Thesis Title -

Student engagement with learning: A sociomaterial conceptualisation

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma. I also confirm that this work fully acknowledges opinions, ideas, and contributions from the work of others.

I declare that the word count of this thesis is no more than 55,000 words excluding appendices.

Signature:

Date: 20th November 2023

Abstract

Student engagement in Higher Education (HE) is a complex and well documented notion but there is a relative scarcity of work that focuses on understanding how students' social, digital and material world interact to affect their engagement. This research addresses the gap and develops an approach that is situated in the emerging field of relational and multimodal studies of Higher Education (Lackovic, 2020; Lackovic and Olteanu, 2023). There is a growing body of research (Adams & Thompson, 2016; Fenwick, et al., 2011; Gravett, et al., 2021; Lackovic and Olteanu, 2023) and compelling evidence that materiality in educational environments impacts social and therefore student experiences. These sociomaterial perspectives encourage us to think beyond the human position (Braidotti, 2016; Gourlay, 2021) offering new and interesting ways to examine the notion of student engagement.

The study is a response to calls for a more holistic understanding of student engagement (Kahu, 2013; Tight, 2020; Zepke, 2015) amidst the dominance of highly marketised approaches in the HE sector that continue to foreground the centrality of participation and reinforce normative views of engagement (Brown, 2015; Gourlay, 2022; Selwyn & Gašević, 2020). This puts students in a compromising position and there are questions of power and agency extending beyond a solely human perspective, to consider the role of technology, things and places in student lives. The study adds to the recent work that examines engagement from qualitative, sociomaterial perspectives (Gourlay, 2021) and asks:

- In what ways do students understand engagement with learning at the intersection of the material world and their individual experience?
- What kind of sociomaterial conditions and phenomena are connected to student engagement with learning?
- How are the sociomaterial forces that influence their engagement with learning characterised and assimilated into their experience of being a student?
- What are the implications of the research for understanding and conceptualising student engagement?

To answer these questions, the research design uses student experiences as the basis for truth in an exploration of sociomaterial forces that influence how they engage in learning. Inquiry Graphics Analysis (IGA) (Lackovic, 2020) was deployed, as a robust multimodal and relational theoretical approach and analytical tool to examine the complexity of student experiences leading to a close-up view of engagement with learning as sociomaterial and digital phenomenon. It involved students providing photographs of the key places, things and symbols of their engagement. It develops a two-phase approach to the use of IGA and multimodal diaries to create a platform for a detailed interpretative dialogue with students. The data across both phases is deeply rooted in and shaped by the individual experiences of students and sheds light on a complex entanglement of social, material and digital phenomena. Reflexive thematic analysis (Braun & Clarke, 2006) is part of IGA in a process through which a new model of student engagement evolves.

Thesis findings capture the messy reality beyond metrics and data dashboards to show that engagement with learning is not an either/or state but one that is in flux, a continuum of strategically negotiated states influenced by the complex interrelationship of inhibiting and enabling sociomaterial conditions. The thesis develops a contemporary conceptualisation of student engagement as a sociomaterial, relational and multimodal phenomenon. It shows how engagement is situated in the everydayness of student experiences, extends the engagement discourse and offers a posthuman vantage point as the basis for a more holistic understanding to inform new teaching and research opportunities.

Contents

Acknowledgements

At times over the last five years, I doubted I would get to the stage marked by the writing of this statement, that I have is down to more than my own efforts.

My PhD journey was made possible by the HEREE programme at Lancaster University, the opportunities it offers to engage at a distance and the academic and support team that expertly brings it altogether.

In that context, I would like to express my gratitude to Dr Natasa Lackovic, who as my supervisor has been instrumental in the development of this work and whose support, expertise and encouragement has helped me to negotiate the challenge of Inquiry Graphics and apply it in this research.

I would also like to extend my thanks and appreciation to the students who joined with me in this research. Exploring new ways of thinking about their experience at a time when the pandemic was such a disruptive influence was a tricky undertaking for all of us. You rose to the challenge; this research would be radically diminished without your insight.

Crucially, I would like to thank my family for unwittingly joining me on this journey, for their love, ongoing support and understanding that someday soon I might be able to talk about something else.

Publications derived from work on the Doctoral Programme

To date no papers have been published from this work although initial findings from

Phase One were shared at the Higher Education Close-Up Conference (2022),

Lancaster University in the paper:

Researching student engagement: the application of Inquiry Graphics Analysis to develop a sociomaterial understanding.

List of abbreviations

HEFCE: Higher Education Funding Council, England

SE: Student Engagement

HE: Higher Education

HEI: Higher Education Institution

HESA: Higher Education Statistics Agency

UCAS: Universities and Colleges Admissions Service

OfS: Office for Students

NSS: National Student Survey

NSSE: National Survey of Student Engagement

TEF: Teaching Excellence Framework

IGA: Inquiry Graphics Analysis

VLE: Virtual Learning Environments

LA: Learning Analytics

QRS: Qualitative Research Synthesis

NUS: National Union of Students

UCAS: Universities and Colleges Admissions Service

CRM: Customer Relationship Management

ADHD: Attention Deficit Hyperactivity Disorder

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Chapter 1: Introduction

The purpose of this opening chapter is to establish the broad context for the study and outline the rationale for the research, in other words, identify the research gap and value of this study. In doing so it also provides a brief overview of the nature of student engagement in Higher Education and introduces the conceptual framework that the thesis aims to develop as a means of unravelling the complexity of students' individual and group experiences of engagement in relation to their social, material and technological interactions and entanglements. The chapter closes with an overview of the thesis structure.

1.1 Rationale: Identifying the research gap

Given the wealth of literature on student engagement, there is a relative scarcity that focuses on understanding how students' material world and the material environment they are embedded into links to their engagement. This research addresses that gap in the context of student engagement by cross-fertilising it with the growing field of work and compelling evidence that materiality either in physical or digital environments has an impact on human and therefore student lived experiences (Acton, 2017; Gourlay, 2017; Cattaruzza, et al., 2019; Fenwick, et al., 2011; Gourlay, 2021; Gourlay & Oliver, 2018; Lackovic & Popova, 2021). These ideas are epitomised in sociomaterial and posthumanist perspectives that encourage us to think beyond the human position and recognise that social, cultural, and personal considerations are entangled with the physical, material and digital world (Bayne, 2018; Fenwick, 2015; Gourlay, 2017). Within this context, Inquiry Graphics Analysis (IGA) (Lackovic, 2020) and theoretical positioning is deployed, bringing together the key concept of the thesis inquiry (student engagement with learning) and student's chosen visualisations and narratives of that engagement. It is a robust theoretical and analytical tool to examine the complexity of students' lived experiences from a sociomaterial, multimodal and relational perspective. This approach to researching knowledge and experiences will be unpacked in Chapters Two and Three.

At the time of writing these critical approaches to materiality in HE practices have yet to be substantially brought together in relationship to student engagement with their learning and their sense of being a student. Notably though, Gourlay (2010, 2015, 2017) began to challenge established ideas of student engagement making a robust case for a sociomaterial perspective. This study builds on that salient argument recognising that students' lives are strongly mediated by the places they spend their time (Acton, 2017; Acton & Halbert, 2018) and the objects they use often and assign value to. These include accommodation, personal workspaces, technological devices, books, desks and library spaces as part of an expansive assemblage of student engagement experiences. Therefore, this research explores how students are linked to multiple dimensions of learning through their relationship with different things they encounter in their everyday environments. That is, the areas of engagement explored are the social, environmental and digital modalities of learning (Lackovic & Olteanu, 2023) and how they can also be methodologically applied to understand student engagement (with their learning).

An extensive body of literature exists that makes a case for expanding our view of knowledge and therefore student engagement into the environment (Clark & Chalmers, 1988; Malafouris, 2019; Wilson & Golonka, 2013). In this thesis I focus on the approaches that have embraced sociomateriality and the sensory and material aspects of knowledge and learning in HE and education studies in particular, the work by Fenwick (2015), Fenwick, et al (2011), Gourlay (2015, 2017, 2021), Gourlay & Oliver (2013), Lackovic (2020), Lackovic and Popova (2021), Lackovic and Olteanu (2023).

1.2 Development of the Research Issue

In this section I build on the rationale and elaborate on my positionality with respect to the focus and context of the research. Additionally, I indicate how established definitions and approaches to student engagement are shaped by strategic agendas in Higher Education before discussing the specific focus of this research.

1.2.1 Researcher's Positionality

The privilege of holding an academic post offers a wealth of anecdotal insight into the growth in student success and support initiatives as part of institutional responses to the discourse on engagement. With a departmental responsibility associated with student journey, employability and graduate outcomes, I appreciate how strategic intentions filter through faculty structures, influence routine activity and impact on student experiences. Particularly disruptive forces in this scenario are annual cycles of activity associated with National Student Survey (NSS) reporting, the introduction of the UK Engagement Survey (UKES), the Teaching Excellence Framework (TEF) and the influence of data as a proxy for student engagement in a broader sense.

In this context, engagement initiatives have increasingly been delivered at arm's length through the affordances of digital technology and increasingly centralised service functions. 'Wellbeing' comes packaged as a 'mobile app' and the door to 'Student Support' takes the form of a generic email address for the triaging of student queries. Some of the challenges regarding student engagement relate to conflicting priorities embedded across a sector where consumerism and marketisation drive organisational transformation and the rationalisation of functions (Buckley, 2018; Fawcett, 2021). These kinds of structures are likely to widen the 'compassion gap', increase alienation amongst the student population (McCowan, 2017; Tomlinson, 2017 Waddington, 2016) and work against engagement.

This research originates from my own curiosity about how ideas of student engagement are positioned within this context, and a sense that there is a disconnect between rhetoric, and the everyday experiences of students. Narrowing this gap could lead to insights to better serve student interests and enhance their university experience. Importantly, the work also stems from familiarising myself with sociomaterial and related approaches to HE that opened up new spaces for understanding what student engagement is.

The sense that something is missing or that the picture regarding student experience and engagement is incomplete is certainly not 'breaking news' but it continues to have

currency in the research community and is a constantly evolving idea as new perspectives offer fresh insights (Bramley & Morrison, 2023; Bryant, 2014; Bunce, et al., 2023). This was captured to some extent by a conceptual synthesis of literature that I did (Ardron, 2020) at that point of my research journey, examining how student engagement was framed in then recent research. The dominant themes emerging from that work were categorised and clustered to form the graphical representation of research space shown in the figure below.
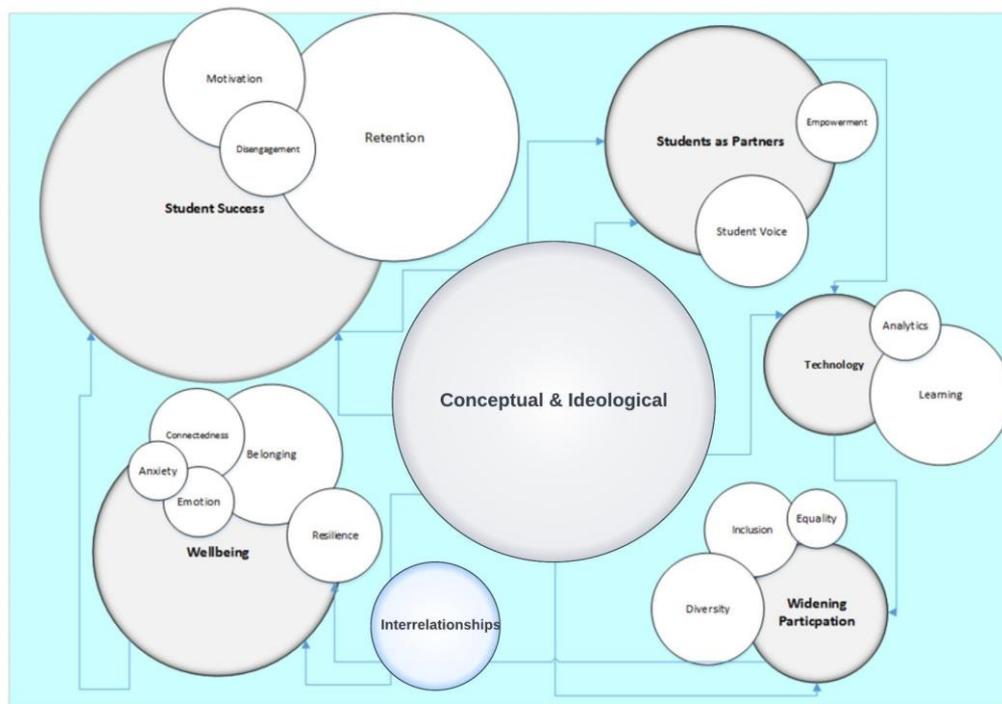
Figure 1.1:Student engagement research space (Ardron, 2020)

The central space is occupied by literature and commentators involved in a continuing search for better ways to understand the concept of engagement amidst a collective concern for the student position in a marketised higher education sector (Aldridge, 2018; Hayes, 2018; Westman & Bergmark, 2018; Zepke, 2018). The findings also show the Students as Partners (SaP) literature as a response to this concern with notions of democracy, agency and partnership underpinning the discourse (Carey, 2018; Cook-Sather et al, 2017; Gravett et al, 2019). Furthermore, the review began to reveal how

this discourse connects student engagement to literature on wellbeing, student success, digital technologies, and the widening participation agenda.

The conceptualisation of the research space in Figure 1.1 is an attempt to illustrate the interrelationship between these themes and contributed to my appreciation of engagement as a complex and difficult to define concept. Tight (2020) also demonstrates through a robust systematic review of the literature, that a consensus regarding the meaning of student engagement remains an elusive goal and offers suggestions to guide new research to gain a better understanding of the contemporary student experience.

> *We need a much better understanding of what it is like to be a student today(.) Contemporary student lives spread out much further than their course and institution, involving family, friends, social and leisure activities and employment. Critically, what is needed to research this inter-connected broader experience is not just the willingness of students to have their whole lives researched, but also their direct involvement.*

<div align="right">Tight (2020, p.697)</div>

The main argument of the thesis is driven by the ambition of the statement above and the sense that mainstream views of student engagement continue to foreground the centrality of participation, positive dispositions towards learning, and the resultant value of such behaviour (Cassidy et al., 2021; Gourlay, 2015; Zepke, 2018). As institutions seek to harness and commodify engagement, students are expected to respond to initiatives accordingly. This is a complex scenario shifting the responsibility for engagement back to students where universities may overemphasise individual agency and underplay their own structural responsibilities.

In this way students are situated in a compromising position that raises questions of power and agency with calls to explore engagement from a more holistic perspective (Tight, 2020). Hayes (2018) suggests an absence of a 'human' perspective in a policy context driven by marketisation and the pervasive impact of technology. However, rather than argue for a human centric position, this study recognises the value of the posthumanist perspective and is not limited to a focus on the human factor. As such, perspectives in the study align with Gourlay's (2015, 2022) views and challenge the

notion that engagement derives from human agency alone. Different views can be adopted in terms of *other than human agency* but what is important is a notion of sociomaterial assemblage in which humans and their environment affect each other. Adopting this position, the research seeks to understand the diverse ways in which students engage through social and material experiences and the forces influencing that engagement as part of the student's relationship with their university.

