensure effectiveness of the group and that this decision should be reasoned and agreed by the collective. Participants perceived that this agreement should be based on the goals and priorities of the collaborators, which tended towards the more *practical enablers* of collaborative creativity.

Despite investigation at stage four, the theoretical sampling concept of non-verbal forms of communication used by individuals in a group context which emerged from stage three, did not directly arise in the data set during the semi-structured interview process. It could then be assumed that participants perceive verbal communication as the manner in which transmission of information is made, however, Griffin (2016) highlighted that communication is a socially constructed activity and thus humans will construct their reality of the meaning of the communication based on their perceptions of their environment, including para-verbal and non-verbal information. Hence, the participants may perhaps be unaware of the impact of social dynamics on communication related to creativity and, to some extent, be over simplifying a complex issue.

The final element of *collaborating with others*, as perceived by participants, related to the *practical enablers* of the collective groupings. In the first instance, data from participants, irrespective of subject domain or role, tended towards the idea that the most crucial practical factor of collaborative endeavours is establishing and maintaining clear aims and parameters. Chris made clear that whilst giving high importance to collaborative creativity, activities should still have some semblance of structure, noting that:

*‘...being clear what the goal is or what the objective [is], so some kind of a framework you know so that the collective energies can be harnessed and focused rather than just be purely spontaneous and a little bit dislocated perhaps.’*

Francis supported this and illustrated that whilst appreciative of groups working together informally, collaboration had been designed into the undergraduate curriculum, thereby giving it more structure and formality. Charlie articulated that from their experience, creativity facilitated through collaborative work was most effective when individuals had agreed aims, objectives and motivations, noting that *‘even though they [the students] have the same values, they still can have different approaches to things,’* thus seemingly concurring with figure 4.3.1e and suggesting that creative tasks are not boundless and require direction.

The second *practical enabler* that saturated within the perceptions expressed by participants, was the concept of trust in an individual's subject knowledge. Distinct from the notions of personal trust identified earlier, for example where an individual trusts another member of the group not to be judgemental, participants identified that trust in a collaborator's subject knowledge must be assured at the latter stages of the creative process (*designing* stage onwards – see figure 4.4b). Chris and Leslie noted that at the *conceptualising* and *clarifying* stages of the creative process it is possible for an individual without subject knowledge to be able to contribute to creative thoughts in a collaborative scenario, however, as the *designing* and *synthesis* is undertaken, it is necessary that all co-actors have trust in the subject knowledge of each of the group members, thus instilling confidence and promoting uninhibited creative thoughts. Chris noted that:

*'you can get into people needing to, kind of, diagnose or offer expert input and then it definitely does matter if the person is [pause], you trust that person and know with some confidence that they have expertise and knowledge to bring. Definitely.'*

Leslie concurred with this idea of confidence in an individual's subject knowledge and illustrated that the level of trust, in this regard, varies on the stage of the creative process, noting:

*'[conceptualising/clarifying stage] you just wanting people to brain dump and say what they think. So I don't think you don't need trust. I think you need the trust and understanding when people are then developing something further [designing/synthesis stage]. You need to be able to rely on people to understand what you're trying to do.'*

It is interesting to note that the sub theme of confidence in co-actors subject knowledge is seemingly more important to employers during the collaboration than academics or students, potentially due to employers' necessity to engage with a broader range of individuals with a diversity of subject knowledge; as opposed to academics and students who tend to work in groups with individuals with similar backgrounds (for example, students on the same course of study). It is of further interest that subject understanding *per se* is of greater importance to academics and students rather than in a collaborative context, perhaps indicating that

academics and students attach less risk to collaborative creativity than employers due to lesser financial risks.

#### 4.4.6 Understanding the subject

As emerged in *collaborating with others*, the notion that the extent of subject understanding can influence the ability to be creative also saturated the data set at a more generally and personal level. Participant perceptions acquired at stage one of the method illustrated that synthesising subject understanding at all levels of the creative process is important and, similarly, stages two and three also raised the perceived importance of subject understanding to the creative process, as highlighted in table 4.4.6. Further to the unstructured interviews of stage three of the method, the formality of the subject understanding and the impact it has upon the value of the creative output was a point of conjecture and, hence, was investigated further.

**Table 4.4.6 – Stage one, two and three themes and theoretical sampling relating to understanding the subject and the resulting developed conceptual theme**

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Understanding the subject	Synthesising at all levels	Formal versus informal gaining of understanding	Understanding the subject

Data saturation was demonstrated across the interviewed participant groups with regard to subject understanding, with all subject domains being in agreement that an informed level of subject understanding is required to be creative and produce valued outputs. Interestingly, however, saturation was also evident with regard to subject understanding often being discordant with creativity, in the sense that subject understanding can limit creative thought due to preconceptions of restrictions and barriers.

Lindsay (social science) perceived that some basis of subject understanding is required to be creative within their domain of social science; noting that individuals must *‘learn the language of the discipline’* and know the specific boundaries of the subject, so as to be able to draw out

and articulate informed conclusions. Lindsay warned, however, that due to the political and emotive nature of the *'language'* and boundaries, it can become easy to shut off other views and ways of thinking, thus limiting creative thoughts. Jesse (social science) tended to concur with this stance and noted from their experience that a basic understanding of underpinning principles and *'broad parameters'* is required in order to be creative and produce a valued output within a certain discipline. Jesse went on to highlight that, in their view, art based subjects have greater scope for creativity (provided the output has value) given the more subjective nature of the domain and, conversely, that science follows a rigid path which results in little new creative thoughts and outputs.

Interestingly, this perception did not arise in interviews with science or arts based participants and Francis (arts based) concurred with the general view that a subject understanding is required but that:

*'I think someone needs to sort of balance that subject knowledge with that questioning nature and that adaptability to sort of think well "this shouldn't work but perhaps it could work in this way".'*

Similar to the social science participants, Francis went on to note that, in their experience, it is possible to have too much subject knowledge which makes an individual become *'blinded by it when you are looking at a particular issue'* and thus reducing their ability to engage with creative thinking and creative ideas. In a similar vein, Leslie (arts based) concurred that whilst subject understanding and experience is important, but also noted that:

*'I think sometimes it can be a hindrance, because we have preconceptions about a particular problem that we have to solve'*

and Sam (arts based) also perceived that excessive knowledge can sometimes make it difficult for an individual to relate and conveyed their thoughts and ideas to others.

The science based participants displayed general agreement with their social science and arts based contemporaries with regard to subject understanding, however, a subtle variance was noticed in the data set. Whilst science based participants concurred that subject understanding

is important to creativity, they also noted that this understanding can be more generic so long as the underpinning concepts of the subject area are understood; an example provided by Charlie (science based) deemed that for an individual to be creative in forensic chemistry their subject understanding can be based in microbiology as the *'fundamental principles at a cell level'* are the same. Aubrey (science) tended to agree with Charlie and discussed various examples during the stage four interview including the follow dialogue with the interviewer:

[interviewer] *'...could I be creative around [Aubrey's subject]? I know nothing about it at all. Could I look at something and say "have you thought about..."'*

[Aubrey] *'You could if you have another understanding of another field that could be applied to [Aubrey's subject]. For example, if you knew nothing about [Aubrey's subject] but you know a lot about materials; what things are made of and how things react with each other.'*

Chris tended to concur with the concept of general subject understand, conveying that specific understanding is not always required for creativity to occur, however, some related understanding is required. Chris went on to note that often it can be an advantage to engage with individuals who are not subject specialists as this can assist in exploring novel approaches. Chris noted:

*'...in fact it might be an advantage. It might be somebody from a different engineering discipline rather than being mechanical; maybe they're electrical or control systems background or maybe a physicists something like that or a chemist, to think about different technological approaches that we might not be not familiar with. I think that's where it's valuable.'*

With regard to the potential limitations of subject understanding on creativity, Chris also perceived that in their sector, often individuals become convergent in their thinking when they have high levels of subject understanding and that this makes them *'risk averse.'* This aligns with other participants' views that perceptions of success and failure based on subject understanding can lead to barriers to or the cessation of the creative process, therefore, perhaps suggesting that non-subject have the potential to be creative in a different subject area; a notion strongly disagreed with by Baer (2015) who noted that creativity is domain specific and that

*'...whatever skills and motivations feed our creativity in one domain cannot be easily transformed into the skills and motivations needed to be creative in other, unrelated domains' (p166).*

Relating this study's stage one findings and the theoretical sampling that emerged from stage three, during the interviews at stage four it became apparent that, as mentioned previously, *synthesising at all levels* of the creative process was deemed to be important to participants. Seemingly, the consensus of opinion evident in the data set tends to suggest that subject understanding is necessary at all stages of the creative process, however, as identified in section 4.4.5 it was deemed possible that a person with no subject understanding can contribute to the *synthesis* of the creative process at the *conceptualising* and *clarifying* stages. Whilst this is possible the case, the overall weight of reference to subject understanding made by participants, tends to suggest that individuals who do not possess some subject understanding cannot contribute to the whole creative process and are therefore less likely to *synthesise* entities of value; thus aligning with Baer (2015). Similarly, the theoretical sampling of whether formal (that being formalised qualifications) subject understanding is necessary for creativity and value outputs to be produced, did not show any particular consensus in the data. Chris made a single reference to engaging with an employee who was from *'a factory environment and doesn't have an academic background'* during the creative process but only in the context of collaborative activities. Furthermore, it is interesting to note that the descriptions of individuals with subject understanding made by participants, tended to imply a status which necessitated a formal qualification or being on a course of formal qualification. For example, Chris referred to a 'physicist' and Aubrey made reference to a 'micro biologist', with students making constant reference to individuals on their degree courses.

This tends to suggest that there is a perception that subject understanding is desirable to facilitate the creative process and allowing synthesis at all stages of the process; whilst also acknowledging that individuals should be mindful of the potential that the assumptions and consensus implicit within subject understanding can limit creativity and should be challenged. The ability to reflect and form this challenge to subject understanding appears to be something of a personal characteristic which will now be explored.

#### 4.4.7 Characteristics of creative individuals

In section 4.4.6, the interviewed participants identified that the necessity to possess subject understanding for creative purposes is, perhaps, somewhat paradoxical in that it can inform and facilitate creative thoughts, in line with Guilford (1950) and Baer, (2015), whilst at the same time as contriving perceived limitations and barriers to solutions, agreeing with Campbell (1960). It could therefore be assumed that for an individual with subject understanding to be fully creative, they will require a personal characteristic which facilitates the challenging of assumptions and the critique of established principles, as supported by the work of Dellas and Gaier (1970).

**Table 4.4.7 – Stage one, two and three themes and theoretical sampling relating to characteristics of creative individuals and the resulting developed conceptual theme**

<i>Stage two/three conceptual theme</i>	<i>Relevant stage one finding</i>	<i>Theoretical sampling</i>	<i>Stage four developed conceptual theme</i>
Characteristics of creative individuals	Empowering the individual	Working relentlessly.	Personal characteristics

Section 4.4.7 explores this and other characteristics that participants perceived as being associated with creative individuals, and integrates the relevant findings from stage one and theoretical sampling of stage three of the method as highlighted in table 4.4.7.

Participants perceived that creative individuals possess a range of personal characteristics which enable the creative process and the production of valued entities, and consensus in this regard, was evident in the data for six sub themes which contributed to the overall theme of *characteristics of creative individuals*. General agreement in the sub themes was also apparent across all subject domains and participant roles did not associate with any particular characteristic or groups of characteristics. Whilst some overlap between characteristics was noticed, seemingly no hierarchical value was attached by participants to any of the characteristics.



Associated to the views noted in 4.4.6 with regard to challenging established learning, participants concurred that a person who tends to be more creative is inclined to display a *curiosity* for the subject and what underpins the assumptions made in that domain. Related to this is the notion that a person who tends to be more creative, often will *'view life more unorthodoxly'* (Sam) and challenge the assumed principles of tradition in that area. Sam went on to note that when life is viewed in an unorthodox manner, it becomes *'dynamic'* and defies the taboos of society or the parameters of the given task or problem. Data from Francis concurred with this opinion and cited an example of where students had undertaken a learning task which, it was felt, enhanced their employability due to the unorthodox methods that were established which challenged the perceived traditions of their subject. Francis noted:

*'They [students] are still learning the same skills...but what they actually have to fulfil here is unique I think to our school and the way we do it, and that's led a lot of people to say "well if they are not going to do that in the industry what's the bloody point of making them do a [subject task]?"'*

Francis explained that despite the challenge of orthodoxy, as noted above, from colleagues, the students developed, via the creative tasks, a greater awareness and appreciation of subject specific techniques and cited examples of how this had led to improved employment opportunities for the students.

Across the interviewed participants, a *passion* for the subject matter was deemed as necessary for creativity to be maximised, as it provides an intrinsic motivation to work through the creative process and assists in overcoming challenges. Chris provided an example of a generic creative character in the context of an engineering problem that required a solution, stating that:

*'...they've [the creative person] got a genuine interest in it rather than just, you know, it's just a piece of physics.'*

Charlie agreed with this sentiment and also conveyed that from their experience, having a passion for something maintains focus on the task and ensures a dedication from the

individuals involved. Lindsay further supported this and noted from a personal perspective and their experience of working with students that:

*'It takes quite a lot of motivation to keep going with an idea or area of research, so you need to have some passion for it.'*

In a similar vein to *passion*, *perseverance* was all perceived by participants to be a key characteristic of when an individual is being creative. Aubrey explained that, in their experience personally and when working with students, being creative and devising new outputs is challenging and success is not guaranteed at any stage of the creative process. Aubrey continued and explained that individuals must display *perseverance* to overcome the challenges and setbacks during the creative process, for example, when a proposed method does not work during the *synthesis* stage. Lindsay and Francis concurred with this notion and made reference to both students and academics requiring *resilience* when being creative; an idea supported by Sam who provided an explanation of how resilience is important in a creative, academic context:

*'There's nothing wrong in trying to defend or give a different view point if your lecturer doesn't particularly like a phrase or the wording. Maybe the tone is incorrect. I don't think there is anything wrong in protesting it. Because then you can come to a [pause] maybe that could open up his or her mind.'*

Chris agreed with the idea of being resilient and providing justification for one's work in the face of evaluation or criticism, however, Sam and the academics tended towards resilience to persuade others and change people minds, whereas Chris provided an example more akin to maintaining a personal position irrespective of the thoughts of others. Chris noted of individuals who displayed creativity:

*'They aren't too bothered about what other people think. They might be a bit thick skinned...they are not always the easiest people to get on with.'*

The agreement between students, academics and the employer towards the general concept of *resilience* aligns with previously held views (from stages one and three) and also, perhaps, indicates a slight difference between employment and education, whereby *resilience* in

education is a concerned with debate, exploration and discovery of knowledge, whereas in employment, *resilience* is associated with meeting an expectation and undertaking a job role.

Leslie noted a characteristic that is seemingly associated to *resilience* and the potentially negative consequences, in a creative sense, of being too resilient. This employer highlighted that in an employment context it is crucial that whilst being resilient, it is important to be able to listen to others and adapt one's thoughts. Leslie noted:

*'I think if you're a personality that thinks you know it all or you only do it a certain way, that's where you're no good in the creative industries.'*

This finding tends to align with the work of O'Byrne *et al.* (2018) and Amabile (1983) who favoured external validation as part of the creative process and although touched on by Sternberg *et al.* (2002) the appropriateness of the balance between resilience and receptiveness of the individual creator is not established; Interestingly, the Chris and Aubrey did not make reference to this concept directly in terms of learning from others but did make reference to personal reflection and not being '*precious*' about creative entities (Aubrey), with Chris extolling the virtues of having, in a creativity sense, an '*enquiring mind*.' This position perhaps illustrates that science based participants recognise the value of adaptation but are more likely to seek confirmation from sources other than human co-actors. Charlie (science) concurred with both science and non-science stances in this respect which, potentially, highlights the developmental position of being a student, used to receiving feedback from peers and lecturers. Jesse noted in the respect of listening to others and personal reflection, in a creativity context, that '*acceptance and appreciation of different ideas and sort of perspectives on everything*' is an important personal characteristic; to which Lindsay agreed and suggested that creativity is more likely if a person is more open to learning from others, noting that:

*'You've got to be someone who is willing to talk to people and listen to people and their ideas...and have that collaborative [pause] even if you're not actually going to collaborate with those people, it's about learning from other people.'*

Francis also agreed with this and further suggested that, in their experience, people are more likely to be creative when, alongside self-critique and receiving constructive criticism from others, they are also willing to receive from co-actors praise and congratulations for their thoughts and ideas. This notion tended to be supported by the Sam and Leslie but not by other participants, thus, perhaps making this unique to this subject domain.

Participants were in agreement that a characteristic which facilitates creativity is the ability to communicate with others. Stage four interview confirmed that communication is a key component of creativity in that individuals must be able to convey thoughts and ideas to a range of audiences, thus, highlighting and realising a creative act has taken place and an output has been created.

Secondly, participants perceived that communication is a key characteristic of creativity in terms of the creative process, whereby effective communication can enable discussion and stimulate further creative thoughts in others. In support of this, Charlie expressed that:

*'I think I will be able to communicate the issue better so I would be able to work with people a bit better and that would help me to push the creativity. So effectively I would make people like me more, which would create the environment for the creativity; to actually resolve the problem rather than argue about the problem'*

illustrating that creativity can be fostered by clear communication and the effective transmission of information. Other student participants concurred, with Sam articulating that being *'relatable and understandable'* as important, particularly when they have researched a topic in great depth and hold greater knowledge than the audience they are communicating with. Lindsay was in agreement with the notions of communication and the importance of meeting audience needs but reflected that there is an inherent danger of losing the novelty of the creativity that is being conveyed and that communication *'should be done without knocking the edges off more radical or unusual ideas.'*

Whilst agreement was noticed across students and academics, employers did not make specific reference to communication during discussions related to creativity. It was apparent, however, that the systems and process that surrounded the creative process they were discussing could not have occurred without communication which tends to imply an implicitness and assumption that it is in place rather than something that needs to be developed (as in students).

The final personal characteristics relating to creativity as identified by interviewed participants, were more generic in their nature but, it was perceived by the participants, still highly important. The characteristics which found agreement across the participant group were *organisation, time management, willingness* and *patience*. Sam was clear that for purposeful creativity to be fostered, an individual needs to be organised and structured, and cited an example of not getting out of bed late and having a set routine to work within. Similarly, Jesse conveyed that good time management is assistive in the creative process and noted an example of where their personal capacity to be creative had been limited by poor time management. Both students acknowledged that the factors cited in the examples were somewhat variable and personalised, but it was felt that the premise of being purposeful provides a basis for the creative process to be undertaken.

The perceptions of Leslie concurred with this notion of purposefulness and conveyed that *willingness* to engage in creative endeavours was a key personal characteristic that will facilitate creativity. Leslie confirmed that individuals who tend to be more creative are those who are willing to *'have to go at something'* and Lindsay agreed that, from their experience, creativity is more likely in individuals who are willing and *'prepared to go and do that ground work and get that basic knowledge and get frameworks in place.'* These findings tend to triangulate with the theoretical sampling of *working relentlessly* acquired during stage three of the data collection and illustrate that whilst creativity can be viewed as a process, it is likely to be more successful if individuals are motivated and diligent in the support of the process.

The notion of *patience* was further highlighted by participants as a generic characteristic related to creativity. Francis discussed how under graduate students, often, attempt to develop ideas too quickly and not allow themselves time to develop their ideas creatively:

*'I find a lot of them are very impatient with themselves and almost need permission to explore things and not suddenly have final product.'*

Sam concurred with the idea of patience being facilitative in the creative process and illustrated that:

*'I think patience as well that's key. Just because you haven't got something immediately doesn't mean you are wrong, erm, [pause] and just because something is hot, such as a fashion trend, doesn't mean you instantly have to conform to it.'*

Aubrey supported this further by explaining that often, the whole creative process or elements there within, lead to failure and so (linking with resilience) individuals are required to be patient in their endeavours and allow time for the reworking of ideas and thoughts to develop.

In summary, the generic characteristics of *organisation, time management, willingness* and *patience* appear, from the perspective of the participants, to be contributory to the creative process and when maximised, facilitate greater creativity. It would appear that, collectively, these characteristics support, on a personal rather than situational basis, the empowerment of the individual to be creative, thus triangulating with the findings of stage one of the data collection.

As can be noted in section 4.4.7 and others, the perceptions of participants show agreement in general themes, however, plurality of understanding is evident when considering the findings from the perspective of the participants' groupings or subject domains. Section 4.4.8 will now provide a summary overview of the plurality which has emerged from the findings of stage four of the method.

#### 4.4.8 Plurality within consensus

As evident within the previous section of the findings of this chapter, the participant groupings (academic, student and employer) and participant subject domains (science, social science, arts) highlighted differences in how the participants understood the agreed themes of creativity as an employability skill. Whilst operating in a different context, Lassig (2020) also identified the differences in how the perceptions of creativity are nuanced by participant groupings and illustrated that the ‘importance, motivation towards, audience and judgement’ (p10) of creativity vary dependent upon the type (as defined by the author) of creativity, thus conveying a sense of plurality. The plurality in this study has been evaluated and discussed in themed isolation in the previous sections of this findings chapter. However, the following tables (4.4.8a and 4.4.8b) provide a summary of the plurality demonstrated by the participants as a prelude to consolidation within the chapter five (conclusions) of this thesis. Specifically, table 4.4.8a provides a summary of plurality by subject domain, with table 4.4.8b illustrating similar but by participant grouping. In each case, the key concepts identified by each participant are cross referenced against the agreed perceptions of creativity.

**Table 4.4.8a Summary of plurality of understanding categorised by subject domain**

Participant Resultant theme	Aubrey (science)	Lindsay (social science)	Francis (arts)	Charlie (science)	Sam (arts)	Jesse (social science)	Chris (science)	Leslie (arts)
<i>Processing thoughts (Conceptualising)</i>	Problem	Theorists	Sensory stimulation	Problem	Sensory stimulation	Sensory stimulation	Intuition	Sensory stimulation
<i>(Clarifying)</i>	Empirical research	Empirical research	Feelings and experiences	Empirical research	Feelings and experiences	Feelings and experiences	Others' research	Feelings and experiences

<i>(Designing)</i>	Constrained by previous experience	Constrained by previous experience	Constrained by previous experience	Explore previous experience	Requirements of function and form	Explore previous experience	External stakeholders	Insight from research
<i>(Synthesising)</i>	Extension of current to form new Testing practically	Abstract theorisation	Adaptation of current Testing theoretically and practically	Adaptation of current Testing practically	Testing practically	Adaptation of current Completely new Abstract theorisation	Adaptation of current Testing practically	Physically devising by hand
<i>(Evaluating)</i>	Updating method Structured personal critique	Sense making Linking to other entities Subjective peer critique	Linking to other entities Subjective peer critique	Updating method Structured personal critique	Linking to other entities Subjective peer critique	Sense making Linking to other entities	Structured personal critique	Subjective peer critique
<i>(Applying)</i>	Leading to a tangible output	Leading to a tangible or theoretical output	Leading to a tangible output	Leading to a tangible output	Leading to a tangible or abstract output	Leading to a tangible or theoretical output	Leading to a tangible output	Leading to a tangible output
<i>Producing a valued entity</i>	Practical, capitalist values	Humanist values	Humanist values	Practical capitalist values	Humanist values	Practical capitalist values	Practical capitalist values	Humanist values
<i>Enabling the cultural environment</i>	Flexible boundaries Flat hierarchy	Flexible boundaries	Flexible boundaries	Clear boundaries Clarity of purpose	Clear boundaries Egalitarian Shared goal	Clear boundaries	Clear boundaries For all staff	Clear boundaries Clear direction
<i>Collaborating with others</i>	Personal value and safety	Personal value and safety	Personal value and safety Structured	Developing ideas Playing and testing ideas	Developing ideas Playing with ideas	Developing ideas Bounce ideas	Personal value and safety Trust subject knowledge	Personal value and safety Trust subject knowledge



					Clear aims				Clear goal	
<i>Understanding the subject</i>	More generic	Technical language	Danger of too much		More generic	Broad parameters Limitations of excessive	Broad parameters		More generic Danger of high levels	Context specific Limits of preconceptions
<i>Personal characteristics</i> - Curiosity - Passion - Perseverance - Communication - Generic (organisation, time management, willingness, patience)	Resilient persuasion Not Precious	Resilient persuasion Learning from others Valid relatability	Resilient persuasion Challenge tradition Receptive to praise Allow themselves time		Positive dialogue	Unorthodox Relatable and understandable Organised Patience	Appreciation of different ideas Relatable and understandable Time management		Resilient to critique <i>Implicit communication</i> Not Precious Curious Allow time	Resilient to critique <i>Implicit communication</i> Receptive to ideas Receptive to praise Willingness to try

Table 4.4.8b Summary of plurality of understanding categorised by participant grouping

Participant Resultant theme	Aubrey (science)	Charlie (science)	Chris (science)		Lindsay (social science)	Jesse (social science)		Francis (arts)	Sam (arts)	Leslie (arts)
	Problem	Problem	Intuition		Theorists	Sensory stimulation		Sensory stimulation	Sensory stimulation	Sensory stimulation
<i>Processing thoughts (Conceptualising)</i>										

<i>(Clarifying)</i>	Empirical research	Empirical research	Others' research		Empirical research	Feelings and experiences		Feelings and experiences	Feelings and experiences	Feelings and experiences
<i>(Designing)</i>	Constrained by previous experience	Explore previous experience	External stakeholders		Constrained by previous experience	Explore previous experience		Constrained by previous experience	Requirements of function and form	Insight from research
<i>(Synthesising)</i>	Testing practically Extension of current to form new	Testing practically Adaptation of current	Testing practically Adaptation of current		Abstract theorisation	Abstract theorisation Adaptation of current Completely new		Adaptation of current Testing theoretically and practically	Testing practically	Physically devising by hand
<i>(Evaluating)</i>	Structured personal critique Updating method	Structured personal critique Updating method	Structured personal critique		Sense making Linking to other entities Subjective peer critique	Sense making Linking to other entities		Subjective peer critique Linking to other entities	Subjective peer critique Linking to other entities	Subjective peer critique
<i>(Applying)</i>	Leading to a tangible output	Leading to a tangible output	Leading to a tangible output		Leading to a tangible or theoretical output	Leading to a tangible or theoretical output		Leading to a tangible output	Leading to a tangible or abstract output	Leading to a tangible output
<i>Producing a valued entity</i>	Practical, capitalist values	Practical capitalist values	Practical capitalist values		Humanist values	Practical capitalist values		Humanist values	Humanist values	Humanist values
<i>Enabling the cultural environment</i>	Flat hierarchy Flexible boundaries	Clarity of purpose Clear boundaries	For all staff Clear boundaries		Flexible boundaries	Clear boundaries		Flexible boundaries	Egalitarian Shared goal Clear boundaries	Clear direction Clear boundaries

<i>Collaborating with others</i>	Personal value and safety	Playing and testing ideas Developing ideas Clear aims	Personal value and safety Trust subject knowledge Clear goal	Personal value and safety	Bounce ideas Developing ideas	Personal value and safety Structured	Playing with ideas Developing ideas	Personal value and safety Trust subject knowledge
<i>Understanding the subject</i>	More generic	More generic	More generic Danger of high levels	Technical language	Broad parameters	Danger of too much	Broad parameters Limitations of excessive	Context specific Limits of preconceptions
<i>Personal characteristics</i>  - <i>Curiosity</i> - <i>Passion</i> - <i>Perseverance</i> - <i>Communication</i> - <i>Generic (organisation, time management, willingness, patience)</i>	Resilient persuasion Not Precious	Positive dialogue	Resilient to critique Not Precious Curious <i>Implicit communication</i> Allow time	Resilient persuasion Learning from others Valid relatability	Appreciation of different ideas Relatable and understandable Time management	Resilient persuasion Challenge tradition Receptive to praise Allow themselves time	Unorthodoxy Relatable and understandable Organised Patience	Resilient to critique Receptive to ideas Receptive to praise <i>Implicit communication</i> Willingness to try

#### 4.5 Conclusion

This chapter has presented findings drawn from the academic, student and employer participants during the four method stages to address the research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The findings of this study were discovered in line with the principles of Grounded Theory (Glaser and Strauss, 1967) and, hence, the emergence of the conceptual themes have been presented here chronologically to reflect the processes of theoretical sampling, constant comparison and data saturation; working from initial raw information to theory generation and thus presenting the meaning given to creativity as an employability skill by academics, students and employers.

The emerging themes and conceptual model illustrated in chapter four demonstrates that creativity is a skill that is held in high regard by academics, students and employers. The meaning given to creativity as an employability skill by academics, students and employers tended to demonstrate consensus in two core principles of creativity and four surrounding factors which facilitate the core principles. The two core principles of *processing thoughts* and *producing a valued entity* illustrated the agreement of participants that creativity is a sequence of processing thoughts from initial genesis and conceptualisation of the requirement for creativity and subsequently clarifying meaning, designing and synthesising solutions to the requirement, with subsequent evaluation of the synthesis then leading to application of the synthesised entity. Participants were clear that this entity need not necessarily be a tangible artefact but must be valued, in a capitalist or humanistic sense, by stakeholders if it is considered to be creative and the notion that the produced entity of creativity should equate to a complete, never seen before, novelty was not supported by the three participating groups of the current study, thus not aligning to Kaufman and Glăveanu (2019) and their notion of '*something new*' (p27) and tending towards Plucker *et al.*'s (2004) conclusions that creativity is about creating the unobvious (p88).

The two core principles of creativity as an employability skill identified do not, seemingly, operate in isolation and can only be achieved when supported by surrounding factors identified by the participants, namely; facilitating situational factors, collaborating with others, understanding the subject and the personal characteristics of those being creative. Participants showed agreement that personal creativity tended to be more fluent when personal agency was enabled by co-actors surrounding an individual, whilst also acknowledging the individuality of a person as opposed to conforming to established traditions. Participants were, however, mindful that unfettered agency and individuality was not pragmatic and the boundaries of this freedom need to be defined in any given situation.