1.2.2 Defining student engagement in Higher Education

The pervasive nature of student engagement and the multiplicity of ways it has been put to work underpins wide variation in how it has been defined (Ashwin & McVitty, 2015; Axelson & Flick, 2010; Kahu & Nelson, 2013; Kuh, 2007; Kuh, 2009; Trowler & Trowler, 2010). In some cases it has been characterised and also criticised as a meta-construct (Fredericks et al, 2004; Kuh et al 2006; Zepke, 2014). Below, I present some of the key publications in the area of student engagment and their stance.

Kuh's (2009, p.683) idea that engagement can be defined as "the time and effort students devote to activities that are empirically linked to desired outcomes … and what institutions do to induce students to participate in these activities", suggests a joint endeavour. In that sense it is similar to the definition offered by Trowler & Trowler (2010, p.3) where engagement is seen as

> *…the interaction between the time, effort and other relevant resources invested by both students and their institutions, intended to optimise the student experience and enhance the learning outcomes and development of students and the performance and reputation of the institution.*

These kinds of definitions shape engagement as a **quantifiable commodity** to serve a strategic purpose beyond the immediate reality of student life. They foreground predictable, desired or expected behaviours, encourage students to participate to this effect and have an interest in data that supports the performativity agenda.

The work of Kahu (2013) and Kahu & Nelson (2018) extends our understanding of engagement beyond the behavioural/institutional dynamic described above by drawing on the ideas of Fredericks et al (2004) and the suggestion that engagement includes

cognitive and emotional dimensions in addition to the behavioural. Kahu & Nelson's (2018) conceptual framework recognises the influence of the "psychosocial constructs" of self-efficacy, emotions, belonging and wellbeing. These are seen as a function of engagement at the "**educational interface**". They also refer to Nakata (2007) and define the interface as "the place where students live and learn in higher education" (Kahu & Nelson, 2018, p.63), a micro-context where student and institutional factors align to facilitate engagement.

Trowler et al (2022) make further refinements to the model presented by Kahu & Nelson (2018) adding motivation, resilience and reflectivity to the list of psychosocial constructs and reframe the educational interface as the **engagement interface**. They make this suggestion on the basis of their understanding that education and engagement are not the same thing and that engagement itself is located at the interface rather than within the individual student (p.765). They highlight a further point of contention where Kahu & Nelson (2018) suggest that engagement occurs when institutional and individual student interests align. The point being made by Trowler et al (2022) is that the proposal by Kahu & Nelson depicts students as lacking imagination or agency (p.768). They suggest it is a more complex matter where students are influenced by their 'back stories' whilst simultaneously inhabiting the engagement interface and their 'other lives'.

The ideas of Kahu & Nelson (2018) and Trowler et al (2022) certainly resonate with the direction of this research in that they recognise the complexity of the student experience and acknowledge engagement is influenced by many factors. However, the point of departure between their work and this research is the human-centred perspective they maintain. Whilst the centrality of relationships runs through the *dimensions* of Kahu & Nelson (2013, 2018) and the *pathways to engagement* defined by Trowler et al (2022), these do not extend to a consideration of the agency of material or non-human artefacts, inter-relatedness and assemblages in those relationships. To fully account for the complexity of these relationships the *tactics to engender engagement* (ibid, p.770) would therefore arguably benefit from a sociomaterial perspective.

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Therefore, this study develops the sociomaterial perspective of engagement as an intensely negotiated and highly situated practice constituting the everyday experiences of students. As a working definition of student engagement it is based on ideas brought together by Gourlay (2015) drawing on the work of Fenwick et al (2011) to develop the theoretical positions established by Archer (2003, 2007) and Kahn (2013). Looking beyond the human perspective and the centrality of participation, Gourlay presents a sociomaterial manifesto to refocus our understanding of engagement "on what students do, as opposed to what they ought to do" (p.409). Further, that engagement in these scenarios is constituted through complex relationships between human and non-human actors and the spaces they inhabit.

1.2.3 Student engagement shaped by Higher Education agendas.

Student engagement in Higher Education is an important issue, a key research area, a strategic concern, and a focus of educational development (Buckley, 2018; Matthews, 2016; Trowler et al, 2022). It has been shaped by and is influenced by diverse interests within the sector and continues to be a highly contested concept. That said, there is an unquestioning adoption of engagement as a force for good (Ashwin & McVitty, 2015; Zepke, 2014) and a general acceptance that students who are engaged with their studies are more likely to be successful (Trowler & Trowler, 2010). Vuori (2014, p.509) described it as "trendy term" used by governments to refer to university performance, academic excellence and competitive advantage. The HE sector associates it with learning, student success, retention, progression and graduate outcomes (Chipchase, et al., 2017; Mandernach, 2015; Trowler, et al., 2022).

Student Success Teams, Student Progress Initiatives and Student Journey Advisors have been mobilised as a taskforce to bolster student behaviours that trigger engagement metrics. In turn they progress the strategic intent of universities, driven by the language of student engagement policy and guided by NSS and UKES outcomes. Informed by data generated through learning analytics systems, these initiatives validate the restructuring and centralisation of faculty support services, a process that in turn gradually erodes the human interface and diminishes the proximity of students. This

trend is reflected by some of the key findings of the OfS (2020) consultation on student engagement and the Student Engagement Strategy (Office for Students, 2020) that emerged from it.

Amidst multiple definitions and the ongoing discourse, it is generally accepted that students who are engaged with their studies are more likely to be successful (Chipchase et al, 2017; Mandernach, 2015; Matthews, 2016; Trowler, 2010) and therefore not surprising that universities deploy significant resources in trying to harness engagement (Douglas et al, 2020). Viewed as a prerequisite for improving student outcomes and as an indicator of institutional success, student engagement has become central to strategic policy and is thoroughly embedded in the fabric of Higher Education (Buckley, 2018; Kahu & Nelson, 2018; Trowler, 2015; Zepke, 2014).

However, there is mixed policy messaging and conflicting interests regarding engagement when students are positioned as both consumers and commodities in a HE sector that is highly marketized (Baron & Corbin, 2012; Tomlinson, 2017). In this context, the increasing prevalence of data tools (Shacklock, 2016) reinforces simple associations, obscures complexity and sustains the normative view that solutions are straightforward (Kahn, 2015; Kahu, 2013; Klemencic & Chirikov, 2015). This kind of agenda is likely to misrepresent student engagement and risk alienating individuals by limiting their agency in the process (Ashwin & McVitty, 2015; Douglas et al, 2020), albeit students are encouraged to act in certain ways (the agentic approach) in order to be "engaged". This notion is reinforced by Ball's (2016, p.1046) suggestion that the performativity and accountability agenda of neoliberalism has harmfully changed the subjective, interpersonal, mutual and relational experience of education. Attempts to capture the essence of this experience through widescale adoption of surveys (NSS, UKES) generates metrics to justify policy action and strengthen the value of HE commodities (Brown, 2015; Marginson, 2013; Robertson & Komljenovic, 2016) but again, weakens the position of the student as a stakeholder.

1.2.4 Engagement, datafication and analytics

The reality is that at an institutional level, learning requires a proof of work to justify the resource investment and maintain status in a highly marketised sector (Brown, 2015; Molesworth, Scullion & Nixon, 2011). In the context of Higher Education this correlates with student behaviours and generates fluid data to support systems that monitor progress and establish value added over the course of their journey. As producers (and consumers) of data, students, their behaviours and their response to data collection requests result in a data footprint that is increasing in volume, velocity and variety (Shacklock, 2016). It contributes to the growth of data doubles (Turkle, 1995; Zuboff, 2019) and the datafication of HE (Komljenovic, 2022). Much of this is generated by students interacting with Virtual Learning Environments (VLEs), swiping into teaching spaces and pushing through library barriers. These traceable behaviours are captured by universities and put to work as proxies for engagement without considering the complexity of students' relationships with digital or physical spaces.

Defined at the first International Conference on Learning Analytics and Knowledge (LAK) in 2011, Learning Analytics (LA) is now generally accepted as "the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs" (SoLAR, 2023). Increasingly sophisticated technology helps universities make sense of the kind of data described above and is seen by many to offer valuable insights capable of enhance learning and engagement (Larusson & White, 2014; Shum & Ferguson, 2011; Wagner & Ice, 2012). This is illustrated in a recent report from a UK based analytics company (Solutionpath, 2023) working across the HE sector, as they highlight the effectiveness of their platform (StREAM) which ingests data from core university systems seen to represent students' engagement with their academic studies.

Relatedly, a quantitative study by Boulton et al (2019) examining student engagement and wellbeing in undergraduate cohorts, is an example of research seemingly committed to the data solutions campaign described above. Using an elaborate survey instrument to gather dispositional data their aim was to enhance existing data captured

through learning analytics systems as a means of predicting engagement. Following sophisticated analysis of the survey data the conclusions of the study are reflected by the three statements:

- (Regarding engagement and wellbeing) *This study cannot separate these potential mechanisms since it only shows correlation and cannot assign causality.*
- *We can only speculate why there is an observed decrease in engagement during the academic term.*
- *The observed increase in happiness towards the end of term seems to be robust but is hard to explain.*

Boulton et al (2019, p.17)

Similar to Ferguson's (2012, p.310) suggestion that early analytics tools were presented as 'pedagogy neutral' rather than offering any direct support for learning and teaching, I argue here that quantitative methods aligned to big data mindsets lead to 'context neutral' findings limited to speculation rather than explanation.

Of course, big data and technology enabled analytical insights are not the privilege of this sector. An increasingly unwieldy data burden (Youell, 2023) is a reflection of global trends as HEI's are compelled to emulate the corporate behaviour of large business and commercial organisations. Learning Analytics is increasingly capable of providing intelligence at a scale to drive strategic policy, but in that respect is also limited in its capacity to directly influence or account for students' engagement with learning.

In this context, the Office for Students agenda (OfS, 2020) encompassing the NSS and TEF, strengthens the institutional rationale for survey driven methodologies and learning analytics tools as a way of harnessing proxy engagement data. The current proposals (Office for Students, 2023) to strengthen the position of the TEF, making it a mandatory exercise inclusive of the intention to publicise data, may further sharpen the strategic focus of universities in ways that sustain normative approaches to student engagement and obscure understanding of the vitality of sociomaterial relationships.

This study questions the universal validity of data claims as a legitimate means of gaining insight into student engagement and holds that big data falls short in its ambitions to fully appreciate the complexity of student engagement with learning. However, as Kahu (2013) accepts there is some value in data informed behavioural perspectives that might offer a baseline for action.

1.2.5 Focus of the Research: Student Engagement with Learning

This research considers engagement as part of the wider experience of an individual, one that is defined by the student as they interact with the University in the broadest sense. It is an experience mediated, enhanced, and inhibited by the structures, processes, people and places that constitute it and the interrelationships formed thereof. These interactions are increasingly facilitated and encouraged by universities as part of a technology enabled, on-demand consumer culture (Guilbault, 2016; Nixon, et al., 2018; Tomlinson, 2017) that sustains the appetite for data described above.

Importantly though, Zepke (2015, p.1311) and Cassidy et al (2021) reinforce the idea that engagement is not bounded by the institutional domain of the University, and that it connects to personal backgrounds and wider community as part of a complex socio-cultural ecosystem in which the tangible experience of being a student evolves. As Tight (2020, p.697) suggests, the contemporary student experience "spreads out much further than their course and institution, involving family, friends, social and leisure activities and employment." Rather than a predefined institutional, quantifiable, and fixed construct, engagement from a sociomaterial perspective, grounded by the experience of *being* a student in the midst of complex and entangled relationships, is a deeply personal, fluid and all-encompassing concept.

New relational and material perspectives (Fenwick, 2015; Gourlay & Oliver, 2018; Lackovic & Olteanu, 2023) offer fresh opportunities to explore this complexity. That said, arguing for an expansive view presents challenges for research attempting to gain new insights into student engagement, not least in defining a clear focus for inquiry that will contribute to new understandings.

To that effect, this research is supported by the work of Ashwin & McVitty (2015) in identifying the focus as student engagement with learning. Although their model (Figure 1.2) does not reflect engagement as the kind of sociomaterial phenomenon described above it is useful in defining where the focus of interest is. In choosing to locate the research within the sphere of 'Formation of Understanding' it is primarily concerned with the relationships and conditions that are conducive (or otherwise) to student learning. Ashwin & McVitty's model (2015) emerged from their attempt to address the vagueness around student engagement research and policy (p.343) and their argument that "the meaning of student engagement changes when the object of engagement changes" (p.344).
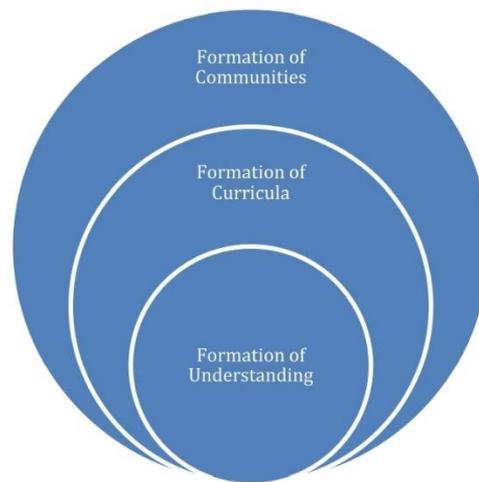
Figure 1.2:Conceptual Model of Student Engagement (Ashwin & McVitty, 2015.p.345)

This study argues that efforts to understand engagement in Higher Education have often missed opportunities to fully appreciate the reality of day-to-day student experiences, the nature of their complex relationship with the university and the ways in which this underpins the overall student journey. Figure 1.2 and the work of Ashwin & McVitty (2015) helps to identify an object of inquiry in a complex sociomaterial scenario and is founded on the notion that learning and engagement with disciplinary knowledge is fundamental to the HE experience.

A focus on *engagement with learning* and how it is influenced by the prevailing sociomaterial conditions locates this work within the broader field of student engagement and offers a new vantage point from which to better understand it.

At the intersection of individual experiences, the material world, and the digital dimension this work is grounded by the notion of engagement as a form of distributed agency mediated by these dimensions. It represents a new approach bringing together ideas from sociomaterial and posthuman perspectives to develop an alternative conceptualisation of student engagement (Fenwick, 2015; Gourlay, 2022, Gravett et al., 2021; Lackovic & Olteanu, 2023).

1.3 Theorising Student Engagement as Sociomaterial and Relational

So far, this chapter has defined the focus, outlined the rationale for this study, and introduced student engagement as a well-established, complex and contested notion aligned to traditional approaches that do not acknowledge notions of materiality or other than human factors. This section outlines further how new materialist perspectives (e.g. Fenwick, 2015; Gourlay, 2017; Gourlay & Oliver, 2018; Lackovic, 2020; Taylor, 2018) are brought together as a theoretical and methodological tool to bring new understanding to the idea of engagement and unravel the complexity of the individual student experience to that end.

1.3.1 Origins

In my initial thoughts about the nature of this research and its focus on the student experience, Sousanis (2015) provided some early inspiration, showing how visual narratives could shift perspectives and guard against a linearity of thinking. The author developed a thesis entirely as a graphic novel, contemplating the sensory embeddedness of knowledge and learning through visual narratives and references to key work in education studies (Sousanis, 2015). It suggested an antidote to data driven and survey led interpretations and presented an alternative scenario where images as a medium for reflective thought and inquiry would help to redefine what we can 'see' when we think about student engagement.

The means by which we order experience and give structure to our thoughts - our languages - are the stuff we breathe in and a sea we swim in. But for all their strengths, languages can also become traps. The medium we think in defines what we can see.

Sousanis (2015) p.51 - 52

Although the trajectory of this research is limited in its graphical ambition at a technical or artistic level, by using participant provided and curated images as Inquiry Graphics (IG) artefacts to anchor the analysis, it aspires to be a creative and rigorous means of enhancing our understanding of student engagement with learning. Briefly, Inquiry Graphics are any visual media brought into connection with concepts in education for the purposes of critical and creative analysis.

1.3.2 Overview

In keeping with the epistemological and ontological position of this research, unpicking the fine-grained messy reality (Fenwick, 2015) of the student experience requires an approach that recognises the value of the social conditions of knowledge production. Such an approach is not led by survey tools but offers sensitive, nuanced opportunities to delve deeper into the layers of meaning associated with the individual experience of being a student. In that sense, this work adopts a constructionist stance recognising that individuals possess (some) agency as they construct meaning through complex interactions in sociocultural contexts (Cohen, Manion & Morrison, 2018). More importantly though, it looks beyond the centrality of individual action and aligns with the posthuman, relational perspectives that question human exceptionalism, individualised agency and visions of learning that are inhibited by the discourse of metrics and strategic performance indicators (Taylor, 2018).

This fundamental position underpins a research design that develops an understanding of the sociomaterial, multimodal nature of student engagement and the ways in which learning is experienced. In this context, multimodality (Gourlay, 2010; Jewitt, Bezemer and O'Halloran, 2016; Kress, 2010) helps us to theorise about learning and engagement as functions of complex interactions as individuals communicate through a multiplicity

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of (increasing digitally mediated) modes (speech, gesture, images, video, audio). As a semiotic theory of communication, this interfaces well with Inquiry Graphics Analysis (IGA) and the work of Lackovic (2020) which offers a way of accessing the multimodal experience of students through the use of image artefacts as a platform for a detailed interpretative dialogue around the key concept of inquiry – that of student engagement with learning. Inquiry graphics and associated analysis will be further examined later in this thesis – in essence, it argues that student knowledge develops at the intersection of abstract and concrete representations and ideas, mind and body, matter and concept, therefore it argues that conceptual development is not solely symbolic, mentalistic and verbal. It has been well established that participatory visual methods (Ball & Smith, 2017; Bravington & King, 2019; Glegg, 2019; Pauwels, 2015) have the potential to support the search for meanings associated with first-hand experience and it is within this context that IGA provides an intelligent interpretative tool. The dialogue generated as individuals are guided to reflect on their student experience acknowledges the constructionist perspective (Charmaz, 2008; Flick, 2018) and places it as the basis for truth in this research.

1.3.3 New materialism, sociomaterialism and posthuman perspectives

The idea that the discourse of student engagement is inhibited by a dominant humanistic framing aligns with posthumanism and the views of Gourlay (2022, p.18). This section briefly outlines how posthumanism and the interconnected perspectives of relational materialism, sociomaterialism and multimodality (Fenwick, 2015; Gourlay, 2022; Gravett et al., 2021; Kress, 2010; Taylor, 2018) inform the thinking behind this research and guide the process of inquiry.

The central concern of this study is the concept of engagement with learning seen as part of a student experience situated within the complex socio-cultural system that constitutes the university but also extends beyond it. As a diverse and fluid phenomenon, the experience of becoming and being a student is not a matter of individual agency but more a distributed, collective sociomaterial enactment (Fenwick, 2015; Gourlay, 2022). The fabric of the university in the guise of its physical, digital and socio-cultural presence with all the things constituting that assemblage intertwine with

the everyday lives of individuals as students. In this context, the notion of 'being' a student is performed through complex social and material relations with people, ideas, physical objects, spaces and technologies. These relationships connect the individual (as a student) to the university, but also to life beyond the university, to family, home, work, and community. In this sense, relationships enacted with the university are negotiated in response to sociomaterial forces acting across the lifeworld (Adams & Thompson, 2011; Kress, 2010) of students.

The social and material dimensions of everyday life form a backdrop (Fenwick, 2015) to the student experience where complex relations between elements, influence and alter each other in an agentic assemblage. The context matters (Gravett et al., 2021), and in this scenario choosing to engage with learning (or not) is far removed from the humanistic perspective that imagines students possessing and being able to exercise individual agency without concern for influential contextual forces.

Seeing engagement through this lens is an opportunity to develop a more holistic appreciation of how such relations exert influence on the ways in which students engage with learning. Integral to this holistic view is the multimodal nature of contemporary communication, the ameliorating (or otherwise) effects of digital technology (Kress, 2010) and the increasing dominance of image over text in social and news media (Kędra & Žakevičiūtė, 2019; Lackovic, 2020). Understanding the dynamic, complex relationships between social, material and digital dimensions demands an approach that speaks to multimodality in this respect and offers an expansive way to explore how individuals see themselves as students.

In this scenario, survey led methodologies become redundant in their capacity to broaden our understanding and opportunities are created for new approaches more aligned to the multimodality of the contemporary student experience. Inquiry Graphics Analysis opens the door to these new possibilities.

1.3.4 Inquiry Graphics: Sociomaterial, multimodal and relational artefacts

Originating in Peircean semiotic theory, specifically focusing on Peirce's triadic sign logic applied in the context of HE learning with visual media, Inquiry Graphics is a visual, multimodal approach that highlights the value of involving participant generated image artefacts throughout the inquiry process. What this means is that the image does not only act as a prompt for reflection, but it is actively used to generate conceptual insights. In the context set out above, Inquiry Graphics Analysis (IGA) (Lackovic, 2020) provides a unique methodological tool that facilitates the externalisation of students' interpretations and meaning making about their experience as a student. It recognises the importance of social conditions of knowledge production in relation to the student experience and aligns with social constructivist principles (Flick, 2020; Glasersfeld, 2013) providing a means to interpret experience as truth in this context.

In this research, images serve as a platform for a detailed interpretative dialogue but are more than an adornment to accompany interview transcripts or support textual interpretation methods (Flick, 2020). Following IG principles, images provided by students become the core unit of analysis and represent the social (abstract) concepts and material (physical) artefacts that constitute an aspect of the sociomaterial world of the student that they link to their experience of engaging with learning. There is synergy here between 1) Semiotic Theory as the study of signs, how they mediate human meaning making and action, its concrete application in the context of reflection, analysis and learning with images (Lackovic, 2020) and the notion of 2) agentic potential present in Sociomaterial Theory (Gourlay, 2017, 2021). To explain, in the context of their individual student experience, the images that students as study participants were encouraged to provide represent both the abstract concepts and physical artefacts their engagement with learning. Acknowledging that images as data are subject to varying interpretations (Banks, 2014), it is the individual reflections of the student as an expert in their own experience (Pauwels, 2015) that is key to the participatory analysis at this stage. Here the IG analytical model allows access to the repertoire of the image, encouraging the student participant to engage in elaborate thinking around abstract concepts and make associations with the material reality of their experience.

Within this context, and building on the reviewed literature and identified gap, the following research questions guide the process of inquiry:

RQ1: In what ways do students understand engagement with learning at the intersection of the sociomaterial world and their individual experience?

RQ2: What kind of sociomaterial conditions and phenomena are connected to student engagement with learning?

RQ3: How are the sociomaterial forces that influence student engagement with learning characterised and assimilated into their experience of being a student?

RQ4: What are the implications of the research for understanding and conceptualising student engagement?

1.4 Thesis Context & Methodology: A brief overview

This research focuses on student engagement with learning in Higher Education and for very pragmatic reasons is located within the institution where I have been employed as an academic since 2006. This post-1992 university is situated in the North-East of England with a broad portfolio of courses and a rich cultural diversity in its student population. With over 30,000 students across four faculties, graduate employment is strong, and widening participation is key to its strategic mission.

Research participants (n=10) are drawn from across the university and are representative of undergraduate and postgraduate students from 3 out of the 4 faculties. The impact of the COVID-19 pandemic and restrictions imposed on conducting face to face research influenced the agile, phased approach to data collection where each stage was conducted online. In this context, a number of technologies (Blackboard, Zoom, Padlet, Outlook, Sway) became centrally important to its success.

Phase One of the study involved three participants, each creating multimodal diaries over a two-week period. This activity was primarily associated with RQ1 and involved

participants curating a series of images that were representative of concepts they associated with engagement (with learning). The individual participatory research conversations that followed took place via Blackboard Collaborate which is well suited to this kind of work and represents a familiar environment for students. The first stage of analysis involved the application of the IGA Model (Figure: 1.3) during the research conversations generating a rich dialogue around the images.
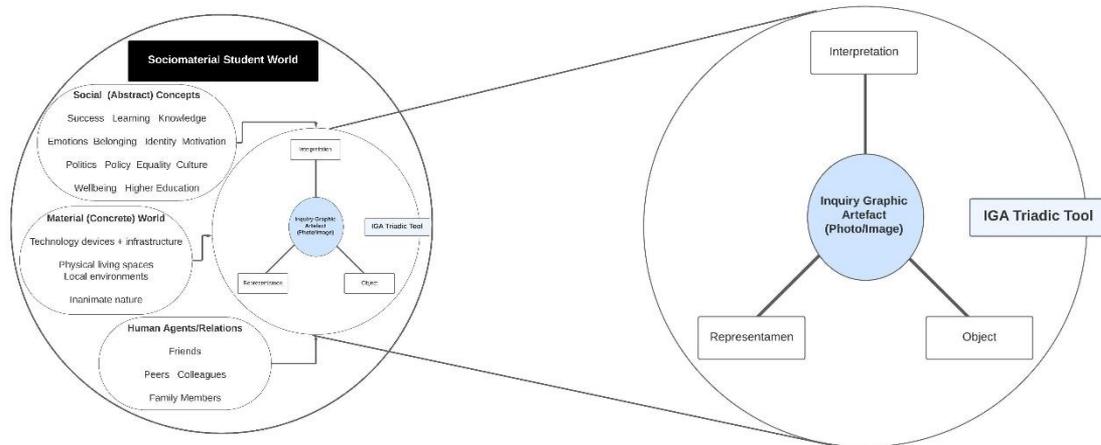
Figure 1.3:Inquiry Graphics Analysis Model: [Adapted from the model: Dynamic edusemiotic relationality of the Sociomaterial world from Lackovic (2020)]

The IGA model scaffolded participant thinking as they considered how material artefacts represented in each image related to concepts associated with engagement and the reality of their day-to-day experience. The outcomes of this process informed Phase Two of the study.

Phase two involves seven participants recruited as part of an email campaign targeting Faculty and Subject Student Representatives across the University. Once again, each participant created multimodal diaries by reflecting on specific engagement concepts that had emerged from Phase One. In this phase, Padlet (Appendix 2) facilitated the reflective process and supported the individual participatory research conversations that followed.

Extensive analysis of image artefacts and research conversation dialogue over the two phases was guided by IGA and aligned to the broad principles of reflexive thematic analysis (Braun & Clarke, 2006, 2021; Byrne, 2022). Findings reveal interesting and

important detail about the sociomaterial forces at work, and the way these act together to influence how individual students engage with learning. Interrelationships between abstract concepts and the material reality of student life emerge in these sociomaterial vignettes giving an insight into the challenges and affordances created at the human, material and digital intersection. Consideration of these leads to the conceptualisation of a sociomaterial model of student engagement reflecting contemporary student life.

1.5 Summary

The aim of this initial chapter has been to set the general context of this study and outline the nature of the research. It introduces a new direction for research into student engagement that aims to extend the current agenda and provide valuable insight to the complex lives of students in Higher Education. As such, it represents a timely response to recent challenges (Cassidy et al., 2021; Gourlay,2021) to examine student engagement through qualitative approaches. It also acknowledges the impact of the COVID-19 pandemic and what the reality of the student experience was during a time of significant disruption and change. Although initially conceived in a pre-Covid world, this work aims to contribute to the discourse on student engagement, its relationship with learning and how this is conceptualised in post pandemic universities. The following overview (Figure: 1.4) illustrating the structure of the thesis brings this chapter to a close.

1 Introduction	2 Literature Review	3 Developing a Sociomaterial Approach to SE	4 Methodology	5 Presentation & Analysis of Data	6 Discussion & Conclusions
Introduction to the chapter.	Introduction	A Relational Higher Education	Introduction	Introduction	Introduction
Rationale	Positioning the study	Sociomateriality in/of HE	Process overview	Phase One	Research summary
Development of the research issue	The engagement agenda in Higher Education	Perspectives on Learning	Recruitment of participants	Research conversation process	Engagement reconceptualised
Theorising student engagement as sociomaterial and relational	Student Engagement: Conceptual Waypoints	Inquiry Graphics: Theory & Method	Phase One Method Description	Research conversation Outcome	The iterative process
Context and methodology	Summary	Introducing the Sociomaterial Inquiry Model	Phase Two Method Description	Phase One Summary of Findings	Sociomaterial Conceptualisation of Engagement
Summary		Summary	Application of IGA	Phase Two	Considerations, Implications & Applications
			Ethical Considerations	Introduction	Future directions
			Summary	Enabling environments Barriers to engagement with learning Technology	Limitations and challenges
				Opposites and alternatives	Closing thoughts
				Motivation and outcome	
				Summary	
				Conclusions to chapter	

Figure 1.4: Thesis Structure

Chapter 2: Literature Review - Mainstream views of student engagement

Introduction

This chapter addresses the classical notion of student engagement as discussed in the bulk of the literature in this area. It sets the ground for understanding the key characteristics and elements of the mainstream conceptualisations and models of student engagement and surrounding concepts, which by and large exclude the material and technological aspects of student experiences that frame their engagement with learning. The stated models are then collectively reviewed to reflect on which elements may be useful for the development of a sociomaterial perspective to student engagement. The chapter also presents evidence to suggest that the policy and practice associated with student engagement have been inhibited by institutional agendas aligned to 'old power' structures (Grant 2021), the impact of marketisation (Brown, 2015; Kennedy, 2019) and the pervasive influence of technologies, favouring data led solutions to maximise efficiency and management rather than creative pedagogy with digital media and ways how students actually use technology as part of their student life (Gourlay, 2022; Selwyn & Gasevic, 2020).

This also sets the scene for Chapter 3 that argues for a multidimensional interpretation, drawing on recent multimodal and relational perspectives of Higher Education (Gravett et al., 2021; Lackovic & Olteanu 2023) to find new ways of looking at, and understanding, student engagement. Chapter 3 works in synergy with Chapter 2 to demonstrate that existing approaches to understanding this phenomenon are limited in their capacity to understand engagement in the context of complex sociomaterial realities and posthuman perspectives (Fenwick, 2015; Gourlay, 2022) in terms of what learning, knowledge practices and student engagement constitute. Together, the two chapters provide the rationale for a research design that offers an antidote to normative approaches and offers a reconceptualisation of engagement as a complex sociomaterial phenomenon.

2.1 Positioning the study

The field of student engagement is extensive, well documented, and thoroughly embedded in the fabric of Higher Education (Zepke, 2014; Trowler, 2015). The fundamental challenge in this context requires embracing the complexity of the conceptual and policy space associated with engagement (Ardron, 2020; Zepke, 2019), and a commitment to developing new ways to understand the student experience. As universities seek to renegotiate their social contract with students (Grant, 2021) it is a context where expectations are shifting, and relationships are being tested (Gravett et al, 2021).

The well-established discourse around student engagement has a trajectory dating back to the mid 1980's (Trowler & Trowler, 2010) and is built on the contributions of a global community of researchers, commentators, and policy makers. Although, a review of the significant corpus of associated literature is beyond the scope of this study, acknowledging the influence of that work is an important step in positioning this research and staking a claim to the new insights it brings.