Collaborations with other individuals emerged from the data set as a facilitative factor to the creative process as, in the opinion of the participants of this study, it gives permission to exchange and develop thoughts at all stages of the process. Participants highlighted that collaborative activities are, however, underpinned by the notions of trusting other individuals both in a humanistic manner and also having trust in the subject understanding of a collaborator. Furthermore, the participants of this study also illustrated that for collaboration to be pragmatic and effective, a shared appreciation between collaborators of when not to be collaborative was important.

The perception of the impact that subject understanding has on the processing of ideas was also highlighted by participants as a key facilitative factor of creativity. Participants gave meaning to the idea that whilst random acts of creativity are possible, it is much more likely that creative entities will be produced by individuals who have an understanding of the subject domain the creative act is situated within. Participants did, however, also recognise that creativity can be restricted by subject understanding which is highly developed and only articulates the currently established reasons for why a creative entity is not worth pursuing, due to dictation from dogmatic tradition.

The final surrounding factor identified by the participants of this study, related to the personal characteristics of those attempting to be creative, namely; curiosity, passion, perseverance, communication and the more generic skills of organisation, time management, willingness and patience. Participants deemed that where an individual possesses these characteristics, the processing of creative thoughts was likely to be more effective, as the characteristics enable the individual seek alternative ideas, maintain focus on the task despite failure or criticism and will allow the conveyance of creative ideas to others, thus more easily establishing the value to other stakeholders.

Through inductive reasoning and the phenomenographic approach adopted within the current study, the emergent themes illustrated the shared meanings given to creativity as an employability skill by the academics, students and employers within their associated local context. Whilst shared meaning was evident, variability of specific perceptions of the agreed themes was evident throughout the analysis of the data, thus indicating an element of plurality in how creativity is defined by participants, as summarised in tables 4.4.8a and 4.4.8b. Given the vast array of literature which surrounds, yet fails to define creativity, and considering the perhaps turbulent UK HE sector, the pluralism of definition which has been demonstrated by the participants of this study is not unsurprising, however, if the development of creativity as an employability skill is to progress within the sector, the plurality must be taken into account.

Chapter five shall now draw together and employ these induced theoretical themes to inform a local model of creativity and influence recommendations for future practice in UK HE.

## Chapter Five – Conclusions, Limitations and Recommendations

### 5.1 Introduction

This final chapter of the thesis presents a summary of the current research study and the contributions to knowledge which have emerged from the findings. The key emergent themes evident within the data are identified to inform recommendations for practices in UK HE and provide an outlook which suggest possible research into similar or related topics. The chosen methodological position and associated approaches are reviewed with critical remarks provided; outlining the limitations of the study and the impact upon the data set and subsequent understandings.

The apparent value of creativity as a human attribute appears to be well established in the literature base (Csikszentmihalyi, 2019) and, similarly, whilst much debated, the increasing worth given to the concept of the employability of graduates from UK HE is evident (Lauder, 2015). The exploration of these concepts in tandem, however, has received little attention and hence, the current research project presented here intended to investigate how three stakeholder groups, with a vested interest in graduate skills, perceived the concept of creativity as an employability skill. The current study's research question was:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

The three rudimentary concepts forming this research question; those being creativity, employability and HE, are seemingly subjective and emotive in their nature (Jordanous and Keller (2016) and, thus, the study adopted a constructivist position and inductive data collection approach in addressing the research question. The phenomenographic style aligned with the inductive nature of the study and engaged with three key stakeholder groups that are inextricably associated within the context of graduate employability. Thus, academics, students and graduate employers were the primary units of analysis of this study, with subject domains becoming categorical variables of analysis, namely; science, social science and arts, aligning with Simonton (2009).

Academic members of a UK HE institution, final year undergraduate students of the same institution and graduate employers from the same geographical region, conveyed consensus with regard to their perception of creativity in six emergent themes in response to the research question; sub divided into two categories:

- Core principles
  - Processing thoughts
  - Producing a valued entity
- Surrounding factors
  - Facilitating situational factors
  - Collaborating with others
  - Understanding the subject
  - Personal characteristics

Each of these six elements will be expanded upon further in this chapter, with the variability of meaning within these six consensual elements also illustrated to emphasise the plurality of creativity, as defined by participant grouping or by subject domain.

The findings of this current study can, thus, be seen to offer explanation as to the perceptions of creativity as an employability skill, from the viewpoint of the three key stakeholder groups in the local context in which the study and research question is specifically situated. Hence, the findings make an original contribution to the field of creativity and employability, as it has generated understanding from perspectives not previously engaged with in this collective way and employing data collection approaches, perhaps, more suited to the emotive nature of the subject matters.

Section 5.2 will now describe and explore the key results of the current study; segmenting the findings into two sections which will illustrate, firstly, an overarching local model of creativity and, secondly, the inherent plurality within the model as identified by participants.



## **5.2 Conclusions of the study**

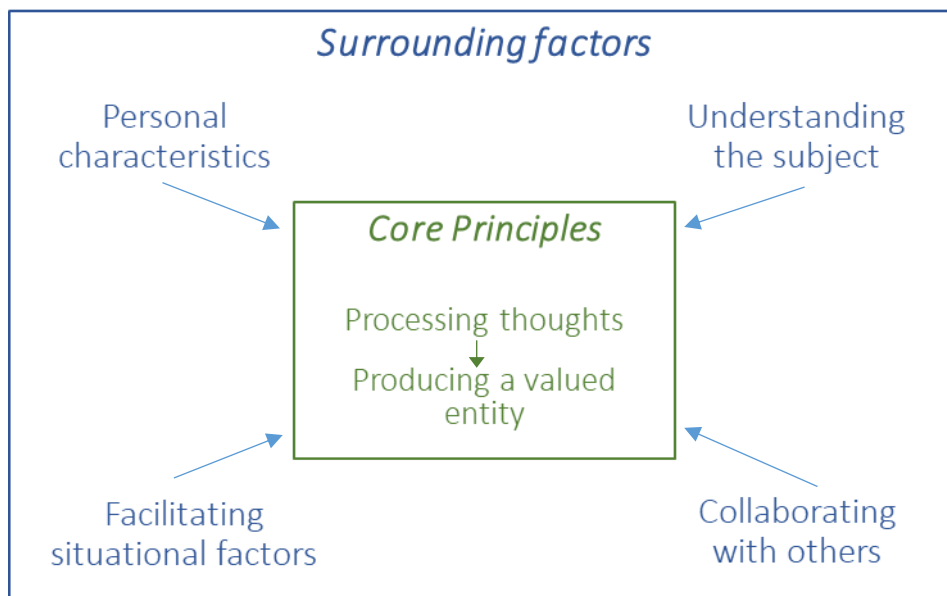
This section of the conclusions chapter presents a culmination of the refined conceptual themes identified by the participants involved in the current study and, thus, offers an explanation as to the perceptions of creativity as an employability skill, thus answering the research question.

The meaning given to creativity, induced from the participants of this study, tended to highlight common aspects of understanding which have influenced the generation of a model of creativity as an employability skill, local to this participant group and their context. Whilst demonstrating consensus, the agreed themes also illustrate a degree of variability specific to subject domain (science, social science, arts) or participant characteristic (student, academic, employer) thus highlighting a plurality to the defining features of creativity. The induced local model of creativity which follows has, as previously argued, high trustworthiness and therefore can be employed as a pragmatic tool to assist in the development of creativity as an employability skill in undergraduate students.

### **5.2.1 Model proposal**

As illustrated in chapter four, the processes of constant comparison and theoretical sampling (Glaser and Strauss, 1967) highlighted that the three participant groups perceive creativity, in the context of being an employability skill, to be the processing of thoughts in a manner which leads to the generation of a valued entity; enabled by certain personal characteristics of an individual, the specific subject understanding of an individual, collaborations with other individuals and the complexity of situational variables which surround an individual. Figure 5.2.1 illustrates the proposed local model.

Figure 5.2.1 A local model of creativity



The model illustrated in figure 5.2.1 was developed via the thematic analyses highlighted in chapter three (3.10) from which all the elements of the model emerged. The meta-analytical approach associated with the Grounded Theory methods of ongoing data collection and analysis (Glaser and Strauss, 1967), also supported the development of the local model, in that, attempts to establish relationship between the emergent themes could be proposed and illustrated.

The representation of the findings of the study via a diagrammatic model was considered, by the author, to be the most effective of facilitating the greatest knowledge transfer from the findings to the widest number of audiences so as to have the greatest impact on practices in UK HE. Whilst acknowledging and being mindful of the potential for a somewhat parsimonious representation of the complex and abundant amount of qualitative data, the local model illustrates the key emergent findings in a manner which is pragmatic and accessible to each of the three key stakeholders associated to the research question; academics, students and employers. The conveyance of complex thematic analysis to an academic of UK HE would be plausible, however, to an undergraduate student or, particularly, an employer who may not be familiar with academic practices or have little time to consider large amounts of data, the simple yet rigorous local model proposed in figure 5.2.1 should be accessible.

It is proposed that the local model is employed to influence the practices of the three stakeholder groups by prompting recognition and sense making of the key findings in their contexts, for example who attributes value to a creative entity, and to facilitate reflection on how the surrounding factors can be developed in themselves and others. To aid the contextualisation, the local model should also be used in conjunction with the notions of plurality highlighted in section 5.2.2 thus providing greater nuance at a stakeholder or subject domain level. As highlighted in sections 5.3 and 5.4, this local model remains untested beyond the scope of the study's method and therefore it would seem prudent for future work to evaluate and reflect on the elements of the model and its applicability in developing practice to facilitate creativity as an employability skill.

The participants were agreed that the core principle of processing thoughts, is a sequential process from the genesis of an idea to the synthesis of an entity and its subsequent application, finding agreement with Jackson's (2006a) model where '*processing, analysing, synthesising*' (p3) was apparent. This finding is not dissimilar to the frameworks of many other previous authors (Wallis, 1926/2014; Guilford, 1950; Amabile, 1983) but with subtle variations from these works apparent here and the principle of producing a valued entity is also not unusual. Whilst not being overtly identified by participants, the notions of the four C's model (Kaufmann and Beghetto, 2009) appears to align here as, seemingly, the participants perceived that the value attached to created entities can be assigned internally by the individual (mini-c or little-c) or by external stakeholders (pro-c or big-c).

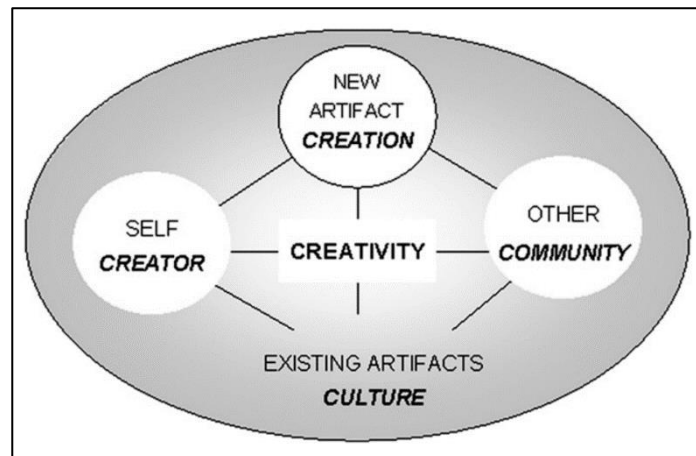
The notion of the surrounding factors which influence creativity is, again, not a new phenomenon; for example, Amabile (1983) identified '*domain relevant skills*' (p362) as a necessary support to the creative process, similar to the *understanding the subject* noted in this study. The factor of personal characteristics proposed here is supported by various authors, including Glăveanu (2010), who also tended to confer to some degree with *collaborating with others* factor via his '*We-paradigm*' (p82) which suggested creativity is influenced by social interactions. Similarly, the *facilitating situational factors* element is

congruent with the ‘*affordances*’ (p70) idea proposed by Glăveanu (2013) which suggested that creativity can be governed by how flexible individuals perceive their environment to be.

Though aligning, the surrounding factors proposed in the model here vary subtly from previous theories, however, of greater relevance is the particular combination of surrounding factors relevant to creativity as an employability skill in this local context, as identified by the participants. The findings of this study seemingly suggest that the four surrounding factors have equal weighting with regard to their influence on the processing of thoughts and that no one of the four factors has greater importance than another. Findings also did not discover any particular interaction between the four surrounding factors; rather, they were apparently identified as co-requisite but distinct, similar to the assertions made by Sternberg (2006) and Besancon *et al.* (2013) amongst others.

The core principles and surrounding factors noted in figure 5.2.1 seemingly tend towards an interactionist position, similar to the notions suggested by, amongst others, Glăveanu (2010, 2013) and the general ontological stance of Dewey (Stoller, 2018). Ibanez (2014) noted that the underpinning theories proposed by Dewey highlighted creativity as a process of interacting with one’s surroundings to learn from previous experiences and subsequently overcome difficulties and problems. Similarly, Stoller (2018) also highlighted from Dewey’s work that an individual is continually redefined and repeatedly constructed via inquiry with their environment, and that experience can be reconstructed creatively through participation in meaningful relationships with others. The model proposed in the current study is congruent with the notions of Dewey as the participants suggested that, generally, the creative process does not exist in isolation and is surrounded by governing environmental factors and, more specifically, that relationships (as in *collaborating with others*) and that exploring an and understanding an environment (as in *understanding the subject*) are critical for creativity to occur. Similarly, Glăveanu’s (2010) work advocated a need for the recognition of the cultural psychology with regard to creativity and, in proposing the “We-paradigm”, emphasised the dynamic co-construction that results when transaction takes place between an individual and their environment, as illustrated in figure 5.2.2 below.

Figure 5.2.2 A cultural framework of creativity (Glăveanu, 2010, p87)



Furthermore, the five A's model illustrated by Glăveanu (2013) also suggested that the actor, actions, artefacts, audiences and affordances are influenced by an ecological psychology which envelops the individual and their environment in interactions, thus acknowledging culture as a guiding principle; *'action cannot take place outside of interactions with a social and material world'* (Glăveanu, ibid, p71). Again, this demonstrates alignment with the proposed model of this study in that the *facilitating situational factors* element very much emphasised an interplay between an individual and the affordances of their environment (and the people within it), which permitted or prevented creativity. In a more pragmatic and obvious sense, the *collaborating with others* element of this study's model, clearly illustrated an individual's interaction with their environment, that being, co-actors who assisted in the *processing of thoughts* or provided assurance which enabled creativity to take place.

Perhaps of more interest and future relevance, was the emergent variability within the participants' consensus of the core principles and surrounding factors of creativity displayed by both participant groupings and, more notably, by subject domain. This shall now be discussed in section 5.2.2.

### **5.2.2 Plurality of creativity within the consensus of agreement**

Chapter four identified the consensus evident within participant perceptions of creativity and, hence, the proposed model illustrated in section 5.2.1 shows these agreements. Whilst general agreement was identified in these six key areas, variability of specific perceptions of creativity within these six key areas exists and, therefore, suggesting that the definition of creativity has some degree of plurality associated with it, with table 4.4.8a and 4.4.8b in chapter four, providing a complete overview of the plurality within the agreed themes generated by the participants. Tables 5.3.1 and 5.3.2 serve to illustrate where commonality exists between participant groupings (table 5.2.2a) and subject domains (table 5.2.2b) with regard to the plurality of understanding; not only being of use when attempting to understand creativity in this context but also permitting a degree of pragmatism when making recommendations for future practice development.

Table 5.2.2a Plurality of creativity by participant grouping

Participant Resultant theme	Aubrey (science)	Lindsay (social science)	Francis (arts)	Charlie (science)	Sam (arts)	Jesse (social science)	Chris (science)	Leslie (arts)
<i>(Designing)</i>	<b>Constrained by previous experience</b>			<i>Variable perceptions across the group</i>			<i>Variable perceptions across the group</i>	
<i>Facilitating situational factors</i>	<b>Flexible boundaries</b>			<b>Clear boundaries</b>			<b>Clear boundaries</b>	
<i>Collaborating with others</i>	<b>Personal value and safety</b>			<b>Developing ideas</b>			<b>Personal value and safety Trust subject knowledge</b>	
<i>Personal characteristics</i>	<b>Resilient persuasion</b>			<i>Variable perceptions across the group</i>			<b>Resilient to critique</b>	

Table 5.2.2b Plurality of creativity by subject domain

Participant Resultant theme	Aubrey (science)	Charlie (science)	Chris (science)	Lindsay (social science)	Jesse (social science)	Francis (arts)	Sam (arts)	Leslie (arts)
<i>(Clarifying)</i>	Variable perceptions across the group			Variable perceptions across the group		Feelings and experiences		
<i>(Synthesising)</i>	Testing practically			Abstract theorisation		Variable perceptions across the group		
<i>(Evaluating)</i>	Structured personal critique			Sense making Linking to other entities		Subjective peer critique		
<i>Producing a valued entity</i>	Practical, capitalist values			Variable perceptions across the group		Humanist values		
<i>Understanding the subject</i>	More generic			Variable perceptions across the group		Constriction of excessive understanding		



As illustrated in table 5.2.2a, it was evident that academics felt inherently constrained during the design phase of the creative process, by their own previous experiences and those of others. With regard to the situational factors that enable creativity, variance was evident between academics and the other two participant groups as the former preferred flexibility in the boundaries which frame the creativity related to the task in hand, whereas students and employers preferred clear boundaries to work within. In respect of collaborating with others, both academics and employers agreed that how a person is valued in a working relationship is important, however, students viewed collaboration more simply as a means to develop ideas further. Employers also identified that mutual trust in the group member's individual subject knowledge is required. Whilst agreeing that personal characteristics are key for creativity, academics specifically valued the ability to resiliently persuade others of their creative entities, whereas employers tended to agree with personal resilience but in relation to being resilient to critique of creative ideas and thoughts.

In summary, the analysis of the plurality by participant type tended to indicate the specific perceptions of the three groupings but little in terms of overall patterns or commonality, aside from employers and students having a greater requirement for clarity and boundaries; perhaps a reflection of the innate perceived values of HE being freedom and expression (Cribb and Gewirtz, 2013). This consideration is seemingly supported by the perceptions of those who have been guided by these academics, that being the student group, who appear to value the idea development.

In terms of the plurality noticed between subject domains as highlighted in table 5.2.2b, it was noticeable that arts based participants concurred that they were more likely to use feelings and experiences when clarifying the initial thoughts and defining the aim of the creativity. Science and social science based participants did not confer on this issue and either agreed with the arts participants or relied on more structured empirical research when clarifying. When contriving artefacts or thoughts to meet the requirements of the creative task, it is apparent that science based participants prefer to practically test solutions in something of a

trial and error manner, whereas social scientists seemingly prefer to create theories and ideas in an internal, abstract way.

The need to evaluate contrived creative entities found agreement across the three subject groups, however, the manner with which this is undertaken by these different subject groups does vary with science based participants preferring a structured personal critique against agreed standards; social sciences participants seeking to make sense of the entity and link with other entities and participants from arts based subjects requiring subjective critiques from peers. It has been agreed by participants that the entity which results from the creative process should be valued in some way, however, science based participants seemed to associate more with capitalist, materialist values as opposed to the more humanist values noted by the arts based participants. The final plurality noticed in the data set referred to the subject understanding deemed to be required by individuals when being creative. Science based participants felt that subject understanding should be generally, if not necessarily specifically, related to the area of study to facilitate valued creativity. Arts based participants, however, believed that excessive subject understanding constricts the creative potential of a person as they are likely to follow precedent rather than thinking in novel or divergent ways.

Overall, the plurality of perceptions by subject domain groupings evident in table 5.2.2b, illustrates much greater and more useful consensus compared to the analysis by participant type. It is noticeable that science based participants prefer structure and tangible practicality; whereas social scientists seemingly like to make sense and operate in an abstract context, with arts based individuals apparently reliant on more humanistic values within themselves and their peers.

In summary, section 5.2 has highlighted agreed conceptions of creativity as defined by academics, students and graduate employers, as illustrated in figure 5.2.1. Further to this, the variability of these conceptions as interpreted by the three participant groups and their subject

domains, has been shown in tables 5.2.2a and 5.2.2b, thus demonstrating the plurality of how creativity is defined and, to some extent, valued by the three participant groups.

Chapter three of this thesis identified and brought reasoning to method and subsequent analysis of data employed within this study. Whilst seemingly appropriate and justified in the approaches undertaken, this thesis and its findings, as with any other, are not devoid of limitation and critique. These limitations will now be discussed in the following section.

### **5.3 Limitations - the trustworthiness and dependability of the thesis**

As discussed in chapters one and three, this thesis is situated in a constructivist paradigm, therefore accepting an interpretivist ontology and epistemology. It has been argued by Golafshani (2003), Green (2010) and FitzPatrick (2019) that the concepts of reliability and validity should be contextualised to the epistemic position of the paradigm a study is situated within and challenge the applicability of the terms reliability and validity in qualitative studies as they are based on positivistic notions of replicability and generalisability. Indeed, Lincoln and Guba (1985) substitute the quantitative terminology of validity and reliability, for trustworthiness and dependability in the qualitative research arena; highly relevant to the evaluation and subsequent application of the humanistic tenets of this thesis, those being, in depth understanding, personal perceptions and individualism.

This approach is not an abdication of the necessity for rigour nor the quality the research findings, rather, it provides a more appropriate critique which aligned to the philosophical underpinnings and positionality of the study.

The greatest advantages of the contrived methods employed in this these are, it could be argued, its greatest limitations. Approaches to data collection and analyses which involve qualitative methods and reliance upon interpretivist underpinnings, typically tend to attract criticism with regard to their subjective nature and the lack of generalisability of findings, for example Cohen *et al.* (2011) suggesting that findings of small scale studies with unstructured data collection cannot be inferred to a wider population. Pring (2015) conveyed that in the view of various policy makers, educational research would be better served by a more

structured approach, akin to the positivistic paradigm. The study, quite deliberately, targeted a relatively small number of participants to focus the majority of the data collection and analysis on, which permitted greater depth of analysis and trustworthiness, but restricted the general applicability of the findings to larger populations. It could also be argued that the relatively small sample size limited the breadth of specific subject areas that could be engaged with and, hence, the applicability of the findings could be more challenging and require greater contextualisation by academics and students. The study acknowledges that the findings presented are, initially, only applicable in the context from which they arose and not a wider audience, however, as noted by Habermans (1973), an opposing positivistic epistemology and methodology which would have likely resulted in generalisability, would have would have ignored the individualism of the participants in what has been shown to be something of an emotive topic.

The researcher also situated them self in an emic position with the intention of avoiding an independent relationship between researcher and participant, which could have resulted in a power relationship whereby the researcher is '*privileged as the knower*' (Hesse-Biber and Leavy, 2010, p8). However, this emic position attracts criticism, in that, the presented interpretations and findings are likely to be influenced by biases for example as social circumstances such as age, gender, race, class and culture (Charmaz, 2014). Whilst this was possible, a variety of strategies were undertaken to restrict potentially biases and compromises to dependability. The method design and approaches required the participants to be actively engaged with the data via the repeated interviews and testing of the emergent findings (Patton, 1990), thus inviting the opportunity for challenge and critique of the analyses. Similarly, the notions of memo taking and constant comparison (Glaser and Strauss, 1967) were applied within the method which allowed for routine verification of the analyses, thus reducing the potential for biases to be progressed in the data (Richards and Hemphill, 2018), and the sharing of interview records with participants to ensure accuracy of their expressions (Cohen *et al.*, 2011), also promoting greater etic trustworthiness in the findings.

The repeated, transparent and peer debriefing manner (Lincoln and Guba, 1985) with which the coding of data was undertaken also minimised bias in the interpretation of the data and, external to the data analysis, peer review of the interpretations and findings occurred via the study's supervisory team and by presentation at conferences and symposia.

More practically, it is acknowledged that the withdrawal of the social science employer was a limitation and restricted the direct comparison between constructions of creativity between employers' subject domains. The overall methodological strategy adopted in the current study did, it could be argued, lessen this apparent limitation to some extent, in that, stage one provided a variety of employer views, including those from a breadth of social science backgrounds and thus their views contributed to the shaping and interrogation of the emergent conceptual framework at stage four. Furthermore, the organisations of the employers who were involved in stages two, three and four of the data collection had organisational structures which employed graduates in roles usually aligned to social science disciplines, for example in human resources departments. Therefore, the employers engaged in stages two, three and four of the data collection also had the opportunity to comment and describe graduate employees more generically.

The context within which this study is positioned, potentially, is a limitation to the applicability of the findings to a wider audience. As noted in chapter three, the HE institution employed within this study is a post-1992 'new' university which, whilst generally reflective of similar institutions, it is likely to be different to other HE institutions in terms of size, curriculum mix, cultural approach and strategic direction, particularly, older (not post -1992) universities. Therefore, it would be assumptive to attempt to directly apply the findings and subsequent recommendations of this study to other UK HE institutions and a requirement for further testing and verification within differing UK HE contexts such as Russell Group universities.

As noted in section 5.1, one of the key intentions of this research project was to employ the findings of the study to provide tangible recommendations to assist in the facilitation of

creativity in students and inform, albeit local, HE learning practices. Whilst it is acknowledged that limitations to the study inevitably exist, the above discussion has highlighted that the trustworthiness and dependability of the findings are sufficiently robust to make recommendations to practice and, hence, these will be illustrated in section 5.4.

#### **5.4 Recommendations for practice**

In section 5.2, a model of creativity highlighting the agreed perceptions of creativity, from the perspective of academics, students and employers was presented, in association with an illustration of the participant grouping and subject domain variability within the conceptions. However, to move this model from a position of observation to one of pragmatism and, thus, enabling the development of creativity as an employability skill, a series of recommendations for future practice in UK HE have been synthesised.

To promote a pragmatic understanding and a greater likelihood of the adoption of these recommendations in the context of which they are situated, it is important to understand the organisation of employability development in the HEI for undergraduates. Within the HEI a central, non-academic careers team exist to developed student employability via two general approaches; firstly, the centralised team offer direct support for students by means of guidance appointments, workshops and 'drop in' careers advice, which students would attend on a voluntary basis. As part of this direct support, students also have the opportunity to achieve extra-curricular awards which recognise achievements, work experience and skill acquisition related to employability, again, on a non-prescribed voluntary basis. Secondly, the careers team also advise and support academics which the integration of students' employability development into curriculum areas; be that via bespoke 'guest talks' or deeper embedding into curriculum content. In summary, the organisation of employability development in the HEI of this study is akin to Barrie's (2004) '*precursor*' (p265) approach to graduate attributes development, in that, employability is not a mandatory element of the curriculum and is, generally, viewed by academics as external to the course of study.

Section 5.4 will now illustrate these recommendations, employing the framework of Beghetto (2017) as a vehicle to clearly and pragmatically convey how the practice of academics, students and employers can be enhanced so as to develop creativity in undergraduate students. Beghetto (ibid) proposed that the teaching of creativity can be undertaken in three ways: firstly, *'teaching about creativity'* (p2); secondly, *'teaching for creativity'* (p2) and thirdly, *'teaching with creativity'* (p2). Whilst seemingly a trustworthy approach and substantiated by other work in the research literature base (for example Simonton, 2012; Plucker and Dow, 2010), the first two elements seemingly focus on the enhancement of students' knowledge and application of creativity, and perhaps makes the assumption that academics do not require such development. In the context of the present study, where findings point towards agreed conceptions of creativity as an employability skill, this approach has been adapted to include academics as the recipients of the *'teaching'* of creativity in the same way as students, whilst also including employers in the recommendations given their key stakeholder role as the employers of HE graduates. This approach is supported by Jackson (2008) who noted two key observations of relevance: firstly, academics tend to derive motivation from their subject areas principally and

*'find it hard to translate the generic language and processes of creativity into their subject specific contexts'* (p7).

Secondly, Jackson (ibid) also proposed that some academics are challenged when considering creativity outside of a HE setting and struggle to appreciate that students benefit from appreciating creativity outside of their subject domain. With this adaptation in mind, table 5.4.1 provides an overview of how the subsequent recommendations should be used by the three stakeholders to enhance the development of creativity as an employability skill. Specific recommendations are provided thereafter.

Table 5.4.1 – generic intended outcomes of the recommendations by participant grouping

Beghetto (2017) model element	Participant group		
	Academics	Students	Employers
Teaching about creativity (learning)	Learn from findings so as to then teach students about the agreed specific constructs of creativity	Learn from findings so as to have a direct awareness of the constructs of creativity	Learn from findings so as to have an awareness and realisation of the constructs of creativity
Teaching for creativity (developing)	Learn from findings so as to understand the subject specific plurality of creativity in different subject domains	Learn from findings so as to understand the subject specific plurality of creativity in their subject domains	Learn from findings so as to have an awareness of academic and student perceptions of subject specific creativity
Teaching with creativity (role modelling)	Learn from findings so as to be able to role model the constructs evident in the findings when teaching students	Learn from findings so as to be able to role model the constructs of creativity to peers	Learn from findings so as to enable the constructs of creativity in the workplace

With the ontological position of this study being based in constructivism, as mentioned in section 1.4, it may seem unusual that a highly structured and directive model such Beghetto (2017) has been applied here. However, this model only serves to bring a semblance of organisation to the recommendations, permitting pragmatism in what could be viewed as an extensive compilation of proposals for change, and should not be viewed as instructional. Rather, in keeping with the contextualised nature of this study and creativity generally, the recommendations should be operationalised in a manner which the stakeholders consider as being the most appropriate in facilitating changes of practice, be that constructivist or transmissive.



### **5.4.1 Teaching *about* creativity**

In the initial element of the model, Beghetto (2017) noted that '*teaching about creativity*' should be concerned with educating students as to the theories and notions which surround creativity, and hence, it would seem logical that academics, students and employers located within the context of this study, including those involved in the data collection, should be made aware of the general findings as to the agreed perceptions of creativity as an employability skill.

#### **5.4.1.1 – Recommendation 1: understand the local model and plurality**

Prior to any teaching *about* creativity, the initial recommendation is that those who would be responsible for the teaching *about* creativity (primarily academics and to some extent employers) should be made aware of the model in section 5.2 and the plurality of understanding in table 5.2.2a via continuing professional development training including initial teacher education programmes.

#### **5.4.1.2 – Recommendation 2: transfer the understanding**

Following this training, academics should subsequently transfer the understanding regarding the six elements of the model and the differing values attributed to the resulting entity to undergraduate students (across all three levels of study) via study skills or employability sessions akin to the '*complementary*' (p265) style of integrating graduate attributes as proposed by Barrie (2004). Recognising the plurality of understanding, academics must acknowledge to students and employers that in the *designing* phase of the creative process, academics perceive that creativity is constrained by previous experience; thus the parameters and affordances of this experience should be explained clearly to students when, for example, setting assessed work.