2.2 "The engagement agenda" in Higher Education

The research literature concerning student engagement in UK Higher Education responds to a broader discourse closely associated with quasi-governmental initiatives such as the NSS (National Student Survey), TEF (Teaching Excellence Framework), and UKES (UK Engagement Survey). This agenda is concerned with the quality of HE provision and aims to promote engagement as a means of ensuring all students receive a high-quality experience. This is the 'reforming scenario' defined by Zepke (2015, p.699) that closely aligns engagement with performativity and accountability.

2.2.1 Regulatory frameworks and quality assurance

Overseen since 2018 by the Office for Students (OfS), the regulatory body of Higher Education (HE) in England, the student engagement business is seen to guarantee success, ensure the quality of teaching, provide insights into wellbeing and transform students into active producers of knowledge (Zepke 2015). Although the OfS aligns itself with the broad agendas of equality, diversity and inclusion, a neoliberal subtext obscures claims that it works in the best interests of students (Bayless, 2023; Buckley, 2018; Bunce et al., 2023; Callender et al., 2022). According to Boyd (2018, p.1) the remit of the OfS is to "encourage the growth of a competitive market that informs student choice … and to protect the interest of its consumers (students, government and wider society)." The power dynamic is interesting as she also notes that no students were appointed to the board at the time and the NUS (National Union of Students) was initially kept at arm's length.

The OfS sought a closer relationship with the publication of '*Students - Experts in their own experience*' (Office for Students, 2020) signalling an intent to learn more about the experiences of students. Its aim, to quality assure outcomes through regulation of the HE sector and engage (consult) with students to better understand how to do this (p.3). Central to this, the National Student Survey (NSS) as a large-scale quantitative tool targets final year undergraduate students gathering data on their experience of teaching, learning, assessment, and overall satisfaction. However, engaging students in a process of consultation alone regardless of scale is, as Ashwin & McVitty (2015) suggest, unlikely to lead to a noticeable transformation of experience. Relatedly, Klemencic (2015 & 2017) is concerned with the lack of student agency in the process leading to what Sabri (2011) identified as a diminished capacity to understand the complexity of the student experience. With a regulatory framework influencing institutional mindsets around engagement (Hayes, 2018) students are urged to engage in a tightly controlled process of consultation that represents only part of a whole.

In a review examining the reliability and validity of national surveys (UKES, NSS) designed to measure student engagement, Maskell & Collins (2017) also highlight flaws

in the system. The multifaceted nature of engagement is not represented by the data from these surveys thereby fundamentally weakening the core objective of the OfS strategy. Alongside the OfS, the Quality Assurance Agency (QAA, 2018, p.1), also has a remit to establish and maintain academic standards in the UK, making clear its expectation that HEIs should take deliberate steps to engage all students, individually and collectively, as partners in the assurance and enhancement of their educational experience.

Engagement is embroiled in a regulatory framework that seems far removed from the individual experience or interests of students. Zepke (2021, p.4) goes further by suggesting that engagement in this socio-political sense performs a controlling function, shaped by neoliberal ideals, more concerned with "shaping the norms of educational politics than impulses to critique the status quo." However, he also acknowledges how this political dimension is variously interpreted in the discourse, referring to Buckley's (2018) view of engagement as a participatory and democratic process. Yet, seen through this regulatory and socio-political filter, initiatives designed to engage students as partners in consultative or participatory exercises might also be viewed with caution. This might also lead us to question the "tactics" to encourage engagement defined by Trowler et al (2022) and consider power relations in such a scenario.

2.2.2 Partnership, power & agency

There is some consensus in the research literature in how student engagement continues to be harnessed by universities in the interests of strategic policy initiatives and that this agenda does not fully grasp the complexity of the student perspective. Certainly, the recent collection of work brought together by Lowe (2023) makes a robust case to advance what we know in the best interests of students. This builds on Grant's (2021) belief that embracing new power values and radical transparency can help to close the gap created by the insurgence of the regulatory framework and its hijacking of the student engagement agenda.

Work to bolster the student position and address power differentials is associated with the 'Student as Partners' (SaP) agenda. It is closely associated with the discourse of engagement and presents students as a more empowered stakeholder group (Gravett et al., 2019). This echoes Buckley's (2018) thoughts regarding engagement as a democratising socio-political construct with the capacity to foster an authentic dialogue and closer relationship with students. In this respect, SaP initiatives seek to enable student agency, and are built on values of respect, reciprocity and shared responsibilities (Cook-Sather, & Felton, 2017; Matthews, 2016).

The encouraging language of partnership is threaded throughout this discourse but as Lubicz-Nawrocka (2023) confirms, there are challenges here too. These not only relate to the type of questions, raised earlier regarding power positions and the nature of relationships inherent in the development of SaP policies (Matthews, 2016; Zepke, 2021; de Bie, 2022; Grant, 2021), but also the fundamental necessity of student participation in such initiatives.

This reconnects with the philosophical and theoretical rationale underpinning this research and the issues regarding how students are positioned and understood throughout their university experience. Essentially, SaP is representative of the "active, public and observable forms of participation favoured in the (dominant) ideology of student engagement" (Gourlay, 2015, p.3). In reality, *enabling student agency* becomes more akin to *encouraging participation* where behaviours not complying with expectations are seen as passive and undesirable (Gourlay, 2015).

Once again, the notion of agency is problematic here, it assumes engagement as being the sole privilege of individuals and their willingness to participate in activities convened in socially constructed scenarios. These scenarios are often pedagogical contexts such as curricular design and development, or educational co-inquiry projects (Bovill, Cook-Sather & Felten, 2011; Harrington et al., 2014; Bovill, 2017; de Bie, 2022) and in that sense agency is also envisaged as distributed and collaborative (Archer, 2007 in Gourlay, 2015, p.408).

The issue being that the status quo, or inertia affecting the student engagement discourse is reflected in the humanistic framing of these kinds of activities where social, cognitive and behavioural influences are readily acknowledged, but where temporal or physical spaces and the objects, resources and devices that constitute them are considered merely as an inert backdrop in the way described by Fenwick (2015) and Gourlay (2015, 2022).

This study has a specific interest in the pedagogical context, primarily with the nature of engagement at the micro-level, and with understanding how forces that act here influence the way in which individual students engage with learning. It builds on the psycho-social and socio-ecological perspectives of Zepke (2021) and is inspired by Gourlay's (2021, 2022) interpretation of posthumanism. It develops a perspective that evolves out of the student experience aiming for the kind of granular detail that exists in the daily lives of individuals. Crucially, it recognises that individuals are not exclusively engaged in learning, and that they are more than, or beyond students in keeping with the posthuman framing of Gourlay (2021).

In this sense, efforts to understand the nature of student experiences must seek to understand how the forces influencing this state lie beyond the individual, are entangled in the complexity of day to day and embedded in the social, material and digital dimensions of that existence. In the context of this philosophical position, the following sections examine how interrelated new-materialist perspectives are represented in HE research and literature helping to forge new ways of understanding.

2.3 Student Engagement: Conceptual Waypoints

Student engagement is one of the most discussed and researched aspects of Higher Education in the last four decades (Tight, 2020, p.689), but as Zepke (2018) suggests, something is missing. In that context, the discussion in this chapter acknowledges student engagement as a complex phenomenon shaped over time through research

interest, political agendas, macro level forces and strategic policy responses (Macfarlane & Tomlinson, 2017; Buckley, 2018). Despite shifts in how it has been conceptualised (Ashwin & McVitty, 2015; Baron & Corbin, 2012; Kahn, 2014; Kahu, 2013; Kahu & Nelson, 2018; Krause & Coates, 2008; Kuh, 2001; Westman & Bergmark, 2019; Zepke, 2019) and its continuing appeal across the HE sector (OfS, WONKHE), Zepke (2018) seems justified in his claims that a status quo still exists.

That engagement is so embedded in the lexicon of higher education and the student experience, efforts to fully understand it are limited by this close association. Seeing it in relation to institutional expectations, quality frameworks (NSS, TEF, UKES) or student data profiling inhibits efforts to fully engage with alternative ways of looking at engagement. This study seeks a new vantage point and underpinned by the rationale outlined in Chapter One aims to refresh understandings of engagement as part of the contemporary student experience by aligning it to sociomaterial and posthuman perspectives. In doing so, it engages with the ideas of Zepke (2018) and considers how a greater attention to learning and agency might shift the status quo in student engagement as it exists in Higher Education.

What follows is not an exhaustive account of the literature on student engagement, but an acknowledgement of broad developments in the field to further establish the context and build a case for this study. It draws on research originating in the USA, Australasia and the UK and in that sense reflects the global nature of the discourse establishes key conceptual waypoints. The discussion makes reference to a number of key literature reviews (Krause & Armitage, 2014; Tight, 2020; Trowler & Trowler, 2010; Wimpenny & Savin-Baden, 2013; Zepke, 2021; Zepke & Leach, 2010) as markers along that route.

Definitions & discourses

The reviews mentioned above each offer definitions of student engagement or summarise how it was framed by the literature at the time. In that way, they provide a useful means of tracking changes in the discourse, assessing where inertia might have

set in, their contribution to moving it forward, and how that creates opportunities for this research. The following discussion builds on the themes introduced in Chapter One.

Often referred to in subsequent literature, the definition offered by Trowler & Trowler (2010) reflects one interpretation of the key themes in the early research,

> *Student engagement is the investment of time, effort and other relevant resources by both students and their institutions intended to optimise the student experience and enhance the learning outcomes and development of students and the performance, and reputation of the institution.*
>
> *Trowler & Trowler (2010, p.6)*

The idea of students as active participants, in Trowler's definition, reflects the earlier thinking of Hu & Kuh (2002) and Coates (2008), both of which see engagement as being linked to an individual's active involvement in educationally purposeful activities. The notion of active involvement as a centrally important concept in the discourse of engagement can be traced back to Astin (1984) and through to the review by Krause and Armitage (2014, p.3),

> *Student engagement is a construct that facilitates examination of the relationship between students' learning outcomes and the quality and degree of their **involvement** with academic peers, teachers and wider communities, and with institutional processes and disciplinary learning.*

It also runs through the research perspectives seen in the conceptual organisation (Table 2.1) of the field by Zepke & Leach (2010). As the outcome of a synthesis of findings across more than ninety studies, their work (p.168) also accepted the definition of engagement by Chapman (2003) which made specific reference to cognitive investment and emotional commitment.

Research perspectives	Proposals for action
Motivation and agency (Engaged students are intrinsically motivated and want to exercise their agency)	1. Enhance students' self-belief 2. Enable students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives
Transactional engagement (Students and teachers engage with each other)	3. Recognize that teaching and teachers are central to engagement 4. Create learning that is active, collaborative and fosters learning relationships 5. Create educational experiences for students that are challenging, enriching and extend their academic abilities
Institutional support (Institutions provide an environment conducive to learning)	6. Ensure institutional cultures are welcoming to students from diverse backgrounds 7. Invest in a variety of support services 8. Adapt to changing student expectations
Active citizenship (Students and institutions work together to enable challenges to social beliefs and practices)	9. Enable students to become active citizens 10. Enable students to develop their social and cultural capital

Table 2.1: Conceptual organiser for student engagement (Zepke & Leach, 2010, p.169)

Despite a sense of shared responsibility and a recognition of the importance of relationships within and beyond the university, the persistent centrality of participation in the definitions is arguably an example of the inertia in the broad discourse of student engagement.

Taken together, these early studies envisage engagement as a feature of the contract negotiated between students and universities, a contract that Grant (2021) suggests needs renewal as universities evolve from 'old power' to 'new power' structures. Regardless, the institutional interest is in engagement as an antecedent of successful graduate outcomes, a means to bolster reputation across the sector and a performance indicator in strategic planning (Buckley, 2018; Macfarlane & Tomlinson, 2017; Milburn-Shaw & Walker, 2017). The student interest is less apparent, more often associated with requests for feedback via quantitative tools (NSS, UKES, Module Evaluation Surveys), attendance monitoring and committee representation, than a genuine 'seat at the table'.

The engagement agenda is also closely associated with the data burden (Youell, 2023) generated through institutional systems enabled by powerful digital technologies to

create 'data doubles' (Turkle, 1995; Zuboff, 2019) of students in the interests of strategic reporting.

The relationship between data and engagement is explored in more depth later in this chapter but it is the work of Wimpenny & Savin-Baden (2013) that returns us here to the interest of students. Their work is important in this respect for its attention to the student perspective and findings to suggest that engagement should primarily be seen through the filters of autonomy and agency at an individual level. It is a perspective that resonates with this study but the aim here is to understand more about the dynamics of agency not only in the context of long-established power structures but also in relation to complex sociomaterial relationships. These relationships exist in a context that extends beyond the immediacy of the university and recognise complexity across social, material and digital dimensions.   This is the crux of new materialism and the relational perspectives of higher education (Fenwick, 2015; Gamble, et al., 2019; Gourlay & Oliver, 2018; Lackovic, 2020; Taylor, 2018) influencing the direction of this research. These ideas offer an opportunity to shift the status quo (the inertia) surrounding participation as a central concern and acknowledge individual autonomy in that respect is influenced or mediated by the agency and interrelationality of other things and situations.

Gourlay (2015) begins to address this in her critique of the normative agenda associated with student engagement, describing the issue as the 'tyranny of participation', where in the interests of institutional gain, engagement is conceptually and practically restricted to pre-determined recognisable and measurable behaviours. In this scenario, clear expectations exist regarding how individuals should engage as 'model students' without accounting for the influence of contextual factors (Kahn, 2014; Wimpenny & Savin -Baden, 2013). Gourlay's (2015) perspective on the vitality of context is central to the questions she raises regarding student agency with respect to engagement and is considered throughout this chapter and in more depth in Chapter 3.