#### **5.4.1.3 – Recommendation 3: reflect on personal characteristics**

Similarly, the key personal characteristics of undergraduates which have been suggested facilitate creativity (communication, perseverance, curiosity, passion, organisation) should be made clear to undergraduate students during the aforementioned study skills sessions. However, to permit students to understand and fully contextualise these characteristics for

themselves, it is recommended that academics and employers create opportunities where reflection on the demonstration of these personal characteristics has been shown by the students within formative and summative assessments (academics) and via work experience or extra-curricular activity (employers). This approach should then avoid the danger of students displaying '*generic distinctiveness*' (Holdsworth, 2018, p1217) and develop these characteristics in a manner which permits personal agency. Within the *perseverance* agreed upon by the participants, academics and employers pluralised their view by recognising resilience as a key part of the characteristic, in terms of persuading others and being resilient to the criticism of others. With this plurality in mind, personal tutorial activity should provide opportunities where students are required to reflect upon where they have been required to justify their ideas and thoughts and have been exposed to criticism of these ideas and thoughts. Whilst the justification of ideas and the receiving of criticism is not necessarily a new concept in UK HE, this activity should be reflected upon in the context of it being an employability skill and realisation be made by the students that it is contributory to the creative process.

#### **5.4.1.4 – Recommendation 4: illustrate the importance of personal agency and individualism**

Enabling personal agency and the acknowledgement of individualism are evident as key situational factors to promote creativity in the proposed model of section 5.2 and, mirroring the above recommendation, should be brought to the attention of undergraduates but also facilitated by academics and employers in applied contexts. It is recommended that space and time should be routinely created in the undergraduate learning experience that encourages agency and the reasonable challenging of tradition without fear of any penalty to academic marks. Furthermore, it is also recommended that students self-evaluate in employability tutorials, whereby their individualism and personal agency is contextualised against varying employment scenarios; facilitated by, ideally, graduate employers.

With regard to the plurality associated with the facilitating situational factors demonstrated by the participants, students and employers preferred clearer boundaries of operation, whereas academics appeared to be more flexible. Whilst the above recommendation meets the academic expectation of flexibility, it is incumbent upon academics to clarify this with students

and employers, and also manage the individualism and agency to permit a degree of freedom, at the same time as providing parameters which define the limits of acceptability for students and employers.

The findings of this study illustrate that a barrier to individual agency can be personal issues such as preconceived ideas of one's own ability. Again, such information should be conveyed and addressed with students via metacognitive tutorial exercises to identify and minimise such perceptions. In further support of student autonomy from academics, facilitation of personal agency should be encouraged via collaboration between students.

#### **5.4.1.5 – Recommendation 5: emphasise collaboration**

The findings of this study indicate that collaborating with others assists in providing humanistic safety and confidence when generating ideas and, furthermore, fosters greater divergence of thinking and ideas. Therefore, academics should transfer this conceptual understanding to students via tutorial or employability sessions; subsequently designing and implementing simulated goal oriented activities which require students, as a group, to collectively employ the processing thoughts model and collaboratively contrive a valued entity. On completion of these activities, it is also recommended that students reflect upon the processes and outcomes of the activities to gain a greater realisation of collaboration being an aspect of creativity in an employment context.

The recommendation here, align with the plurality noted by the participant groups, in that, academics and employers promote personal value and safety, with students valuing the opportunity to developmental ideas in collaboration with others. When facilitating the collaborative activities, however, academics should also be receptive to the thoughts of employers who deemed that trust in collaborators' subject knowledge must be established for collaboration to be effective. Therefore, academics should make students aware of this necessity and demand students choose collaborators to work with based on this premise.

The teaching *about* creativity recommendation focuses on *learning* about creativity in a general theoretical sense and provide a platform which will permit application, nuancing and *development* in subject specific contexts. Recommendations for this *development* will now be proposed.

#### **5.4.2 Teaching *for* creativity**

Beghetto (2017) referred to the development of students' creativity specific to their subject domains or as part of their wider skills set, as '*teaching for creativity*' (p2). As such, recognising the plurality of the agreed aspects of the model of creativity as an employability skill, the teaching *for* creativity should focus on the specific *development* of academics knowledge and skills in their subject domains, as opposed to by participant group. Lassig (2020) agreed with this assertion, albeit it in a different age category, and suggested that

*'...if schools understand the different purpose and ways in which students approach creativity, they might more effectively provide tailored support for creative development and achievement'* (p11).

##### **5.4.2.1 – Recommendation 6: (science) encourage practical synthesis**

When teaching *for* creativity in science based subjects, students should be exposed to an experience which develops creativity with the following specific nuances in mind. At the point of reaching the penultimate stage of the processing thoughts model (*synthesising*), it appears that science based participants tend towards practical testing of their creative thoughts; therefore, academics and where appropriate employers, for example during work placement activity, should create situations in their teaching where students can physically contrive artefacts to represent at test the processed thoughts and ideas. It is also recommended that students be encouraged to seek their own opportunities to undertake this practical testing outside of curricula activity.

##### **5.4.2.2 – Recommendation 7: (science) establish clear criteria**

Subsequent to the practical synthesis of an entity, science based participants seemingly prefer a structured evaluation of the entity which is personally undertaken by the creator. It is recommended, therefore, that at the *evaluating* stage of the creative process, academics

should facilitate this evaluation and provide science based students with clear criteria to personally test the worth of their contrived entity. As the academic maturity of science based students develops, academics should also encourage the empowerment of students to seek their own criteria for the evaluation of their entity, thus facilitating personal agency and the managed challenging of tradition (see section 5.4.1). It is incumbent upon academics and employers to make students aware that the criteria for this evaluation should be generally congruent with the values noted by the science based participants of this study; those being more practical and capitalist in their nature such as efficiency, cost reduction, feasibility and reliability.

#### **5.4.2.3 – Recommendation 8: (science) facilitate inter-disciplinarity**

The final nuance in the development of creativity as an employability skill for science based undergraduates is concerned with subject understanding. Participants were agreed that for science based domains, subject understanding can be more generalised (for example an understanding of human cells can be creatively applied in biology, physics and chemistry) and therefore, academics and employers must, when facilitating creative endeavours (as per section 5.4.1) illustrate the fundamental cognate links between scientific subjects and make efforts to enhance students' creativity by engaging them in cross discipline curricula activities. This cross discipline work would promote collaboration with a wider range of students and therefore experiences, yet also facilitate the trust in collaborators' subject knowledge (see section 5.4.1.6.)

#### **5.4.2.4 – Recommendation 9: (social science) provide space for abstract thinking**

The plurality of perceptions' from participants based in the social sciences indicated two key dissimilarities in the processing of thoughts which should be taken into account by stakeholders. At the synthesising stage of the process, social science participants perceived that synthesising is undertaken in an abstract rather than a tangible manner and it is, therefore, recommended that social science academics and, where possible employers, highlight to the students the need to think, internally theorise and draw together their thoughts into a synthesised entity. Further to this awareness raising as a way of teaching for creativity,

students should also be provided with time and space within a curriculum to undertake this abstract theorisation activity; be that via an activity in a lecture or seminar, or as a distinct task.

#### **5.4.2.5 – Recommendation 10: (social science) make sense and transcend**

Further to the *synthesising* stage of processing thoughts, the theoretically synthesised entity should, as defined by the social science participants, be evaluated by making sense of the entity and linking it to other entities. Academics and employers must initially provide guidance for students on how to make sense of the reasoning which underpins the created entity and how the entity can, theoretically, be appraised for its value and how the entity is linked across within and across subject domains. As with the scientific recommendations, the responsibility for the application of these skills should, as academic and employability maturity develops, ascend from the academic staff and employer to the student.

#### **5.4.2.6 – Recommendation 11: (arts) give worth to personal feelings**

The development of creativity as an employability skill via teaching *for* creativity in arts based subjects has three specific recommendations, grounded in the plurality perceived by the arts based participants. The first focuses on the *clarifying* stage of the process thoughts model, where participants from arts based subjects felt that feelings and experiences were points of reference when *clarifying* the conceptualisation of initial thoughts. Thus, it is recommended that arts based students are made aware of this notion and are encouraged to engage with personal feelings at this stage of the process; supported by academics and employers in ensuring that confidence in this personal rather than external referencing is developed.

#### **5.4.2.7 – Recommendation 12: (arts) facilitate peer critique**

Subsequent to the *synthesising* of an entity, arts based participants of this study illustrated that the *evaluating* of the entity is preferred as a subjective peer critique exercise. Therefore, it is recommended that students be exposed to external peer review of their creative entities consistently within a course of study, including evaluation from academics, fellow students, subject experts and employers, thus also developing the resilience to criticism as identified in section 5.4.1.3. The values given to a produced creative entity were, from the perspective of the arts based participants of the study, humanistic such as persuasion, emotional connection

and challenging thinking. The above recommendation, which facilitates external peer review at the *evaluating* stage of the processing thoughts model, is also valuable as it affords students the opportunity to better understand stakeholder values in creative products, thus allowing enhancements to an entity under current critique but also future products.

The above recommendations which focuses on teaching *for* creativity by academics and employers, illustrates the need and importance to *develop* creativity in subject specific contexts for students. Whilst the plurality of creativity and its development in a subject specific context is vital, for the benefits of this creativity to be realised and harnessed, application to practice via teaching *with* creativity is also necessary. Further recommendations referring to this shall now be presented.

#### **5.4.3 Teaching *with* creativity**

'*Teaching with creativity*' (Beghetto, 2017, p2) refers to where creativity is developed in others by the academic using the theories of creativity to teach their subject matter in creative ways and by role modelling the principles of creativity to others. This notion was supported by Jackson (2014) who highlighted that an academic's pedagogic position is crucial to the fostering of creativity within their students and, similarly, Kleiman (2008) suggested that academics should be the '*agents*' (p216) in the development of students' creativity.

A common feature of recommendations 15 – 17, is the suggestion that academics and employers operate by, and thereby role model, these recommendations to students in their day to day activity. The following recommendations will, therefore, assume this role modelling in each case and offer guidance as to how academics, students and employers can teach *with* creativity, with the intention of turning unfamiliarity or tacit knowledge of creativity as an employability skill to a conscious application of the processing thoughts model and the factors which surround it.

#### **5.4.3.1 – Recommendation 13: develop personal characteristics**

With regard to the personal characteristics which facilitate the processing thoughts model (communication, perseverance, curiosity, passion, organisation), it is recommended that academics and employers facilitate the development of these five characteristics by creating opportunities in their teaching and assessment which requires students to demonstrate these characteristics within formative and summative assessments (academics) and via work experience or extra-curricular activity (employers).

Furthermore, the plural notion of resilience demonstrated in the findings gives rise to the suggestion that the formative and summative assessment activities noted above, should provide opportunities for students to develop resilience by communicating and justifying their ideas and thoughts, and subsequently being exposed to managed criticism of these ideas and thoughts.

#### **5.4.3.2 – Recommendation 14: promote agency and individualism**

As highlighted in 5.4.1.5, it was perceived by participants of this study that facilitating the desired situational factors supports the processing of thoughts model and, therefore, creativity. When teaching *with* creativity, it is recommended that the notions of individualism and personal agency should be promoted, where practicable, by careful assessment design and the allocate a percentage of marks during summative assessments for the demonstration of managed individualism by, for example, allowing the exploration of literature and methods that challenge usual traditions in a subject. Similarly, summative assessments should also foster personal agency by permitting personal choice and risk taking in the design of coursework structuring and submission, and via the requirement for divergent idea creation within assessments which can subsequently be honed by the student to form a final entity.

#### **5.4.3.3 – Recommendation 15: foster collaborative endeavours**

Collaboration was identified by participants of this study to be a key surrounding factor which supports the processing of creative thoughts, as it promotes idea development and provides humanistic safety for those attempting to be creative. Therefore, to raise awareness and



provide students with the experience of collaborative work, academics should design and embed curricula activities which routinely require groups of undergraduate students to work collaboratively on tasks that require creativity and divergence, whilst also having a clear purpose and parameters to work within. These collaborative activities should also, as acknowledged by the participants of this study, have periods of individual consolidation to clarify personal ideas before convening again with colleagues to finalise ideas. This approach of oscillating between group and individual time can be repeated as many times as necessary.

#### **5.4.3.4 – Recommendation 16: be curious of assigned values**

As noted in section 5.2.1, the result of the processing thoughts model is a valued entity and as described in chapter four, these values were perceived to fall into the two general categories of practical and humanist; defined subjectively by a stakeholder. Given this subjectivity, it would seem be prudent to ensure that these values are understood by academics, students and employers and, therefore, it is recommended that academics regularly engage with employers to ascertain the specific values within their related employment sectors and convey this to their students in their teaching. Furthermore, as students progress through their undergraduate journey, academics should transfer responsibility for the ascertaining of the employer values from themselves to the students; thus facilitating knowledge of the values whilst also developing the personal characteristic of *curiosity* (see section 5.4.1.3).

#### **5.4.3.4 – Recommendation 17: accept the risk of failure**

Recommendation 17 provides guidance for academics as a distinct recommendation but should also be viewed as a key underpinning for the preceding recommendations in this chapter. As illustrated in chapters two and four, undertaking creative activities in the pursuit of a novel entity or solution to a problem can result in failure and, if associated to negative consequences, this can lead to more compliant and risk averse behaviours. Therefore, it is recommended that academics and employers should permit greater acceptance of failure by providing managed time and space for students to undertake the processing of thoughts in a risk free manner; particularly during summative assessment thus demonstrating commitment to creativity development as an employability skill. It is acknowledged due to prior experience

and the possible generational factors of risk aversion, students may initially not engage with this approach, therefore, it is suggested that a tapered approach to this recommendation is employed where the guidance and support for creativity begins at a high, structured level and is reduced over the course of a student's programme of study.

The recommendations for practice noted here and summarised in table 5.4.2 are an important tool which transforms the theoretical findings of the current study into pragmatic actions which will enhance creativity as an employability skill within the local context that the study is situated within. Further to this, the process of undertaking this study and the emergent meanings that have been discovered, illustrate additional research which could be undertaken to further validate or extend the findings of this study. These possibilities will now be discussed in section 5.5.