In the context of this study, three significant contributions to the discourse on student engagement precede the commentary presented by Gourlay (2015). Kahn's (2013) work is significant in that it interrupts the discourse of *student engagement for the general*

good with a view to establishing a more theoretical foundation and building a better understanding of how social factors influence cognitive and behavioural dimensions. Wimpenny & Savin-Baden (2013), already introduced above, deploy a Qualitative Research Synthesis (QRS) approach as a means of building understanding through data originating from more personalised perceptions of students rather than meta-analysis of quantitative studies. Lastly, Kahu (2013) makes an important contribution to the theorisation of student engagement by exploring four dominant research perspectives and defining a conceptual framework (Figure 2.1) to inform a coherent approach to subsequent research.
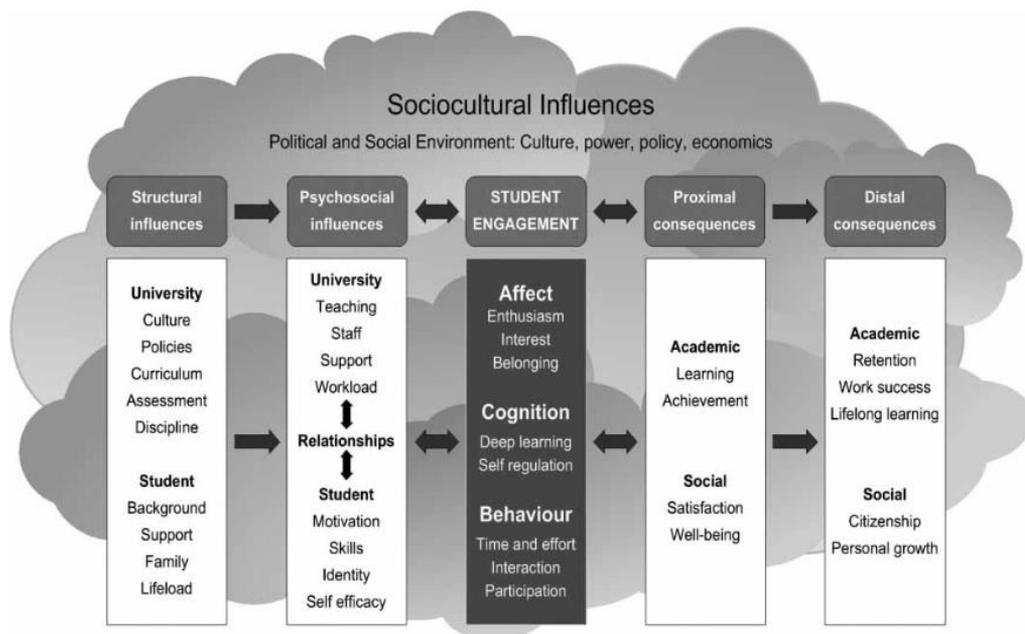
Figure 2.1:Conceptual framework of engagement, antecedents and consequences (from Kahu, 2013, p.766)

This framework (Figure 2.1), together with the studies of Kahn (2013), Wimpenny & Savin-Baden (2013) were particularly influential in the early stages of this research as they offered some clarity in an often overwhelming field and highlighted potential opportunities to contribute to it. My professional interest in the student learning experience and a firm belief that quantitative approaches were lacking in attempts to understand it, found me being easily lured by the idea of qualitative work to give me insight into that student perspective. However, I only began to fully grasp the

complexity of that ambition as I ventured further into the literature and discovered the critique of Kahu's (2013) framework and the subsequent response by Kahu & Nelson (2018); the Zepke-Trowler debate (Trowler, 2015; Zepke, 2014), Ashwin & McVitty's (2015) conceptual ground clearing and the new materialist perspectives of Gourlay (2015) and Fenwick (2015).

The themes emerging from this ongoing discourse helped to determine how this research aligned with what seemed to be a widening debate on student engagement. One that was developing a greater interest in the personal context of students, a growing concern for wellbeing and belonging (Baik et al., 2019; Geertshuis, 2019; Kahu & Nelson, 2018) and a drive to encourage students to work as partners with universities (Cook-Sather & Felton, 2017; Gravett, Kinchin & Winstone, 2020; Hill, Healey, West & Dery, 2021). These lines of inquiry developed amidst calls for a stronger qualitative response in the quest for more holistic views of student engagement (Tight, 2020) but have yet to consider the insight offered by sociomaterial perspectives. In a marketised sector dominated by an agenda committed to the promise of data led insights (Dyer, Jackson & Livesey, 2018; Shacklock, 2016), the conditions remain challenging for work seeking to find new perspectives.

Over the course of this thesis, I aim to show how new materialist and relational perspectives in Higher Education research (Fenwick, 2015; Gourlay, 2015; Lackovic & Olteanu, 2023) have the potential to enhance existing approaches to understanding student engagement. In doing so it helps to build a robust case for the direction this study takes, clarify its position within the broader conceptual space and lay the foundations for a new analytical mechanism (Inquiry Graphics) to offer fresh insight into the contemporary student experience.

Ashwin & McVitty's (2015) critique of Kahu's (2013) model helped to further clarify the focus of this research. Their suggestion concerned the need to explicitly identify the 'object of engagement' and account for more contextual factors. Kahu & Nelson's (2018) response to the critique is the refined conceptual framework in Figure 2.2.
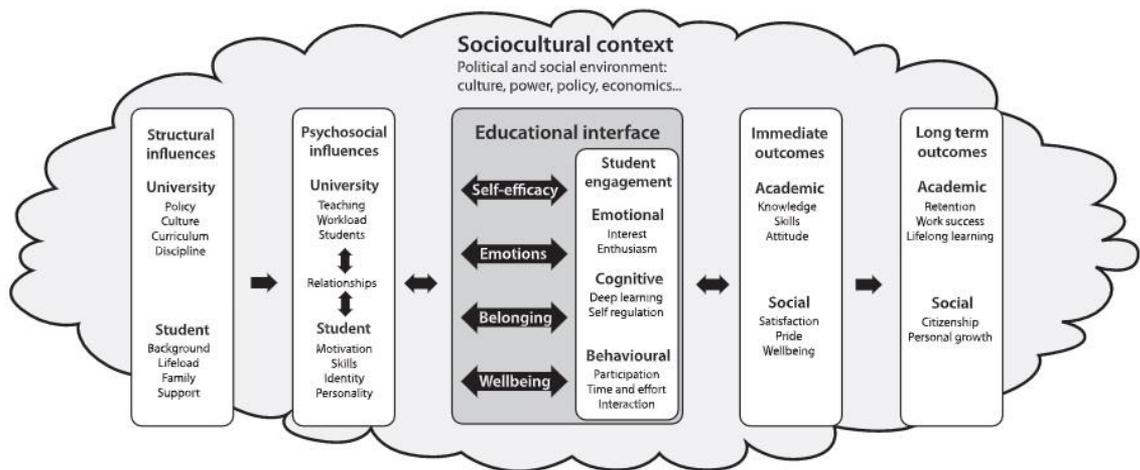
Figure 2.2: Refined conceptual framework of student engagement incorporating the educational interface (Kahu & Nelson, 2018, p.64)

This reconceptualisation, together with the hierarchy of engagement model (Figure 1.2) defined by Ashwin & McVitty (2015, p.345) helped to refine the focus of this study in two ways. Firstly, that engagement with learning should be a primary concern and secondly that the influence of context should be factored into the insights gained.

More recently, work by Trowler et al (2022) provided an opportunity to reflect on the direction of this research and the sociomaterial perspective it adopts. Their work represents a further development of Kahu & Nelson's (2018) conceptualisation as they aim to foreground "a more contextual understanding of student engagement in the context of Higher Education" (p.774). In doing so, they offer the engagement interface (Figure 2.3) as an enhanced version of Kahu & Nelson's model (Figure 2.2) introducing the notion of pathways and tactics to encourage and engender engagement.
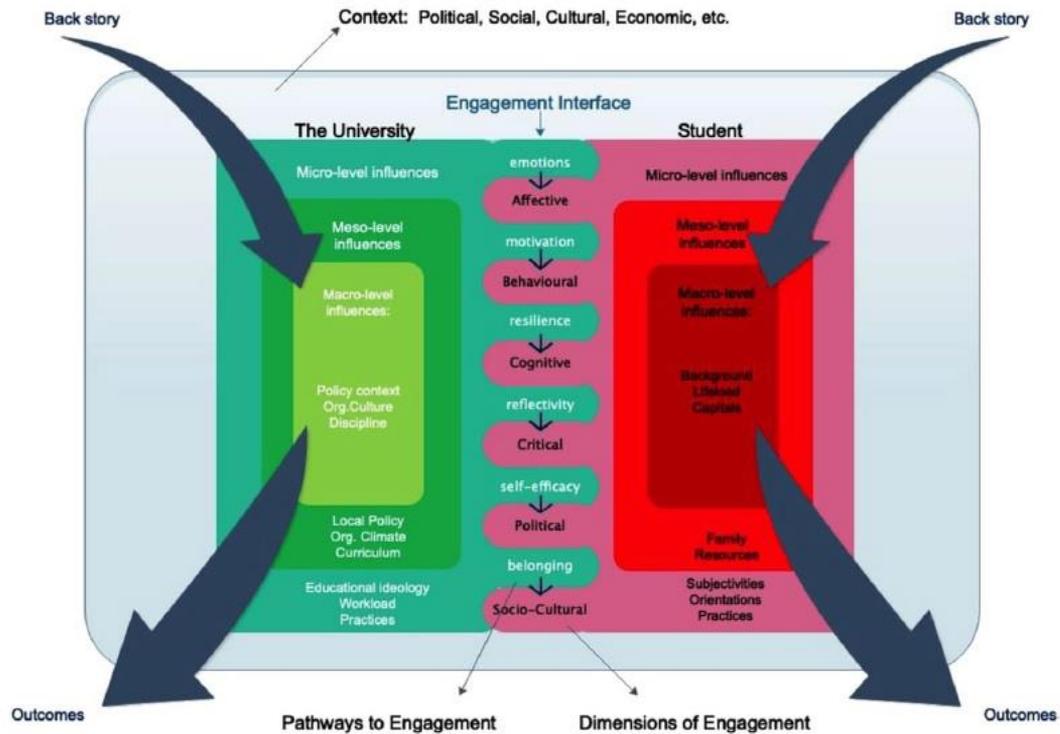
Figure 2.3:The Engagement Interface (Trowler et al., 2022, p.769)

The perspective offered by Trowler et al (2022) is useful because it further acknowledges the influence of context on student engagement and therefore its value as a locus of inquiry. But, in not explicitly recognising the sociomaterial perspective it leaves a gap in the way in which context is accounted for and consequently the ways in which it influences engagement. Fenwick (2015) reminds us that context matters and without a sense of the vitality and agency of material, non-human aspects of that context, understanding is weakened and entrenched practices are sustained.

Collectively, and despite a primarily humanistic perspective the work of Ashwin & McVitty (2015), Kahu & Nelson (2018) and Trowler et al (2022) helps to shift attention beyond a concern for easily quantifiable engagement behaviours associated with early notions of participation and begins to foreground less visible dimensions. They recognise the influence of complex interrelationships between sociocultural contexts and institutional structures, and build on ideas introduced by Fredricks et al., (2004) that considered engagement as a student's behavioural, emotional, and cognitive

connection to their learning. However, the influence of distributed agencies across social, material, and digital dimensions is left unaddressed.

2.4 Summary

Student engagement has been described (Milburn-Shaw & Walker, 2017; Zepke, 2021) as having an ambiguous or nebulous quality that inhibits consensus and understanding. The conceptual models referred to above (Kahu, 2013; Ashwin & McVitty, 2015; Kahu & Nelson, 2018; Trowler et al, 2022) are useful in that respect as frameworks for capturing the complexity and introducing some clarity of thought regarding engagement. The sociomaterial model of student engagement introduced in Chapter 6 of this study adopts a similar approach and builds on that series of work. Central to the models above and taken forward into the new interpretation are the following key elements:

- the idea that engagement is not a fixed construct, but one influenced by prevailing conditions.
- engagement as: a complex and multi-dimensional phenomenon
  : being embedded in diverse student experiences
  : a situated phenomenon (at the interface)

These elements are recognisable in the sociomaterial model that is an outcome of this study but are altered by the meta-approach and theoretical lens developed by the study.

Whereas the models presented by Kahu (2013), Kahu & Nelson (2018) and Trowler et al (2022) have no explicit engagement focus, this research has a primary concern for *engagement with learning*, being guided by Ashwin & McVitty's (2015) hierarchical model and their notion of *engagement as the formation of understanding*.

The concept of *interface* is useful as it supports the idea that engagement with learning *happens* somewhere and is situated in that sense. However, in the models described above the interface can be imagined as a relatively fixed, structural, or institutional concept where engagement occurs or might be encouraged in relation to predetermined criteria. This research develops the idea of environment or lifeworld

(Habermas in Heath, 2011) in the same manner as *interface* as a way to account for the complexity of a multimodal contemporary student experience. In these environments engagement is forged and realised through complex interrelationships not limited to those between student/university or social/cultural/political frameworks but extending to the influence and agency of physical spaces, material objects and the affordances of technology.

Chapter 3: Literature Review - Developing a sociomaterial approach to student engagement.

3.1 Theoretical origins of sociomateriality and new materialism

In the realm of student engagement research, sociomateriality and new materialist perspectives represent novel, and perhaps unfamiliar ideas likely to generate a degree of scepticism from the established mainstream community. In that respect there is an obligation for this new research to bolster its position by acknowledging its theoretical pedigree and to briefly consider the genealogy of the sociomaterial.

Fenwick et al (2011) argue for a broader perspective on the nature of learning, away from long established ideas that foreground cognitive processing and sociocultural perspectives. The "defining parameters of what it means to learn" (p.iv) have shifted in what Lackovic (2020) describes as an increasingly multimodal student experience, that demands an appreciation of learning through a material lens. Key to this is the notion of entanglement and how Fenwick et al (2011, p.iv) suggest the term sociomaterial defines a material world entangled with "social relations and human intensities". Their work builds on Orlikowski's (2007) earlier view of sociomateriality as "the constitutive entanglement of the social and the material in everyday organisational life" (p.1438), and therefore the notion of university as a learning organisation.

Importantly, as Jarzabkowski & Pinch (2013, p.579) suggest, sociomateriality is more than a fascination with the 'things' that shape or are deployed within human action and is concerned with understanding how human bodies, spatial arrangements, physical objects, and technologies are entangled with language, interaction, and practices in the doing of activities.

In the context of education, which Fenwick et al (2011) associate with organised and intentional activity to promote learning, they argue that all scenarios from campus-based classroom settings to technology mediated distant scenarios are entangled with material practice, physical objects, nature, space and time. This notion of education is

central to this study and its interest in student engagement with learning, but that concern also extends beyond formal, organised activities to explore the sociomateriality of informal, incidental, and individual learning.

The origins of this sociomaterial perspective can be traced back to and have been influenced by "a range of theoretical families including Actor-Network Theory, Sociotechnical Studies, Complexity Theory, new feminist materialisms, poststructural geographies and more", (Fenwick, 2015, p.83). Cultural historical activity theory (CHAT) and spatiality theories were also included by Fenwick et al (2011) as theoretical and research arenas for sociomaterial approaches. Their application of 'arena' as "a site of contestation and performance of ideas" (p.xi) is also reflected in the more recent description of sociomaterial approaches by Psaros (2022, p.828) as a "loose collection of ideas" sharing common ideas without representing a homogenous paradigm. The fundamental premise across these sites of inquiry is that social phenomena and material forces are entangled and act together to constitute everyday practices (Decuypere & Simons, 2016; Fenwick, 2015; Sorenson, 2009).

As closely related concepts, Actor-Network Theory (ANT) and sociomateriality seek to understand how social phenomena are shaped through complex interactions between humans and non-human actors. Outlining the central tenets of ANT, Bencherki (2017) positions it as a rigorous approach to social inquiry emerging as an alternative social theory from the work of Latour and Woolgar (1979). Picking up on the term 'actant', used by Latour and Woolgar, Bencherki further suggests it is an idea borrowed from the narrative theorist Greimas and posits "the ability to act is not a feature of one's nature (i.e., being a human, an object, or anything else), but rather a relational feature... an actant is anything that makes a difference in a situation" (p.20).

This logic provides alternative vantage points from which to 'see' student engagement. Engagement in a lecture theatre scenario is not therefore a sole feature of individual, inherent capacity but a reflection of this capacity altered by complex relationships in that space, at that time. Questions of engagement become questions of 'What are the

things here that make the difference?', 'What objects, relationships, values, processes etc intra-act act to create the conditions for engagement to be constituted?'. It extends to other scenarios, such as individual, personal study spaces, online synchronous or asynchronous activity and informal, unorganised instances where such questions can help guard against assumptions made about learning and lead to new insights into the agency and influence of material relations.

Nespor's (2003) analysis of student learning experiences as networks and trajectories can be appreciated from this vantage point as can the relationship between ANT and sociomateriality and the shared focus on understanding how the entanglement of human and non-human actors in shaping social life. However, whereas ANT sees this as a coming together of heterogenous networks and actors, sociomateriality emphasises the fundamental inseparability of social and material elements. Despite this difference, the both perspectives are rooted in the vitality of materiality, and significant contributions to this shift in educational analysis (Fenwick et al, 2011).

Further, Fenwick et al (2011) describe the theoretical and practical turn to matter championed by Sorenson (2009) and Bennett (2010) as a commitment in educational research to look beyond human intention and engage with new ways of appreciating the complexity of learning. Acknowledging how such practices are shaped through dynamic materialising forces, exploring the agency of assemblages, and recognising the vitality of materiality are core principles of sociomaterial analysis variously applied through approaches such as ANT, CHAT or Complexity Theory. Collectively they have also become associated with posthumanist fields of thought and more recently been related to new materialist ontology by Fox (2023). The four themes he defines as being central to new materialism are:

- Materialism: as a focus on matter rather than text;
- Relationality: bodies and matter are not fixed, but relational and context dependent;
- Post-anthropocentrism: human agency is de-privileged, more-than-human is acknowledged;
- Monism: ideas cut across nature/culture, mind/matter dualisms.

The sociomaterial perspective is intertwined with these themes and as Orlikowski (2007, p.1437) argues, rather than privileging either human or material entities, or linking them through a form of mutual reciprocation, it is founded on the notion of there being no social that is not also material, and no material that is not also social.

Researchers and scholars working with these ideas have collectively shaped them as new materialism, with Fox (2023) returning to Latour as a founder of the notion of agency not being limited to humans. Presenting the social world as a more-than human assemblage has created the impetus to study the 'actor network', understand the nature of social and material associations, and how they influence practice. Sencindiver (2017) describes new materialism as a relatively recent interdisciplinary, theoretical, and politically committed field of inquiry spearheaded by the work of Barad (Complexity Theory, Agential Realism) and Braidotti (Feminist Theory, Nomadism, Posthumanism). Fenwick et al (2011) acknowledge the sociomaterial in these perspectives and further trace its lineage to the materialist feminist work of Hennessey (1993), the material conceptions of Deleuze and Guattari (1987) and the influence of Harraway's (1991) feminist cyborg analysis.

Applied in educational settings "attention is drawn to the relationships among learners and the environment" (Fenwick et al, 2011, p.28) where actors, phenomena and events are mutually dependent and mutually constitutive. Fenwick (2015) continues to call for greater recognition of how materials actively configure educational practice and knowing and in answer to that, this study embeds itself in the materiality of student experiences to understand how engagement evolves.

3.2 A relational Higher Education: Encompassing sociomateriality.

In its latest form, the concept of relational Higher Education encompasses how knowledge and associated student experiences relate to social as well as environmental (material) and technological interactions, interdependences and dynamics (Lackovic and Olteanu, 2023). Sociomaterial approaches to HE that include environmental materiality as an integral part of learning experiences can be observed as "belonging"

to this larger, meta framework of relational Higher Education, which calls for a relational turn in the tertiary educational space (ibid.). In this thesis, I focus on sociomateriality that can be observed as closely related to and being a constituting part of the latest approach to relational Higher Education as proposed by Lackovic and Olteanu (2023).

Relational education builds on relational pedagogies developed around the values of care and caring (Noddings, 2007) placing social relations and relationships at the centre of student experiences and specifically focusing on teacher-student relationships. Work on relational pedagogy has explored relationships at school level (Bingham & Sidorkin, 2004), and in Higher Education the work on relational education and pedagogy has more recently highlighted teacher-student relationships (Bovill, 2020). However, an inclusion of materiality through the approaches such as "pedagogies of mattering" has also been introduced in the context of Higher Education (Gravett et al., 2021). Decuypere & Simons (2016, p.373) suggest that "sociomaterial studies operate in a relational framework" and further that relationality has a concern not only for the active role that human and non-human entities play but also with the dynamic nature of relationships between them. Relational thinking, according to Decuypere & Simons (2016, p.374) "is centrally concerned with settings in which actors relate with each other and in which, as a result, a specific way of doing things – a practice – emerges that is constantly in the making."

Where such practice emerges, Lackovic & Olteanu (2023, p.8) see knowledge being created as the result of complex relations that constitute the environment. Importantly, in the context of these relations, the idea of reciprocity, dialogue, and mutual respect extends beyond human-to-human interactions to include material and digital entities (Lackovic and Olteanu, 2023). These interactions constitute the messiness of student lives, the diversity of experience and are not easily accounted for by long established constructs of student engagement. Whereas HE systems seek to standardise and quantify experiences, relational approaches see these as elusive and troublesome goals.

The relational process in Higher Education is considered by Gravett et al (2021) to support a "pedagogy of mattering", recognising flux, uncertainty and the significance of nurturing positive conditions and learning relationships. Crucially, these pedagogies need to involve nonhuman agents in a consideration of "how educationally engaged human relationships are entangled with the spaces, places, contexts and environments with which they occur" (ibid, p1).

Lackovic & Olteanu (2023) develop this idea further and define the three dimensions of relationality in how HE knowledge should be analysed, understood and enacted through integrative multimodal pedagogies. These are outlined below:

- *Social relationality* builds on the pedagogy of care and relational sociology, countering humanist normative forces and individualistic values with a concern for *self* but always in relation to others (Self-Other).

- *Environmental relationality* involves how knowledge practices relate to matter and mattering that extends beyond human into the complexities of the environment, reflecting the ideas of Gravett et al. (2021) and biosemiotics.

- *Digital relationality* includes digital technologies as distinct mediators and integrated forced in knowledge growth. As both tangible/physical and non-physical entities they extend sensory and experiential modalities of learning and living, facilitate connectivity and communication in our contemporary life.

Following this proposal, a relational, sociomaterial and multimodal meta-approach to HE is adopted, as illustrated in Figure 3.1 that summarises key modalities of a relational Higher Education enacted and researched through multimodal methods. The model below will serve as the basis for the new sociomaterial model of student engagement presented in Chapter 6.
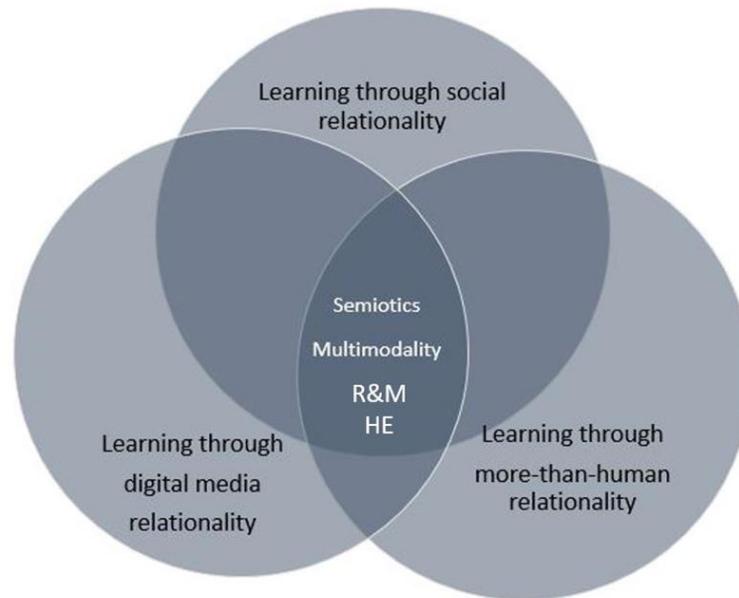
Figure 3.1:A relational conceptualisation of Higher Education (from Lackovic & Olteanu, 2023, p.6)

The arguments presented by Lackovic and Olteanu (2023) are useful here to help map the field of sociomaterial HE to a relational view of student engagement and knowledge practices that acknowledge the importance and presence of material forces intertwined with social and learning practices. The thesis does not go into the detail of all the underpinning theorisations and concepts presented in their work but for the purposes of this research, the following theoretical principles are highlighted:

1) **Peircean Semiotics**

    The key element of Peirce's semiotic theory is a triadic notion of signs and communication and therefore learning as relational entities. A sign being a triadic entity as it is always something (an expression) that relates to something else it represents to the mind that interprets it.

    Other central relational concepts in Peirce's extensive writings are synechism, or the constant growth and development of knowledge towards an imagined final "truth", and "agapism", or love and compassion as driving forces of social and knowledge evolution. Importantly, the thesis adopts the approach of "Inquiry Graphics", explained in the final section in this chapter, and an Inquiry Graphics

Analysis (IGA) methodology, which is a "translation" of Peirce's triadic sign for the purpose of multimodal and image-based reflection, through creative and critical semiotic analysis.

As a branch of Peircean semiotics, **biosemiotics**, is a development of Peirce's semiotics in relation to meaning making as environmentally embedded. In that sense, the concept of *Umwelt* is useful here to signal how meanings are made at the intersection of different worlds and worldviews, those of humans and other living entities, in an environmental space. This concept, although not directly applied in the thesis, informs the concept of relational Higher Education as a complex and dynamic environmental experience, an idea upheld throughout the thesis.

2) **Relational Sociology**

Builds on the following key aspects that resonate to a good extent with new material and posthuman approaches: rejection of modern dualism (e.g. body-mind, abstract-concrete), a focus on the processual nature of thinking, therefore phenomena and experiences, interdependency (between minds and the environment), and co-production (of knowledge), which is reflected in my Inquiry Graphics conversations with the students in Phase One and Two of this research, as detailed later.

3) **Identity +**

The multimodal conceptualisation of knowledge practices and identity as an **Identity +** that argues to acknowledge the complexity and nuances of communication and individual and group identities across various modalities of being and doing. At its core, an **Identity +** resembles the position of intersectionality, arguing that understanding identity as such a layered entity is essential in learning and socially just futures. In this study, although **Identity +** is not directly explored, student narratives reflect their complex identities and variations of interpreting one key concept – that of student engagement with learning.

Accepting knowledge and pedagogy as multimodal and relational strengthens the notion of engagement as an inseparable process and creates new opportunities to see how learning is experienced in everyday life. As Gravett et al (2021, p.13) suggest, new relational approaches to Higher Education "illuminate how teaching and learning relations are entangled with matters of power, and how inequalities are produced through the relations of bodies, spaces and materialities".

Gaining an insight into engagement in this context requires an approach capable of abstracting and foregrounding complex relationships as they occur across the social, material, and digital assemblage and analysing how they influence student learning. Drawing on these ideas, this study explores student engagement from a relational, sociomaterial perspective and considers it an emergent process shaped through intricate interrelationships that play out in the context of students' university experience. This line of inquiry reflects a relational response to the normative agendas associated with student engagement, the impact of marketisation in Higher Education and the marginalisation of care (Su & Wood, 2023). Relational perspectives and pedagogies offer an antidote to such an "uncaring neoliberal, competitive and individualising HE system" (Gravett et al, 2021, p.1) and have the potential to enhance the student experience.

3.3 Sociomateriality in/of Higher Education

Sociomateriality, potentially being part of a triadic meta conceptualisation of relational Higher Education as posited earlier, stems from the new materialist coalition outlined by Carstens (2019) and Sojot (2020) that critiques anthropocentrism across disciplines and acknowledges the vitality of relationships between human and non-human entities. Hultin (2019, p.91) draws on Barad (2007) suggesting that the underlying assumption of a sociomaterial relational approach is that,

> "… there are no beings, social or material, no subjects and objects, no research and researched. Rather, all assumed actors, entities and categories are understood as relational enactments or material configurations."

These approaches are often aligned with posthumanism in their concern for things other than human agency, although Sojot (2020, p.3) notes a subtle difference where "new materialism emphasizes matter, while posthumanism focuses on epistemological imaginings for other subjectivities."

The sociomaterial perspective looks beyond the individual and seeks to understand experiences and relationships between people and their material surroundings (Fenwick, 2015). The dynamic, multimodal nature of contemporary culture reflected in the university experience creates a complex mix of contextual conditions that are explored by this research to understand how they influence the ways in which students engage with learning. The assertion that context matters, that agency is distributed across social, material, and digital entities is central to this study. In this kind of scenario, knowledge is distributed across a complex network of human and non-human agents and is shaped by the dynamic processes of relational materiality (Fenwick et al., 2011; Sorensen, 2009).

Similarly, Taylor et al (2022) argue against the ontological positioning of these objects or 'things' as inert and insist that we "attend to the quiet but powerful work they do" (p.206). These represent new materialist perspectives concerned with sociomaterial, embodied entanglements and the complexity of human and nonhuman agency.

Accepting sociomateriality as part of this complex philosophical and theoretical landscape offers new ways of understanding experiences and relationships between people and their material surroundings. Described by Fenwick & Edwards (2016) as a philosophical perspective rather than a theory, sociomateriality supports critical reflection and offers ways to challenge Higher Education practice. With a focus on the complex interrelationship between social and material (and digital) dimensions it is a means to appreciate the dynamics of teaching, learning and institutional structures.

Sociomaterial perspectives in Higher Education research have been associated with inquiries into learning environments (Acton, 2017; Acton & Halbert, 2018; Griffiths et al, 2021; Lamb, 2019; Tietjen et al, 2023), professional learning (Barry, 2018; Fenwick & Nerland, 2018), pedagogy/teaching and learning practices (Fenwick & Edwards, 2016;

Fenwick & Landri, 2012; Hopwood et al 2016; Lackovic & Popova, 2021) and digital technologies, literacies and learning (Gourlay & Oliver, 2013; Gourlay et al 2015; Gourlay, 2022; Lamb, 2023; Mora et al, 2021). This is no more than a brief indication of how sociomateriality has influenced research across diverse fields and as Fenwick (2015) reminds us, these resist the idea of a universal theory of sociomateriality and instead represent a range of approaches with key commonalities. Notably, in the context of this study that material and social forces are implicated in shaping day-to-day experiences, and the uncertainty of everyday life is fundamental to emerging practices (Fenwick, 2015). Moreover, they represent approaches that offer creative opportunities to foreground and analyse these materialising forces (Hultin, 2019) and avenues for interdisciplinary collaboration.

That said, sociomateriality has not yet been substantially applied to research into student engagement with learning although prominent contributions by Fenwick (2015) and Gourlay (2015, 2017) are key to the evolving discourse and consequently influence the direction this study takes. Gourlay (2015, p.402) argues for Higher Education to be envisaged as situated social practice where engagement and learning are "constantly emergent, contingent and restless." Engagement as a function of highly negotiated, often compromised day-to-day practices, challenges normative approaches and institutional efforts to easily account for it in what Gourlay terms the 'tyranny of participation'.

These ideas are reflected in the work of Decuypere & Simons (2016) and together represent a movement to broaden the focus of inquiry and the burden of responsibility beyond the student individual. In this sense, Fenwick (2015, p.84) argues that although the influence of contextual factors on learning is widely acknowledged, the vitality of context is routinely overlooked in situations where materials are relegated to "the backdrop for human action, dismissed in a preoccupation with consciousness and cognition, or relegated to brute tools subordinated to human intention and design." Similarly, Decuypere & Simons (2016) suggest that material dimensions of educational practice have been ignored in conventional research which has traditionally placed human subjects in centre-stage. Beyond acknowledging the materiality and agency of

context, sociomaterial approaches offer ways to foreground and analyse the complex interrelationships or what Fenwick (2015, p.85) describes as "patterns of materiality infused with affect".