Table 5.4.2 – Summary of recommendations for future practice

Beghetto (2017) model element	Participant group		
	Academics	Students	Employers
Teaching about creativity (learning)	<ul style="list-style-type: none"> <li>- understand the local model and plurality</li> <li>- transfer the understanding</li> <li>- reflect on personal characteristics</li> <li>- illustrate the importance of personal agency and individualism</li> <li>- emphasise collaboration</li> </ul>		<ul style="list-style-type: none"> <li>- understand the local model and plurality</li> <li>- transfer the understanding</li> <li>- reflect on personal characteristics</li> <li>- illustrate the importance of personal agency and individualism</li> <li>- emphasise collaboration</li> </ul>
Teaching for creativity (developing)	<ul style="list-style-type: none"> <li>- encourage practical synthesis</li> <li>- establish clear criteria</li> <li>- facilitate inter-disciplinarity</li> <li>- provide space for abstract thinking</li> <li>- make sense and transcend</li> <li>- give worth to personal feelings</li> <li>- facilitate peer critique</li> </ul>	<ul style="list-style-type: none"> <li>- establish clear criteria</li> </ul>	<ul style="list-style-type: none"> <li>- encourage practical synthesis</li> <li>- establish clear criteria</li> <li>- facilitate inter-disciplinarity</li> <li>- provide space for abstract thinking</li> <li>- make sense and transcend</li> <li>- facilitate peer critique</li> </ul>
Teaching with creativity (role modelling)	<ul style="list-style-type: none"> <li>- develop personal characteristics</li> <li>- promote agency and individualism</li> <li>- foster collaborative endeavours</li> <li>- be curious of assigned values</li> <li>- accept the risk of failure</li> </ul>	<ul style="list-style-type: none"> <li>- be curious of assigned values</li> <li>- accept the risk of failure</li> </ul>	<ul style="list-style-type: none"> <li>- accept the risk of failure</li> </ul>

## 5.5 Recommendations for future research

Chapter two of this thesis highlighted the apparent scarcity of research which specifically explores creativity in the context of graduate employability, and thus, opportunities exist for future studies in this area, however, the thesis presented here has generated more specific areas, worthy of further investigation and insight.

The findings of the current study are, by design, limited to the local context in which they were collected. It would, therefore, appear to be reasonable to suggest a broadening of the scope of data collection so as to investigate the understanding of creativity as an employability skill in similar post-1992 UK universities. Whilst the context and sampling employed in the current study are typical of other post-1992 universities in the UK, it would be assumptive to presume that the findings presented are replicable to other UK HE institutions, given the possible variations in industries and employability opportunities in different areas of the UK (GLLEP, 2019). Therefore, greater understanding of the similarities or variances between the meanings given to creativity as an employability skill in different contexts would be logical prior to application of the findings outside of the context of this study.

In a similar vein, the post-1992 university context in which the current study positioned itself is unlikely to be reflective of the environments of the so called traditional universities including those of the Russell Group. As previously highlighted in chapter two, cultural divisions between traditional and post-1992 universities are evident and, furthermore, the perceptions which surround the employability of their graduates has also been noted (Wilton, 2011). Therefore, a comparative analysis of the difference in perceptions of creativity as an employability skill between post-1992 and traditional universities would seemingly be appropriate and potentially lead to a fuller understanding with which to inform national policy and practice on this issue.

The concept of the plurality within the meanings given to creativity as an employability skill, as defined by the three subject domains here, seemingly makes an original contribution to the literature base. However, as these findings emerged from the participants as a result of the

induction data collection approach, it would be reasonable to propose research to further test and validate these findings by engaging with similar samples of participants, with particular reference to the range of subject areas within each of the domains of study.

Similarly, the plurality of the meanings given by the participant groups to the general agreements which surround creativity as an employability skill are also interesting and worthy of further investigation, particularly in the context of the apparent socio-cultural changes in age defined populations, for example, generation x (Twenge, 2017). The current research base tends to be perhaps assumptive in this regard, implying a general parity across the populations and paying little attention to the differing generations when considering creativity. Therefore, further insight into the plurality identified in this study between the participant grouping (academic, student, employer) should be explored in regards to the generational differences and the impact they have on how creativity is perceived, which could potentially be assistive when designing delivery practices to develop creativity as an employability skill.

## **5.6 Concluding remarks**

This thesis explored the concept of creativity in an applied context, that being, as an employability skill and hence makes an original contribution to the knowledge base surrounding creativity. The research question of:

*How do the perceptions of creativity vary between HE students, academics and employers, and what does this mean for creativity as an employability skill?*

has been answered via an inductive, phenomenographic data collection approach which has uncovered the meaning given to creativity as an employability skill by academics, students and employers based in a local context of UK HE. To some extent, the approach taken in this study has given a voice to the most relevant stakeholders who are routinely responsible for engendering creativity in others (academics), for fostering creativity in themselves (students) and for receiving and applying creativity in an employment situation; a voice that is seldom apparent in the associated literature which surrounds creativity, employability and UK HE

policy. This study and its findings should, therefore, be of interest to the setting that it is situated within and to a wider UK HE audience; with both giving consideration to the possible implications to institutional policy and to the direct, pragmatic application of the model of creativity in teaching, learning and assessment practices. The study should also be of interest to creativity researchers more generally, given the applied perspective it has uniquely provided with regard to both the contextualised setting and the methodological approaches adopted, which should contribute to the associated literary base.

The undertaking and production of the study in itself has, of course, been a journey of enlightenment to the researcher themselves. On reflection, three avenues of personal learning have been noticeable over the years of doctoral endeavour and the production of this study: firstly, the understanding of the technical aspects of qualitative research methodology have been developed and contributed to greater confidence as an all-round researcher who is aware and respectful of the various research paradigms. Possibly the most impactful aspect of this development was the realisation of the power of *understanding* as a valid research tool opposed to the objective positionality the researcher previously embodied. Secondly, the exploration of the philosophical underpinnings of research was also a significant development in the journey of the researcher. The raising of the researcher's philosophical awareness has resulted in connections and realisations being made, not only in research contexts, but also in everyday activities, particularly in the educational employment settings the researcher is employed within. Whilst leading to a degree of personal frustration when paradigmatic conflicts arise, the heightened awareness of philosophical underpinnings has resulted in enhanced trustworthiness in, for example, small scale research projects and policy creation in the researcher's employment context. The first and second avenues of learning have also led to the researcher being able to confidently mentor and guide colleagues who are undertaking similar research journeys. Thirdly and most obviously, the specific understanding of the field of creativity has grown immeasurably and provided a sound platform to knowledgeably advise others of the principles of creativity, to be able to promote creativity in the students and staff the researcher works with and to be more creative in themselves, both academically and personally.

In summary, the current study has shown that the academics and students of UK HE, and the graduate employers involved in this study perceive creativity as an employability skill to be the processing of thoughts, which leads to a valued entity being produced at the end of the process. Furthermore, participants of this study conveyed that the process is facilitated and enabled by certain individual characteristics; by an individual's subject understanding; by the situational factors an individual operates within and the opportunity to collaborate with others. Finally, this study has shown that whilst the above was agreed upon by the study participants, their perception of creativity is pluralised by subject domain and stakeholder group type.

The findings of this study make apparent that creativity in the context of employability, whilst illustrating a convergence of perceptions of the key stakeholders, is plural in its definition by stakeholder group but more markedly by subject domain. Taking this finding into account in association with the previous century's attempt, and failure, to reduce creativity to a singular definition, it is proposed here that the pursuit of a universal definition is a flawed endeavour and research attention should focus on the enabling of the plural interpretations of creativity, both in the sense of greater understanding within subject domains but also understanding the potential changing definitions of creativity as the socio-cultural environment shifts as generations progress through education and employment.

Simply put, the ultimate hope for the current research is that it will be employed, to a greater or lesser degree as the audience sees fit, to enable the lives of human beings to be more creative and, thus, be more actualised, fulfilled and equipped to confront the challenges of existence.

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## Appendices



## School of Education

College of Social Science,  
University of Lincoln,  
Brayford Pool,  
Lincoln.  
LN6 7TS



## Study Information Sheet (staff)

<b>Title of study</b>	Creativity as a graduate employability skill	<b>Investigator</b>	James Wadsworth
<b>Researcher email:</b>	13499915@students.lincoln.ac.uk	<b>Ethics approval reference:</b>	

### Aims of the Study

This study aims to look at how graduate employers, university students and staff define and view the term *creativity*.

This study will form the thesis element of my Doctorate in Education (EdD) and may also contribute to future publications in this area of study.

### What you will need to do and time commitment

This study requires participants to complete four activities:

- 1) fill in a simple survey to get a general idea of how you see creativity and how much you value it as a skill. This should take no more than 20 minutes to complete.
- 2) collect 3 photos/images (from your taught sessions) showing what you think *creativity* is (collection of release forms from your students/staff members will be required and supported).

3) take part in an unstructured follow up interview with the researcher to discuss the photos/images you have collected which should take between 45 minutes to an hour.

4) take part in a final interview with the researcher to verify the findings of the study and ensure your views are accurately represented. This should take between 30 and 45 minutes

#### Benefits of participation in this study

It is hoped that this study will inform future practices at the University to improve students' development of creativity skills and increase their graduate employability; taking part in this study will, hopefully, help your students be better prepared for employment. Being part of this study will also help you think about creativity personally and perhaps consider how creativity can have a positive impact on you and your practices.

#### Right to withdraw

Taking part in this study is completely voluntary and you have the right to withdraw or have your information removed from the study without notice and for any reason up until the written up study is submitted for examination.

#### Risks/Discomforts involved in participating

It is unlikely that any risk or discomfort will be experienced due to being part of this study.

The interview part of the study may involve some discussion about how you see your relationships with peers and colleagues and therefore has the potential to cause some upset. In the unlikely event of this happening, you will be reminded of your right to withdraw from the study or, if necessary, the researcher will stop the interview and remove you from the study to protect your well-being.

#### Confidentiality of your data

All information collected as part of this study will be treated with the strictest confidentiality.

All information will be stored on a password protected computer and using encrypted file storage. Once the three sets of data have been collected, all of the information will be anonymised during the data storage, analysis and write up stages. If individual pieces of information are referred to in the reporting of the data, generic labels will be used (such as "staff 1") to protect your identity.

All facial images collected or unique identifiers (for example logos) on the photos/images will be blurred out to maximise anonymity and these images shall only be viewed by the researcher and will not be used for publication

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If you have any complaints or concerns about this research, please contact the Chair of the School of Education Research Ethics Committee by email at: [rsharpe@lincoln.ac.uk](mailto:rsharpe@lincoln.ac.uk). Alternatively, if you would like to write to the ethics committee, please address correspondence to Chair of the School of Education Research Ethics Committee, College of Social Science, University of Lincoln, Brayford Pool, Lincoln, LN6 7TS.

## School of Education

College of Social Science  
University of Lincoln  
Brayford Pool  
Lincoln, LN6 7TS



UNIVERSITY OF  
LINCOLN

## RESEARCH INFORMED CONSENT FORM

---

<b>Title of study</b>	Creativity as a graduate employability skill	<b>Investigator</b>	James Wadsworth
<b>Researcher email:</b>	13499915@students.lincoln.ac.uk	<b>Ethics approval reference:</b>	

---

**Please read the following statements and, if you agree, initial the corresponding box to confirm agreement:**

I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered to my satisfaction.

Initials

I understand that participation in this study is voluntary and that I am/the company I represent is free to withdraw without giving any reason at any time, up to the point of submission of the thesis for examination.

I understand that my data/my company's data will be treated confidentially and any publication resulting from this work will report only data that does **not** identify me or the company I represent.

I freely agree to participate in this study.

### Signatures:

---

Name of participant (block capitals)	Date	Signature
JAMES WADSWORTH		
Researcher (block capitals)	Date	Signature

If you would like a copy of this consent form to keep, please contact the researcher. If you have any complaints or concerns about this research, please contact the Chair of the School of Education Research Ethics Committee by email at: rsharpe@lincoln.ac.uk. Alternatively, if you would like to write to the ethics committee, please address correspondence to Chair of the School of Education Research Ethics Committee, College of Social Science, University of Lincoln, Brayford Pool, Lincoln, LN6 7TS.

## Appendix B – Ethical approval form

EA2

**Ethical Approval Form:  
Human Research Projects**

**Please word-process this form. Handwritten  
applications will not be accepted.**



This form must be completed for each piece of research activity conducted by academics, graduate students and undergraduates. The completed form must be approved by the School of Education Research Ethics Committee.

**Please complete all sections.** If a section is not applicable, write N/A.

<b>1 Name of researcher</b>	James Wadsworth
	<b>Department/School</b> School of Education
<b>2 Position in the University</b>	Student, Doctorate in Education: Educational Research and Development (EdD)
<b>3 Role in relation to this research</b>	Principal researcher
<b>4 Title of the research project</b>	Creativity as an employability skill in higher education
<b>5 Brief statement of your main research question</b>	How does the perception of creativity as an employability skill vary between HE students, academics and employers?  How do the interactions within and between the three parties influence creative development?
<b>6 Brief description of the project</b>	<p>This study will form the thesis element of the above named programme of study and could also contribute to future publications in this area of study.</p> <p>This study aims to assess how the perceptions and meaning given to the term creativity differ within the three interrelated populations, that is, HE students, HE academics and employers who recruit graduate employees. Furthermore, the project aims to investigate how creativity is constrained or encouraged by the relationships of the protagonists of the three populations; both between (for example, the relationship between student and academic) and within (for example, the relationship between academic and academic) the three populations.</p> <p>This will be achieved via a mixed methods approach that will employ a three stage data collection process.            Stage 1: a sample (n=30-40) of the three populations will be surveyed using a questionnaire tool, aimed at establishing a baseline understanding of the perceptions and value of creativity and aligning them to the framework of Kaufmann and Beghetto (2009).            Stage 2: a reduced sample (n=3 in each population) of the same three populations will be asked to capture photographic evidence of what they perceive creativity to be in their context.            Stage 3: the same reduced sample will be interviewed using a semi structured approach that will, in part, interpret the meanings attached to the photographic evidence provided by the participants. This interview process will also investigate the perceived value and impact social interactions between and within participants of the three subject groups.</p>

1

	<p>A pilot study will be undertaken and will follow an identical format as the main study with a smaller sample size (stage 1, n=3; stages 2 and 3, n=1).</p> <p><b>Approximate start date:</b> February 2016</p> <p><b>Anticipated end date:</b> Pilot: May 2016 Thesis: July 2018</p>						
7 Name and contact details of the Principal Investigator (if not you) or supervisor (if a student)	<p>Rachael Sharpe</p> <p><b>Email address:</b> rsharpe@lincoln.ac.uk</p> <p><b>Telephone:</b> 01522 886211</p>						
8 Names of other researchers or student investigators involved	NA						
9 Location(s) at which this project is to be carried out	<p>Pilot study: Sheffield Hallam University/York St. John University (to be confirmed) Regional employer locations</p> <p>Main study: University of Lincoln Regional employer locations</p>						
10 Statement of the ethical issues involved and how they are to be addressed, including discussion of the potential risks of harm to both project participants and researchers	<p><i>General considerations</i></p> <p>In line with the requirements of BERA guidelines and University of Lincoln Research Ethics Policy, this study will require all participants to voluntarily provide informed consent to participate. Please see the informed consent form (appendix A.1) that shall be employed for all stages of the data collection. Stages 2 and 3 will be further supported by a personal briefing by the researcher (appendix A.2) to ensure that all participants and third parties are protected from possible harm.</p> <p>Participants will have the right to withdraw from the study up to the point of submission of the thesis, in which case, all records of the participant shall be removed from storage and securely deleted. During the analysis and reporting of the data, all participant identities will be anonymised and, if required, will be referred to using generic labels (for example, student 1). The researcher will however maintain, separate to the above, a confidential record of participants and their generic label to allow identification and removal of data if required.</p> <p>On completion of stages 2 and 3, data collected from participants including photographs and transcripts of interviews will be made available to participants in a format deemed appropriate by the participant. Furthermore, participants will be required to review the researcher's analyses of their individual data to assist in ensuring accuracy of interpretation and limit research bias.</p> <p>All collected data will be stored on a password protected computer and make use of encrypted file storage.</p> <p><i>Specific considerations</i></p> <table border="1"> <thead> <tr> <th></th> <th>Ethical issue</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Photographic analysis approach.</td> <td>The process of briefing and obtaining voluntary informed consent will clearly</td> </tr> </tbody> </table>		Ethical issue	Resolution	1	Photographic analysis approach.	The process of briefing and obtaining voluntary informed consent will clearly
	Ethical issue	Resolution					
1	Photographic analysis approach.	The process of briefing and obtaining voluntary informed consent will clearly					