These views resonate with this study and its quest for a more holistic understanding of the student experience by looking beyond the individual to consider how engagement is constituted through relationships with 'others'. Sociomaterial otherness in the context of this study extends to people (lecturers, students, family etc), material environments (campus/domestic spaces), technologies (digital spaces, hardware devices, networked connectivity) and the complex relations that exist across this assemblage. In this context, Inquiry Graphics Analysis (Lackovic, 2020) is deployed as a complimentary theoretical and methodological framework to establish how these interrelationships influence student engagement with learning.

Gourlay (2017) uses sociomateriality to explore a related notion in a critique of student engagement as it is framed in Higher Education policy and how this values 'learnification' over pedagogy. Associated with the commodification of learning and associated performativity agenda in a highly marketised system (Buckley, 2018) this recognises some forms of engagement, marginalises others and reflects the prevailing conditions in which this study is envisaged.

Lueg et al (2023) question the purpose of Higher Education itself, employing narrative sociomateriality in a case study examining three institutional level activities: an information day for prospective students, a video of a campus tour, and on-campus signage. Analysis reveals how a pre-enrolment narrative of an educational, person-centric and knowledge-centric journey conflicts with a post-enrolment market-centred narrative that narrows and commodifies the university experience. Interestingly, their work shows how sociomateriality can be brought together with other complementary theoretical approaches to explore issues of agency and structure as they are experienced and perceived by students.

Other, recent notable examples of sociomateriality being critically applied in Higher Education and research practices in this context include Hultin (2019) and Hultin &

Introna (2019). They argue that materiality is implicated in experience to the point where "subject and object, structure and agency, body and mind, knower and known, are assumed to be ontologically inseparable" (Hultin, 2019, p.91). This inseparability is defined through their use of the term 'sociomateriality' as opposed to 'sociomaterial' as they argue that each leads to differences in the kind of knowledge produced about a given situation. Such a distinction is particularly useful in this sociomaterial study of student engagement envisaged as a relational, performative phenomenon rather than a preconceived, fixed entity that exists as a behaviour to be adopted.

The idea of inseparability identified by Hultin (2019) is also reflected in research by Cooren (2020) considering the applicability of sociomateriality in organisation studies and in which he disputes the use of 'entanglement' as a widely used metaphor. Cooren (2020) posits that it reinforces the idea of materiality and sociality being essentially separate from each other when they should be considered as relative properties of the same existence. In this sense, the notion of matter extends beyond physical, tangible entities that can be seen or touched to include thoughts, interactions and discourse. Cooren develops his point further by considering the function of materiality in communication, arguing that a process of materialization must occur for it to be successful, that it must communicate into something and transform into meaning. This resonates with Peircean semiotics (Lackovic, 2020), multimodality and relational approaches (Lackovic & Olteanu, 2023) to understanding communication and meaning. As such it establishes the links between new materialist approaches in the context of this study and the way in which agency and materiality come together to shape student engagement.

How are we to view materiality and its agency? Braidotti (2019, p.31) presents a convincing case for 'critical posthumanities' as a theoretical framework to acknowledge complexity, multimodality, and the blurring of boundaries between the digital, physical and biological. Susen (2022) adds to this, suggesting that critical posthumanities are important in thematic, methodological, conceptual, and political terms which also aligns with Haraway's (2016) posthumanist materialist ontology referred to by Taylor et al

(2022, p.206). The latter (p.207) calling on Bennett's (2010) conception of 'thing-power' to posit that,

> *Agency is not a matter of individual human will but an emergent process of co-constitutive acts arising from objects-bodies-spaces-temporal relations. Thing-power unleashes potential for new insights in educational research.*

Susen (2022) sees this as engaging with objects (including digital forces) as serious agents in the process of collective thinking and knowing, rejecting the concept of human life as detached from its environmental foundations and advocating the exploration of multi-layered interdependent relations.

The influential forces at work here are more than institutional, sociocultural, or political and evolve from the intra-action between students, material objects, and the physical and digital spaces that constitute not only the university experience but also multiple domestic and social contexts. This position impacts the truth claims made by quantitative approaches or data driven systems that rely on normative assumptions about engagement, reduce it to easily consumable information and fail to recognise it as a constantly emergent and dynamic practice (Fenwick, 2015; Gourlay, 2015).

On that basis, I suggest that truth regarding student engagement becomes accessible, not through regularising systems but, by paying attention to the fine detail, the gritty and elusive day-to-day reality where meaning is made through relationships forged in the coming together of social, material, and digital agents, which also reflects a meta-approach to relational higher education (Lackovic and Olteanu, 2023).

The challenge resulting from this position was to consider a robust means of gaining insight to such a complex scenario. Focusing on the experience of students as a means of enhancing understanding of engagement with learning requires an interpretivist approach that accepts the inherent subjectivity and value-mediated nature of the findings (Cohen et al, 2018). Doing this at the same time as maintaining a robust theoretical perspective is what Zepke (2018, p.436) describes as a 'wicked problem'. However, Baynes (2017, p.79) is a useful ally here, in his exploration of interpretivism in social research, making reference to Taylor (1985) to support an argument that social

practices must be understood from the perspectives of the participants themselves. He suggests that this can only come about through a grasp of the experiential meanings of those individuals and reinforces his position with reference to Gertz's (2000) contention that what is most central to the objects of study is how the world is for those participating in it. This is a little tricky in the context of this study as it reinforces a humanist, individualist perspective that clashes with the relational ontological perspective outlined above.

As a way of resolving the tension, I engaged the ideas associated with critical theory and the perspectives that Bayne (2015) and Fuchs (2016) offered on the work of Habermas. The notion of 'lifeworld' as a contextual concept is useful here because it recognises embeddedness and the give and take of multiple agencies. Providing a critical interpretative model, it acknowledges the value of hermeneutics as a way of the researcher being able to understand situations through the eyes of participants (Cohen et al, 2018. p.52). Integrating hermeneutics with a relational, sociomaterial perspective requires a methodological approach capable of viewing engagement through the eyes of the student to foreground and appreciate the agency of things across the social, material, and digital dimensions. Before I introduce the Inquiry Graphics approach and Inquiry Graphics Analysis (Lackovic, 2020) as a sociomaterial, multimodal and relational strategy fully suited to meeting this challenge, I'll first tackle the notion of "learning" in the construct of "engagement with learning", highlighting its sociomaterial character, followed by the consideration of multimodal and posthuman learning, and what kind of approach to the digital I adopt.

3.4 Perspectives on learning: What is learning in "student engagement with learning"?

As a problematic and elusive concept (Alexander et al., 2009) learning can be viewed as both a process and a product which aligns neatly with institutional efforts to control, monitor and measure it through outcome data and engagement indicators. Attempts to define it vary widely across disciplines and contexts (Barron et al., 2015), but at a fundamental level, there is some consensus regarding its relationship with first-hand

experience (De Houwer et al., 2013 p.631). Schunk (2012, p.4) recognises experience as the antecedent of learning and it features as a core aspect of classic theories (Behaviourism, Cognitivism and Constructivism) that have over time offered social and psychological perspectives on how humans learn.

Accepting the contribution of these well-established perspectives, this study has a central interest in the relationship between experience and learning in the context of Higher Education. As a transformative process, the university experience undoubtedly changes what students know (Bingham & Conner, 2015) but understanding the relationship between the reality of their day to day lives and how they engage in learning is a complex matter. This research considers the student experience as a sociomaterial phenomenon and posits that engagement is transient, reactive in response to changing conditions and therefore not easily measured or harnessed in the name of strategic policy.

This conflicts to a degree with the process and product conceptualisation of learning associated with the student journey and student success agendas in Higher Education. Ostensibly, these initiatives have a primary concern for learning but are models generally derived from customer experience mapping in marketing practise (Rains, 2017). It is unsurprising therefore that they become aligned more to faculty support and administration services than learning itself and act on behalf of institutional policy in the quest to bolster metrics and key performance indicators.

However, there are examples across the sector where these policies have been reframed in favour of learning with subtle shifts in perspective opening up the kinds of possibilities exemplified by the Elevate initiative (University of Sheffield, 2022). In these scenarios, approaches to learning aim to be holistic, inclusive and recognise the centrality of experience. Consequently, engagement with learning is likely to extend across disciplines, beyond the boundaries of modularised programmes and has the potential to counter some of the issues around the commodification of knowledge and learning (Silverio et al., 2021; Tomlinson & Watermeyer, 2022). These issues stem from

what Franklin-Phipps & Rath (2018, p.270) suggest, is the linear logic of a marketised system where "corporatizing forces of neoliberalism [that] insist learning outcomes are the equivalent of knowledge". This study resists the temptation of these associations and posits that to fully appreciate student engagement a more expansive view of how students' knowledge is a function of complex interrelationships not confined to activity scheduled by the university.

Further, Beck (2013) and Grant (2021) raise pertinent questions about whose knowledge and what knowledge is shared through the curriculum that universities offer. The power dynamic they refer to has fundamental implications for student engagement as it creates a differential between types of knowledge, the value attributed to it and what the accepted approaches to learning are in a given discipline. Notions of engagement are not unaffected by such things where learning takes place at the intersection of long-established institutional structures, political and cultural design, and the expectations and experience of students. It is a complicated scenario where learning is more than a concept or activity, it is imbued with complexity and in the search for an understanding of engagement, lies beyond scientific measurement and interpretation.

In the search for new understanding, Braidotti's (2016, p.10) conviction that we cannot solve problems by using the same kind of thinking we used when we created them seems fitting advice, and it is with that in mind that we continue to build a case for this research.

Therefore, in summary, learning is defined from a relational perspective as a process of changing one's prior knowledge and identity through sociomaterial and multimodal experiences and artefacts (signs) addressing social, curricular, environmental, and digital relations and the dynamics concerning higher education.

3.4.1 Engagement and Learning

Examining established notions of student engagement, Gourlay (2017, p.3) questioned how it had been associated with narrow definitions of learning, making particular reference to Coates' (2007) emphasis on the active and collaborative state. Compliance with such a widely accepted norm, leads to the problematic categorisation of student engagement types (Coates, 2007; Crabtree, 2020) and positions the solo, passive student as an individual who is seen to be not engaged and therefore unlikely to meet expectations. This distinction is captured and amplified by data profiling tools such as StREAM (Solutionpath) linked to electronic learning platforms (Blackboard, Moodle) and student records systems (SITS, SAMS, eVision). Students' digital footprints become proxies for engagement and learning, providing some indication of where they might be interacting with university systems, but fall short of providing the much-needed insights this research offers.

The idea of 'active student engagement' influences policy, practice and pedagogy in Higher Education and, as outlined previously is central to the methodology underpinning sector level surveys such as the NSS and UKES. This mainstream position is problematic (Gourlay, 2017) because it foregrounds active involvement to the exclusion of other states of learning and reinforces simplistic binary states of engagement/non-engagement. Giving value to a particular mode of learning where active participation is seen as a fundamental component limits the degree to which we can grasp the complexity of engagement and alienates those with other preferences.

This position is also illustrated by Tagg's (2019, p.xxv) suggestion that the immediate cause of learning is what the learner does, where the challenge then becomes how you get the learner to do that, to make the choices that lead to learning and do the work that learning entails. It seems reminiscent of much Higher Education policy on the subject and is a scenario where Tagg describes engagement as a function of intelligent self-direction, a struggle associated with responsibility and the dilemma of choice. However, this is a troublesome statement in that it offloads responsibility to the individual and makes inherent assumptions about what constitutes learning, engagement and the relationship between them. Again, this reflects the mainstream position criticised by Gourlay (2017) and the point made by Vallee (2017), in his

consideration of Biesta's (2015) work, suggesting that engagement operates in a paradigm of normativity premised by the notion of the student as an unhindered autonomous individual.

3.4.2 Multimodal pedagogies for relational and sociomaterial learning and engagement

Limiting choices associated with learning by outwardly valuing some behaviours or outcomes over others reduces the student experience to a staged and predetermined process. In the critique of Higher Education, this is seen as the commodification and standardisation of the student experience where modularised, and employability focussed learning is positioned in relation to its transactional value (Lawson et al., 2015; Tomlinson, 2017). Consumerism and control reinforce troublesome dualisms (Macfarlane, 2015) and encourages in students an acquisitive approach to learning rather than one that informs personal ontology (Molesworth et al., 2009).

Alternatively, multimodality as part of a materialist, posthuman framing of the student experience accepts diversity, complexity, and uncertainty where learning is concerned offering an expansive perspective on engagement. As a semiotic theory to understand communication, multimodality helps us to theorise about the nature of learning and engagement in Higher Education contexts.

Kress (2010) explains that multimodality is a concern for how communication is mediated through a multiplicity of modes (speech, text, gesture, images) and increasingly influenced by digital technologies. Under these conditions, learning is seen as the result of a semiotic/conceptual/meaning-making engagement with an aspect of the world (Kress, 2010 p.174). Teaching, learning and knowledge are seen as relational and multimodal developments built on verbal and non-verbal modes of communicating (Lackovic, 2020 p.16). With respect to that, the premise of this study is that learning (and engagement) cannot be bounded by the structural processes of the university. Digital and hybrid images and artefacts proliferate (Lackovic, 2020) in a multimodally constituted world where individuals bombarded with choice seek out and create knowledge with little concern for political, cultural or institutional boundaries. Kress (2010) helps us to consider how learning in institutional environments is firmly

associated with particular purposes, forms of power, and expectations. His response to the question of 'What is not learning?' is that 'not learning' refers to the same processes and phenomena as learning itself, though occurring outside institutional framings (p.179). We can apply the same logic to the notion of engagement by asking 'What is non-engagement?' and argue that it is the same as 'engagement' but that which lies outside of institutional expectations or requirements.

The choices students make lay at the core of this and, as Kress (2010) reminds us, are a central feature of the consumerist model of Higher Education. This begs the question of how far the principle of choice extends, and the answer which suggests it falls short of extending to modes of assessment, feedback or engagement. Choosing to engage, to not engage or engage differently are all possible states in a multimodal system but bounded by institutional expectations, the choice must be made wisely and be the 'correct one'.

From a semiotic perspective, Kress (2010) suggests that rather than positioning non-engagement as a negative position it should be read by the institution as communicating a meaning. However, the intricacies of that meaning are likely to be lost in system that thrives on the kind of duality and binary states described by Macfarlane (2014). The dominance of text-based surveys as a means of gathering information about engagement is out of sync with what Kress (2010, p.5) termed the "vast web of intertwined social, economic, cultural and technological changes."

More than a decade later, the proliferation of modes of communication and pace of change has had significant impacts on learning (Lackovic, 2020; Selwyn & Gasevic, 2020) and strengthens the case for a multimodal perspective. It would be naïve to imagine that the student experience has been unaffected by this, and not so easy to comprehend why methodologies designed to understand it continue to adopt mono-modal strategies. The answer of course, to a certain degree, is the scale of the undertaking and the need for universities across the Higher Education sector to collect information from the student population efficiently before putting the data to work in the interests of institutional strategy. However, where student engagement is concerned, there is a need to heed the advice of Kress (2010) and move away from the high abstraction and

generalisation afforded by quantitative data, towards a more material and embodied understanding. Multimodality offers a lens through which to appreciate the nature of the student experience in what is undisputedly a visually and digitally mediated culture (Lackovic, 2020). The lines between the student experience and the broader nature of social, cultural experiences are blurred by their capacity to communicate, engage with, and assimilate information through diverse and pervasive means. It is widely recognised (Archer & Breuer, 2016; Gourlay, 2010; Hiippala, 2016; Kress, 2010; Lackovic, 2020) in the literature that the implications of this mixture of modes of communication are significant with a collective suggestion that these contexts can be better explored by utilizing the potential of the visual in research processes to find new ways of understanding the experience of students.