	<p>The study involves the taking of photographs which may include capturing images of human adults.</p>	<p>convey the nature of the photographic process and the electronic storage of the images (see below). Third party informed consent and release forms will be provided for all persons captured or likely to be captured in the images (Employer and staff participants will be instructed to gather this consent prior to capture. ). All facial images and any unique identifiers (for example corporate logos on images) shall be blurred to preserve participant anonymity.</p>
	<p>2 <i>Participants' psychological wellbeing.</i></p> <p>As the study involves discussion and evaluation of professional relationships, reflections may result in participants to become upset, for example, in cases where an unhappy relationship exists.</p>	<p>The process of briefing and obtaining voluntary informed consent will clearly express the types of questions likely to be employed in the interviews and will highlight the participant's right to withdraw at any stage. Similarly, should the researcher feel unnecessary upset is being experienced, participants will be withdrawn from the study and signposting to relevant support services, such as counsellors, will also be provided.</p>
	<p>3 <i>Employers' confidentiality</i></p> <p>The study may require employers to identify and discuss situations within their organisations, including industrial products and processes. These maybe unique or specialised to that company, therefore concern could be raised as to the confidentiality of sensitive of "trade secrets".</p>	<p>The process of briefing and obtaining voluntary informed consent will clearly demonstrate that all processes will be strictly confidential and data will be stored securely (see below).</p>
	<p>4 <i>Data storage</i></p> <p>A range of personal and commercial information will be collected and electronically stored as part of the survey, photographic analysis and interview process.</p>	<p>All information will be stored on a password protected computer and using encrypted file storage. Participant information will be anonymised during data storage.</p>

11 Does this research involve children and/or young people?

Yes  No

If yes, please explain (a) how you have obtained or will obtain the appropriate permissions to work with these people (E.g., [DBS check](#) in the UK), and (b) your principles for their ethical engagement.



**Ethical approval from other bodies**

**12 Does this research require approval from an external body?**

Yes  No

If yes, please state which body:

**13 Has ethical approval already been obtained from that body? Please note that such approvals must be obtained before the project begins.**

Yes  (Please append documentary evidence to this form.)

No  (If no, please explain why below.)

**APPLICANT SIGNATURE**

I hereby request that the School of Education Research Ethics Committee review this application for the research as described above, and reply with a decision about its approval on ethical grounds.

I certify that I have read the University's Ethical Principles for Conducting Research with Humans and Other Animals (which can be found online here:

<http://visit.lincoln.ac.uk/C11/C8/ResearchEthicsPolicy/Document%20Library/Research%20Ethics%20Policy.pdf>).

\_\_\_\_\_  
**Applicant signature**

\_\_\_\_\_  
**Date**

James Wadsworth

\_\_\_\_\_  
**Print name**

**FOR STUDENT APPLICATIONS ONLY  
Academic Support for Ethics**

Academic support must be sought from your mentor prior to submitting this form to the School of Education Research Ethics Committee.

Undergraduate and Postgraduate Taught applicants should obtain approval from their tutor or an academic member of staff nominated by the Department.

Postgraduate Research applicants should obtain approval from their Director of Studies.

**I (the undersigned) support this application for ethical approval.**



15/12/15

\_\_\_\_\_  
**Academic / Director of Studies signature**

\_\_\_\_\_  
**Date**



Rachael Sharpe

Print name

**For completion by the Chair of the School of Education Research Ethics Committee**

Please select ONE of A, B, C or D below.

A. The School of Education Research Committee gives ethical approval to this research.

B. The School of Education Research Committee gives *conditional* ethical approval to this research.

14 Please state the condition (including the date by which the condition must be satisfied, if applicable).

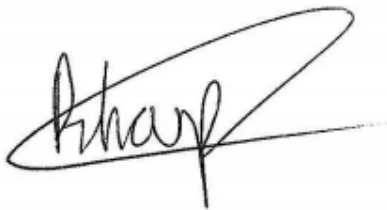
C. The School of Education Research Committee cannot give ethical approval to this research but refers the application to the College of Social Sciences Research Ethics Committee for higher level consideration.

15 Please state the reason.

D. The School of Education Research Committee cannot give ethical approval to this research and recommends that the research should *not* proceed.

16 Please state the reason.

Signature of Chair of School of Education Research Committee (or nominee)



4<sup>th</sup> February 2016

Signed


Date

## Appendix C – Sample blog pages

The screenshot shows a browser window with the URL [jamesw76.wordpress.com](http://jamesw76.wordpress.com). The page title is "Ph.D, me and a bit of creativity" with a subtitle "My doctoral journey of researching creativity". The main image is a collage of colorful handprints. Below the image is a navigation menu with links: Home, My posts, A bit about me, Ph.D activity and conferences, and Ethical approval and info sheets. The main content area contains a welcome message: "Welcome to my blog about my research into creativity in education. I'm James Wadsworth and I'll be using this blog as a space to reflect and report on how my doctoral research is going which is aiming to look at how creativity is viewed and understood by students, lecturers and graduate employers. I'll also be blogging about my journey as a part time student and researcher." To the right, there is a "Recent posts" section with a list of five items, a "Follow me on Twitter" section, and a "Tweets" section featuring a tweet from James Wadsworth (@JamesWads96) dated July 29, 2020, which reads: "Saddened to hear of the passing of #kathycharmaz. The method of my PhD is based on her doctrine of constructivist grounded theory but, much more than that, her work has had a profound influence on how I view research and the world in general. A great academic and human being ❤️".

The screenshot shows a browser window with the URL [jamesw76.wordpress.com/ethical-approval/](http://jamesw76.wordpress.com/ethical-approval/). The page title is "Ph.D, me and a bit of creativity" with a subtitle "My doctoral journey of researching creativity". The main image is the same collage of colorful handprints as the first screenshot. Below the image is a navigation menu with links: Home, My posts, A bit about me, Ph.D activity and conferences, and Ethical approval and info sheets. The main content area is titled "Ethical approval and info sheets" and contains the following text: "This research project has received ethical approval from the School of Education Ethics Committee at the University of Lincoln. To view confirmation, please click below [Ethical approval – approved – Feb2016](#). To view the associated information sheets (for the full study) please click below. [Study information sheet \(STUDENTS\)](#), [Study information sheet \(EMPLOYERS\)](#), [Study information sheet \(STAFF\)](#), [Informed consent](#), [Release form](#). If you have any questions, please do not hesitate to contact me via [13499915@students.lincoln.ac.uk](mailto:13499915@students.lincoln.ac.uk)". To the right, there is a "Recent posts" section with a list of five items, a "Follow me on Twitter" section, and a "Tweets" section featuring a tweet from James Wadsworth (@JamesWads96) dated July 29, 2020, which reads: "Saddened to hear of the passing of #kathycharmaz. The method of my PhD is based on her doctrine of constructivist grounded theory but, much more than that, her work has had a profound influence on how I view research and the world in general. A great academic and human being ❤️".

## Appendix D – Stage one survey format and questions



### Creativity

This short survey is part of a doctoral research project and aims to explore your views about creativity and your course.


This survey is anonymous. You will not be asked to give your name or any other information about you such as your age or gender. Results will be treated in the strictest confidence and answers from participants will be combined for analysis. Any subsequent reporting of data will only refer to the overall, combined results and no individual responses will be analysed or reported.

Participation in this survey is voluntary and you are free to stop at anytime. By continuing you are giving your permission to be used as part of this study. If you have any questions about this survey or the research project in general, please contact James Wadsworth on [13499915@students.lincoln.ac.uk](mailto:13499915@students.lincoln.ac.uk) or visit <https://jamesw76.wordpress.com/ethical-approval/>.

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### Creativity

#### Your course


Please state below the subject area which best describes your programme (eg. psychology)

Your answer \_\_\_\_\_

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### Creativity

#### Importance of creativity


In your opinion, please rate the importance of creativity within your course.

Not at all important  
 Slightly important  
 Moderately important  
 Very important  
 Extremely important  
 Other: \_\_\_\_\_

What are your main reasons for this choice?

Your answer \_\_\_\_\_

**Back** **Next** Page 3 of 6



### Creativity

#### Creativity and your course

Please complete the following sentences, providing as much detail as possible

On my course, creativity could be defined as.....

Your answer \_\_\_\_\_

On my course, people are being creative when they.....

Your answer \_\_\_\_\_


On my course, the attributes or skills which help people to be creative are.....

Your answer \_\_\_\_\_

On my course, the impact of creativity is.....

Your answer \_\_\_\_\_

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## Creativity

Any further thoughts


Please use the space below to provide any further thoughts or comments you may have about creativity and your course.

Your answer

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## Creativity

Thank you

Thank you for completing this survey.

If you would be interested in participating in the next phase of this project, please contact James Wadsworth on [13499915@students.lincoln.ac.uk](mailto:13499915@students.lincoln.ac.uk)

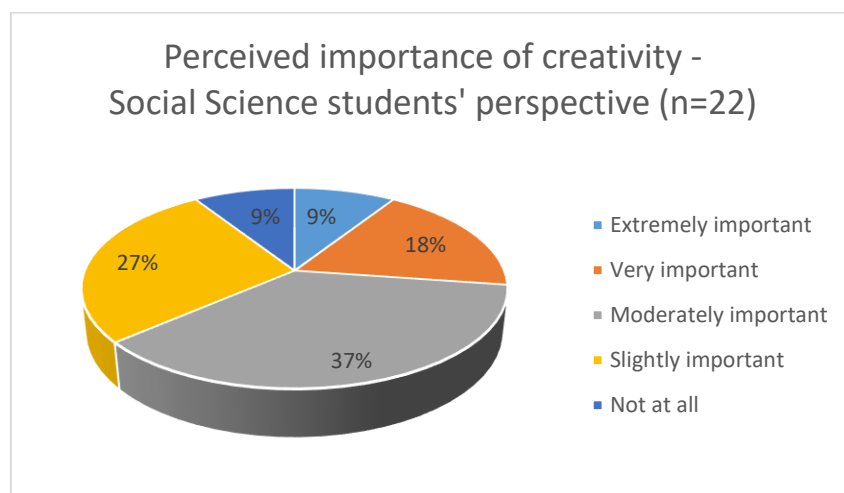
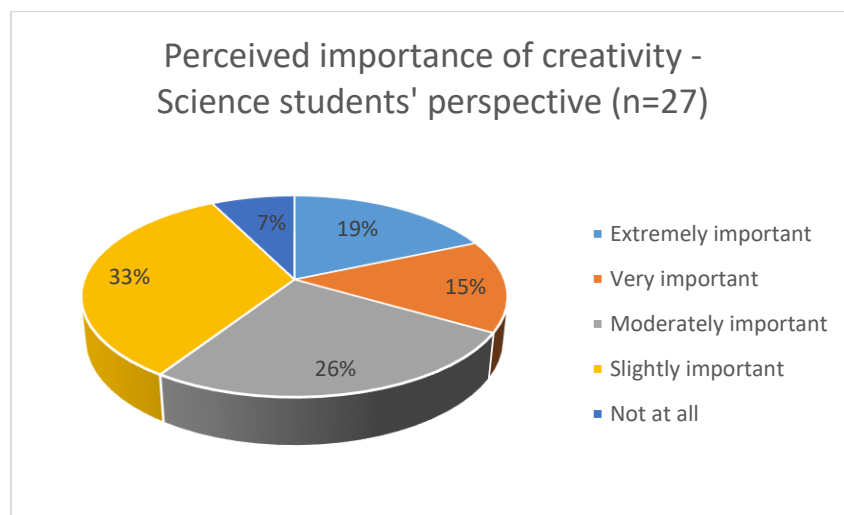
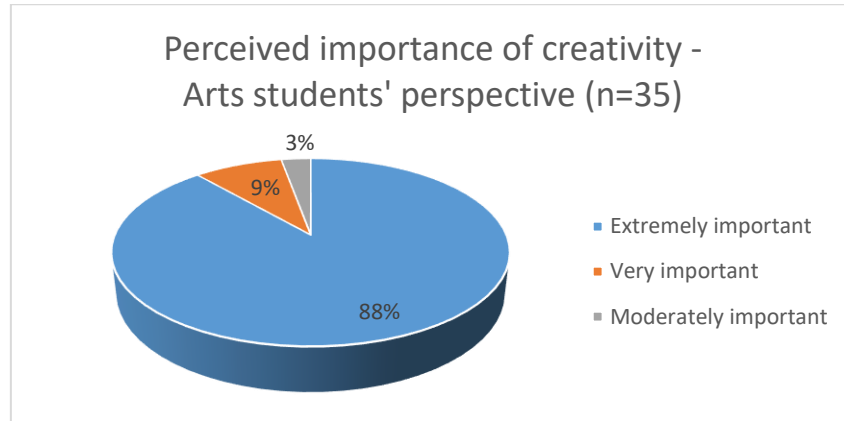
Back Submit Page 6 of 6

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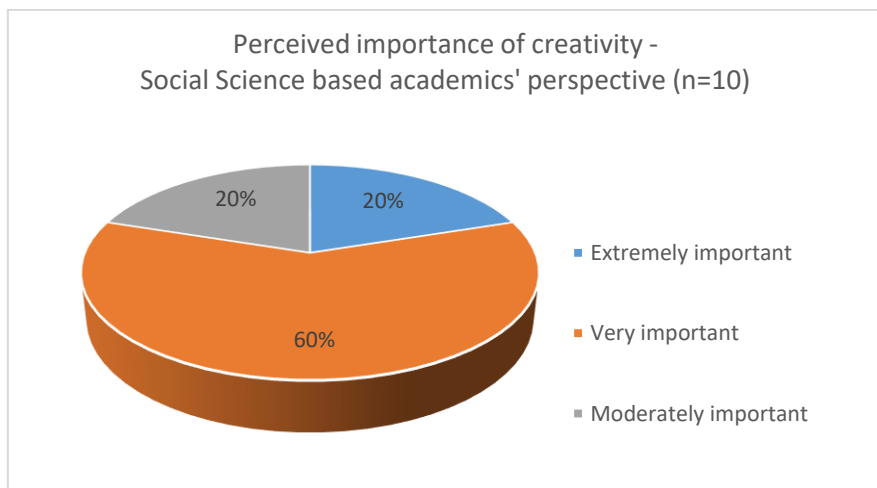
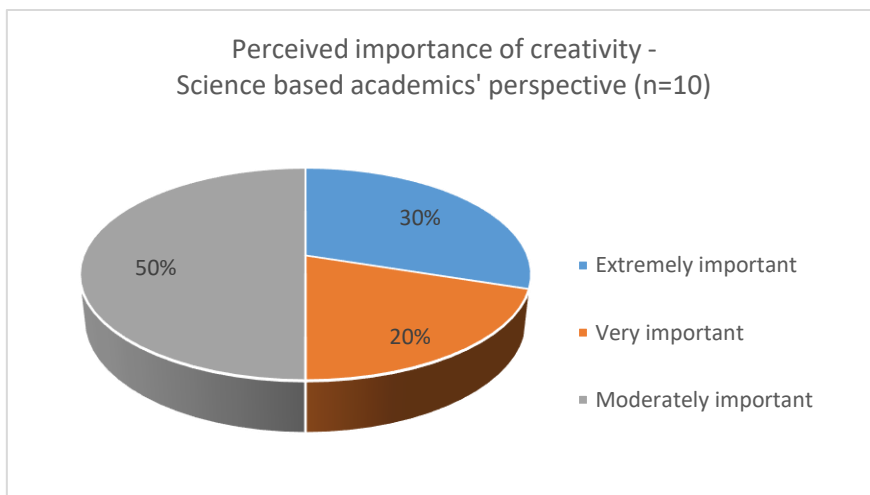
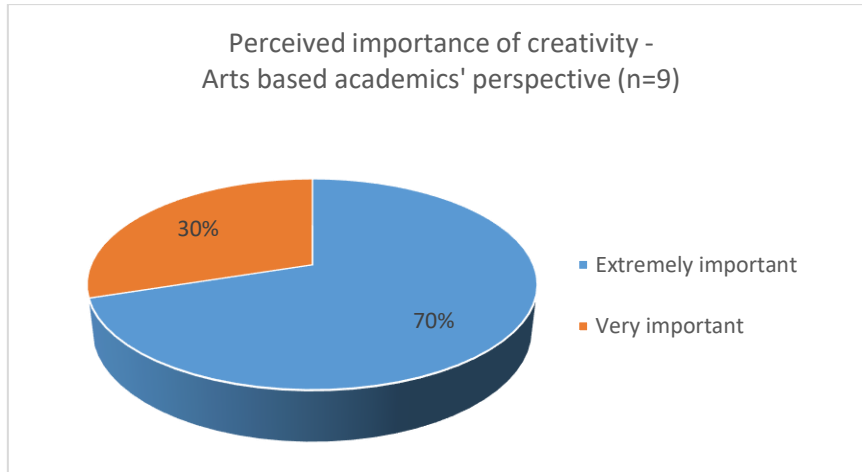
Google Forms

## Appendix E – Stage one raw quantitative data

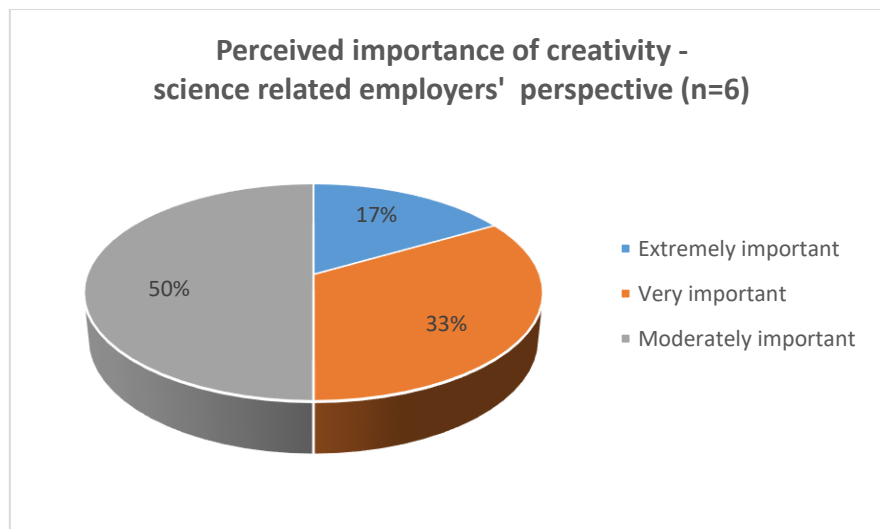
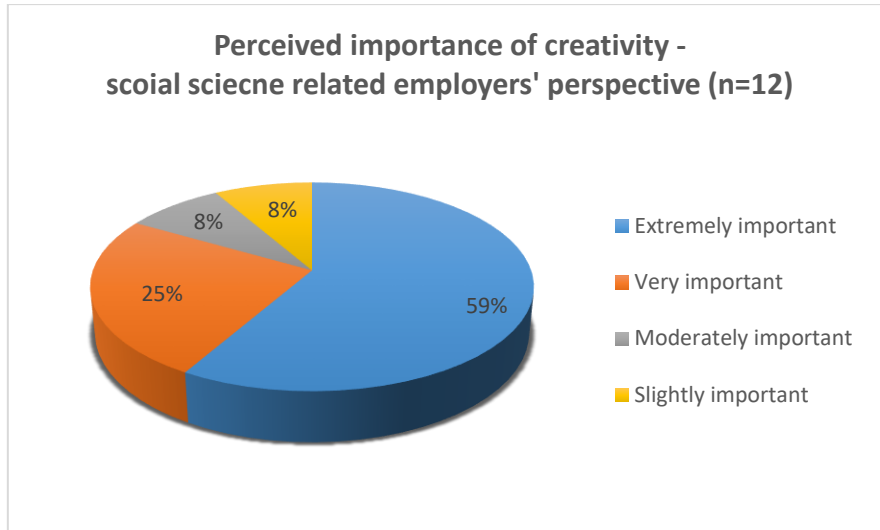
### Students' perceptions of the importance of creativity by subject area



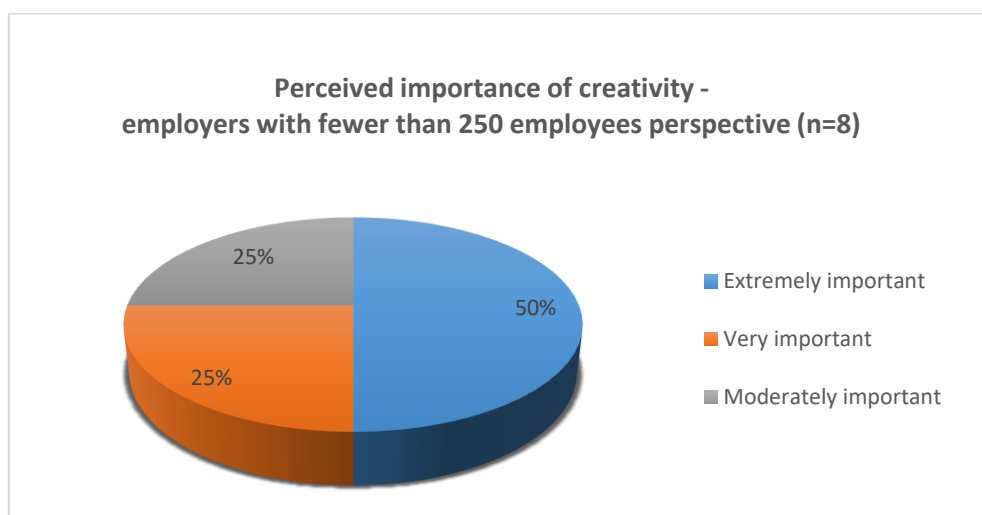
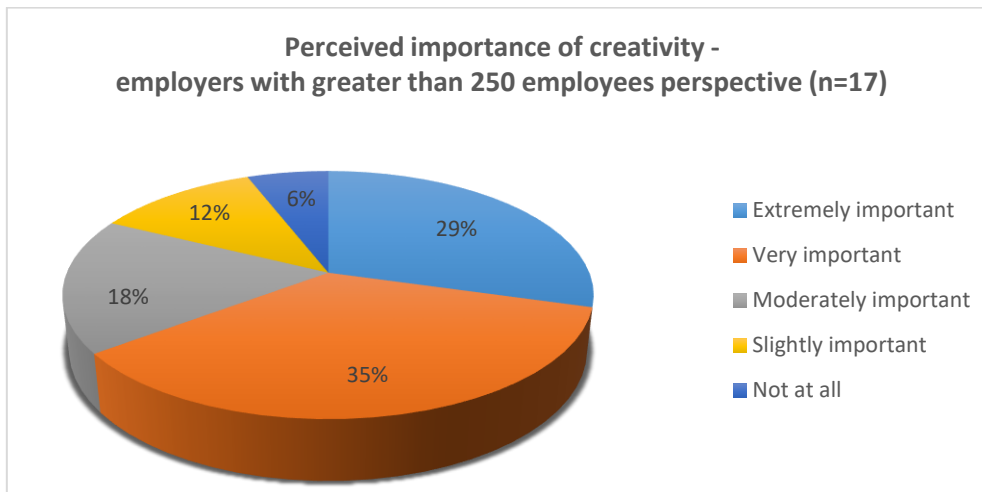
Academics' perceptions of the importance of creativity by subject area



Employers' perceptions of the importance of creativity by subject area

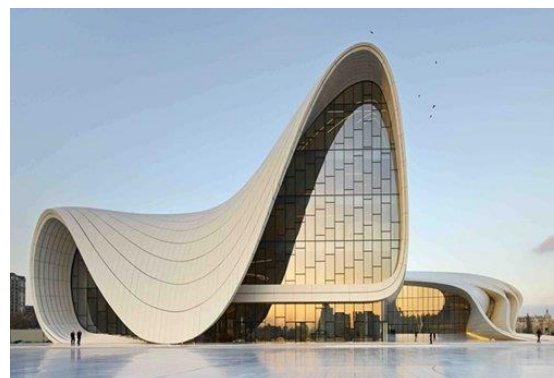
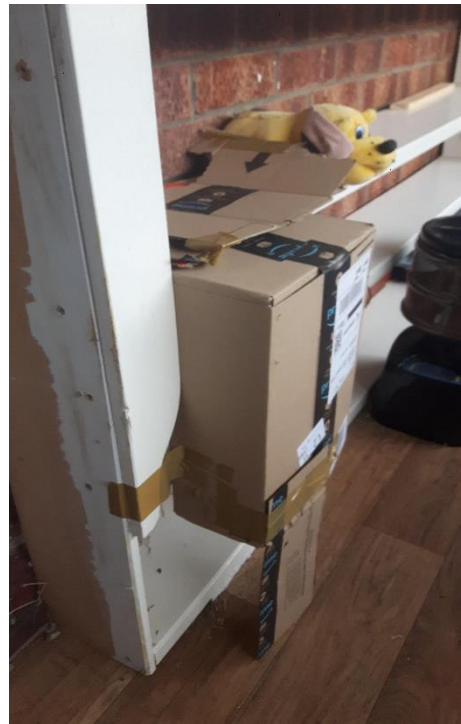
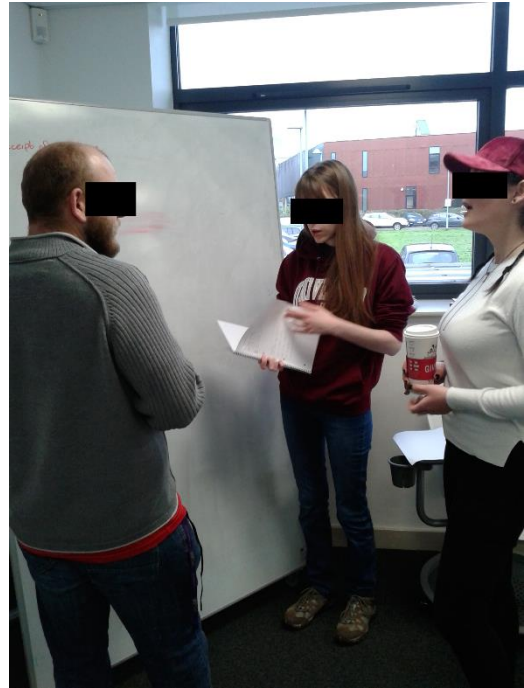


## Employers' perceptions of the importance of creativity by number of employees





Appendix F – Stage two example images



## Appendix G – Sample stage four (semi-structured interview) questions

1. From your perspective, what does collaboration look like in the context of creativity?
2. What impact does 'challenge' or 'challenges' have on the creative process?
3. From your perspective, how necessary is specific subject knowledge to be creative?
4. To get the most of people creatively what do you think makes a good physical and cultural environment?
5. What do you think a person needs to be or needs to have in terms of characteristics to be creative?
6. From your experience, do you think these characteristics can be developed in individuals?
7. Thinking about the process of creativity, what's your view on creativity being the adaptation of current products or the genesis of something absolutely new?
8. Is the creative process chaotic or ordered?
9. What gives value to a creative product?

## Appendix H – Coding book

Code	Definition
Processing thoughts	Sequence of events which transforms thoughts from internal idea to the production of a valued entity.
Conceptualising	The initial realisation of a concept, idea or problem.
Clarifying	The refining of the conceptualised idea and the defining of the purpose of the creativity.
Designing	The planning of ideas to meet the clarified purpose of creativity.
Synthesising	The contriving of artefacts or thoughts to align with the designed ideas.
Evaluating	The analysis and critiquing of the contrived artefacts or thoughts.
Applying	The employing of the critiqued artefacts or thoughts to a situation.
Producing a valued entity	The creation of a tangible artefact or theoretical notion which is useful to an individual or group.
Practical values	Values given to an entity which can be objectively measured.
Humanist values	Values given to an entity which are subjective and open to personal perception.
Facilitating the situational environment	The support of the cultural, social and physical environment to enable the creative processing of thoughts.
Collaborating with others	Interaction of individuals to work on the same task.
Understanding the subject	Personal comprehension relating to a specific field of study.
Personal characteristics	Qualities possessed by an individual which facilitate the creation of a valued entity.

## Appendix I – Memo example

Process and product: can they both be personalised?

The process of solving a problem seems varied and multifaceted but will reach a solution, to a greater or lesser degree, and whilst participants seem mindful of efficiency of process, they acknowledge that different routes to a solution are evident. This appears to be encouraged by the participants and therefore points towards personalisation in the creative process, which seemingly emphasises a possibility, or perhaps a preference, to employ stronger personal attributes when problem solving. But to what extent is this true across subject domains and personal role? What credence does, for example, a science based subject give to individuality, as opposed to following a traditional approach? It appears that chaos and a loss of control (caused by the product of personal agency and individuality) is a necessary element of creativity and is acknowledged as such by all participants but, conversely, all participants have recognised that unfettered chaos (or divergent thinking to quote Guilford) is not helpful. But where is the balance and what (or who) influences this? Is part of the question in defining creativity in the context of it being an employability skill knowing where the boundaries are within the *flowing creativity* quadrant? So the creative process can be personalised it seems, but is perhaps shaped by the environment or context.

If the process of creativity is a personalised one, it would follow perhaps that the resulting product is personalised by default. As Chris noted, the creative product doesn't have to be tangibly productive, rather than product is recognition of where the process was successful and where it failed. But this is based on the assumption that the product is somewhat intrinsic – is this always the case? Even in Chris' example, the customer did not receive what they wanted. Many authors have pointed towards the 'expert panel', so to speak, when establishing the value of a creative product and the extrinsic necessity for validation. There are potentially two things going on here: does a creative process have to result in a physical outcome, and ultimately, who establishes the value or validates the product as creative? All conversations seem to agree that the 'end user' of the product predominantly defines the value of a product but in a subjective way. This will cause issues when trying to define creativity or reach a consensus on what 'value' looks like when referring to a creative product.