In a situation where multimodality seems to offer a multitude of solutions, it is crucial to be a little cautious and temper any unquestioning enthusiasm by returning to consider the notion of choice. Individuals presented with multiple choices appear to be in a powerful position, one where they have the agency to make unencumbered choices about the modes of communication they adopt. This aligns with the humanist framing of the student experience and underpins the institutional rationale for quantitative methodologies seeking to harness engagement data. It is also central to the post-humanist critique of Higher Education.

3.4.3 Posthuman perspectives on learning and engagement.

Posthuman approaches offer new vantage points to research into student engagement with learning. The perspectives they offer (Adams & Thompson, 2016; Barad, 2003; Braidotti, 2016; Carstens, 2019; Gourlay, 2015; Taylor, et al., 2022) feel refreshing and possess the kind of energy that sparks a researcher's imagination and invites a sense of activism. Drawing on Barad's (2014) notion of 'moments of spacetimemattering', Oinas (2021) brings together some of these exciting ideas in a consideration of pedagogy, learning and everyday academic praxis through an analysis of instances observed during a seminar. This reflective

process leads Oinas to define three modes of attention (solitary, connected and wild) acting as entangled tensions to help researchers and academics better understand what they do in their everyday practice (p.46).

As a posthuman perspective this encourages us to look at the things that matter and see how this matter extends far beyond the individual human subject. It leads to a consideration of dynamic relationships, "human-nonhuman agencies, forces and events" (Taylor & Ivinson, 2013 in Geerts & Carstens, 2021, p.II).

Regarding student engagement, the work of Oinas (2021) opens up ways to imagine different 'modes of engagement' across a spectrum including solitary, connected and wild states. Whereas solitary, connected states might more readily be associated with established or accepted notions of engagement and study practices, wilderness represents other landscapes and complex challenges. I posit here that the student experience has a wilderness aspect to it in the way in which 'wilderness' is approached by Geerts & Carstens (2021) and used by Oinas (2021). It is unfamiliar territory for many students representing freedom and self-discovery but also perhaps loneliness and isolation. Also, in the same way Geerts & Carstens (2021) suggest wilderness obliges us to embed new forms of being in pedagogical and research practices, it demands that students seek out new ways of 'being' in these unfamiliar territories. Students castaway into the wilderness of Higher Education survive by becoming resourceful learners, they may become wayward and not conform to institutional expectations or norms regarding engagement. The notion of 'waywardness' in the way Oinas (2021) draws on Hartman's (2019) analytical interpretation helps us to appreciate 'student life in the wild' and how moment-to-moment happenings might constitute or challenge engagement.

These perspectives on engagement and learning taken together with the ideas of Haraway (2016) and Hartman (2019) acknowledge the struggle of day-to-day life, reject the false choice of non/dis/engagement and trouble institutional attempts to account for it. Relatedly, Braidotti (2006, 2016) argues that traditional humanism which places human beings at the centre of things no longer explains our relationship with the environment, technology or other forms of life, and in this

case the student experience. Imagining that students have the agency to make unencumbered choices regarding their approach to learning is to deny the complexity of the interrelationship between themselves and their surroundings. This is the crux of posthuman and related sociomaterial arguments (Bayley, 2018; Fenwick, 2015; Gourlay, 2015; Taylor et al, 2022) that look for ways of decentring the individual in an effort to understand more about the dynamics between learning, pedagogy and institutional structures.

In a similar manner to Franklin-Phipps & Rath (2018), Bayley (2018, p.244) calls for a re-imagining of pedagogy and to acknowledge that 'we' are constituted by multiple, entangled othernesses including nonhuman ones. Her intention here is to inject a sense of otherness into our pedagogy, that we seek to represent the voice of others and that the voice we use speaks for more than ourselves. This idea of decentring the human also exists in Fenwick's (2015) sociomaterial critique of learning and extends our understanding of how engagement should be framed. Considered from this perspective, student engagement is more than a singular pursuit, or a plural endeavour experienced in unison or collaboration with other people. Related to the notion of solitary, connected and wild modes of engagement introduced earlier, plurality extends to encompass non-human objects, spaces (physical, imagined, digital) and their dynamic mix (Fenwick, 2015; Fenwick et al, 2011) in an entangled social and material assemblage. In this kind of scenario, engagement with learning as everyday practice, reflects the 'beyond human' interpretation of Braidotti (2018) and Gourlay (2015, 2022) and supports the direction this research takes to look beyond the student in order to understand engagement.

Seen through a posthuman lens engagement is far from the sterile, friction free binary state feeding accountability systems that Gourlay (2021) sees as playing into the hands of the neoliberal fantasy. Institutional obsession over the prefix of 'non' or 'dis' where engagement is concerned prevents a deep understanding of the things that might influence a student's engagement with learning. Aligning itself with posthuman principles and the sociomaterial stance, this study makes a

commitment to engage with the complexity of student experiences, to 'stay with the trouble' (Haraway, 2016), to gain deeper insights into the embodied relations and practices shaping engagement with learning.

The collective vantage point offered by posthuman perspectives (Adams & Thompson, 2016; Barad, 2003; Braidotti, 2016; Carstens, 2019; Gourlay, 2015; Taylor, et al., 2022) are valuable and reassuring in this endeavour. They help us to recognise and foreground the things that are vital in educational practices and learning processes but are at the same time often disregarded as mundane and inert objects or spaces. These ideas represent a shift away from anthropocentric views and simple associations towards a relational approach embracing diversity and recognising the agency of multiple human/non-human entities.

They are perspectives that free the notion of engagement from normative expectations, they blur binary associations and recognise the vitality, agency and diversity of the wild environments and their capacity to influence student experiences. In these situations, learning might occur through wayward behaviour, engagement maybe outwardly passive rather than active or naturally involve periods of avoidance and procrastination (Steel & Klingsieck, 2016). These characteristics are unlikely to be captured or appreciated by quantitative processes which strengthens the case for this research as an approach capable of gaining a more holistic view of student engagement.

3.4.4 Digitalisation not data

As interrelated perspectives, sociomateriality, multimodality and posthumanism offer new ways of thinking about the experience of students in Higher Education settings (Archer & Breuer, 2016; Kress, 2010; Fenwick et al., 2011; Gourlay, 2022; Lackovic, 2020) and influence the direction of this research and its focus on engagement with learning. This guiding philosophy shifts our understanding of learning from a linear, perhaps individualistic or simply cognitive process to an understanding of learning as an embodied and affective phenomenon distributed across sociocultural scenarios and material dimensions. Engagement (with learning) in this scenario is not the privilege of the student as a fully autonomous individual student but is something negotiated

through complex interrelationships sustained by the agentic forces of abstract concepts and material things including technological devices and infrastructure.

This study has so far taken a stand against the proliferation of data deployed in the mission to enhance students' experience and bolster the reputation of universities (Komljenovic, 2022; Selwyn & Gašević, 2020; Shacklock, 2016), but that is not to argue against or fail to recognise the influence and potential of digital technologies.

Student relationships with technology reflect and perhaps drive broad drive trends in an increasingly digital multimodal society and new research into engagement in Higher Education must endeavour to understand this. The importance of this was confirmed by Henderson et al (2017) in a study of undergraduate students' perceptions of 'useful' digital technology. Their findings suggest that although digital technology was central to the ways in which students experience their studies it was not viewed by participants as something that was transforming their learning. Students' interactions with digital technology appeared to be largely associated with logistical, study-focussed routines influenced by university regimes and curricular frameworks rather than "expansive, expressive, empowering or … exciting" uses (p.1578). Their research calls for a better understanding of the realities of students' encounters with digital technology as part of a need in HE research to pay particular attention to "what students do as they live their lives".

These ideas intersect well with the notion of engagement as everyday practice, and the concern for students' relationships with the digital as an embodied, synergistic, and highly negotiated influence on their learning. Examining the ways in which students interacted and engaged with each other in conversations about academic work Stokoe et al (2013) noted how the presence of digital technology was significant. However, findings by Henderson et al (2017) suggest that the presence of technology did not lead to transformative learning. Thinking through this from a sociomaterial and posthuman perspective it seems possible that where digital technology and its assemblage of devices are taken for granted as part of the routine backdrop, their contribution and agency in learning relationships may be undervalued.

Gourlay & Oliver (2018) advise against disregarding the agency of spaces and their constituent things in such situations, a perspective that Gourlay (2022) extends further in her posthuman and new materialist examination of digital technology in Higher Education. A critical appreciation of the role that digital technology plays in the learning process is relevant to this research into student engagement because of the ubiquitous nature of technology enabled devices and their ability to connect academic and domestic spaces. This may lead to assumptions about how, where and when students engage in learning and therefore the need for a cautionary and more informed approach to the rhetoric of technology enhanced learning. Macaskill & Denovan (2013, p.747) reinforce this notion, suggesting that to "be cognizant of students' lived reality", we need to guard against assumptions regarding the relationship between learning and digital technology.

Although the findings of Henderson et al (2017) reflect these ideas and suggest a more informed position would require asking different questions, their work relied on questions asked to almost 1700 participants via an online survey tool. This study argues for alternative approaches, for a new materialist framing (Barad, 2003; Braidotti, 2019) with the potential to progress lines of questioning in greater proximity to the student. As new approaches applied to student engagement research they will lead to new understandings of the complex interrelationship between students, their devices and the exponential growth of the internet of things (Greengard, 2021).

Understanding how students live with digital technologies and how the relationships formed between human and non-human entities influence engagement with learning requires that we extend our focus beyond the individual. These are challenges considered by Gourlay (2022) in a posthuman exploration of the digital university that dislodges the human-centric position to gain a new vantage point from which to appreciate learning relationships and the everydayness of the student experience.

3.5 Inquiry Graphics: A multimodal, sociomaterial and relational theory & method

Theory

Inquiry graphics are visual media or graphics that form an integral part of conceptual reflection (inquiry) through a critical and creative semiotic analysis, rather than only acting as concept illustrations or "springboards" for reflection. In other words, the main argument of Inquiry Graphics is that the best way to grasp concepts in Higher Education is to connect seemingly abstract conceptual ideas with conceptual manifestation (how a concept can be materialised as imagined or real object or setting). Lackovic (2020) posits that inquiry graphics are sociomaterial learning artefacts par excellence: they focus on the materiality or sensory experience of a concept as the basis for conceptual insight that cannot be divorced from its material embeddedness, as it gives rise to it.

Inquiry Graphics theory builds on several conceptualisations. It finds inspiration in social constructivism, highlighting the often-neglected unitary view of "scientific" and "everyday" concepts proposed by Vygotsky (Lackovic, 2020), the former being the scientific views and theorisation of phenomena and the latter being everyday experiences, regardless of whether they describe scientific or lay beliefs. Although he might observe "scientific" concepts to be of "higher level" in some conceptual hierarchy, Vygotsky suggests that they could not develop and be comprehensible without everyday concepts. Lackovic (2020) uses this and similar approaches in sociocultural learning sciences (such as the approach of "knowledge building") to challenge the clear-cut distinction between the concrete and the abstracted side of learning experiences, instead focusing on the processual approach to knowledge growth through inquiry of concepts as multimodal, "concrete-abstract" assemblages.

One of the key premises of this approach is "synechism": that we cannot know an absolute truth (building on the work by C.S.Peirce), as all our scientific inquiries always push the boundaries of knowledge further, hence knowledge and theories are never finite, but we interpret what we sense (see, hear, feel) through a process of semiosis. Following the same logic, this research argues that there is no absolute or finite truth regarding student engagement, but using images as signs that show some material reality or imagination concerning student engagement generates the possibility for

multiple student interpretations and representational choices, thus reflecting the diversity of student experience and its material embeddedness.

Lackovic (2020, p.45) introduces the Inquiry Graphics sign (IG sign) (Figure 3.3) based on Peirce's triadic sign model (Figure 3.2) as the analytical tool to unlock meanings associated with images.

Object

S

Representamen   **Interpretant**
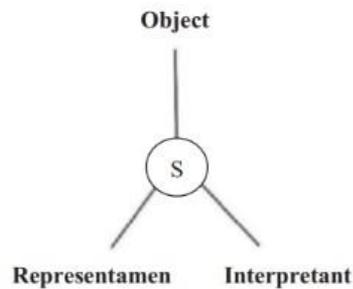
Figure 3.2:Triadic sign model by Charles Peirce (from Lackovic, 2020, p.51)

As mentioned earlier, a sign is a triadic entity, it is some concrete form or sensation (Representamen) that stands for something it represents (its Object) to the mind who interprets it (interpretant = interpretation, not the person). Lackovic "translates" or develops this basic triadic format into a multimodal learning sign, that of Inquiry Graphics shown below (Figure 3.3).

PI = Picture/image Interpretation   CI = Concept Interpretation

Interpretation (PI + CI)
Guided interrogation of pictorial meaning,
and alignment to the concept

Interrogation cues or questions

Interpretation

The sense that is made of the
image and resultant dialogue

Shared understanding

Inquiry Graphic Artefact
(Photo/Image)

Representamen

Embodied form of the
picture that is chosen to
represent the concept

The materially visible, identifiable
and qualitatively describable
content of a photographic
representation

Representamen

Object

Object (PO + CO)

PO = Pictorial Object: what the picture embodied
form refers to
CO = Conceptual Object: what the picture is
chosen to refer to for targeted communication
purpose

Figure 3.3:Representation of the IG Triadic Model developed by Lackovic (2020)

An inquiry graphic sign has the pictorial and conceptual sign qualities merged or brought together in one multimodal sign. For example, the conceptual object (CO) is the concept that is brought into the relationship with the pictorial representation/sign, represented as CR (conceptual representamen) in a manner of "conceptual label" or words that refer to that concept. Conceptual Object represents all the body of knowledge, scientific and other literature collected about the concept, over time, up to the present moment. Having this distinction within sign elements is important to understand the dynamics or knowledge interpretation and production. In this thesis, I focus on pictorial-material and conceptual interpretations that form inquiry graphics interpretants, which means how students interpret their image choices and relate them to student engagement, which generates narratives that contain further conceptual descriptors or concepts that all constitute the larger umbrella concept of "student engagement".

As Geertz (1993, p.127) suggests, "meaning is not stored in symbols, or outside our cultures, as a free-floating phenomenon". In the case of this research, the meaning of

each image selected is symbolically embedded in the participant's reasons for choosing the image, it comes into being through reflection on their own experience, a consideration of relations with/within their environment and how the image itself is seen to represent engagement. Geertz's (1993) interest in semiotics is well established and relevant to his work in interpretive anthropology (Micheelsen, 2002) and there is some resonance here with the notion of digital anthropology referred to by Gourlay & Oliver (2018).

Method

Inquiry Graphic Analysis (IGA) stems from Inquiry Graphics. It adopts a multimodal approach to the communication of meaning and challenges the dominance of purely textual methods, as well as the idea that knowledge consists of concepts that can be understood solely through their verbal definitions and descriptions (Lackovic & Olteanu, 2020). In the context of student engagement, this brings new opportunities and ways of knowing about the diversity of student experience and the influence of sociomaterial relationships. Engagement with learning as both an abstract concept and a sensory reality experienced by all students is not homogeneous but instead reflects the plurality of living and understanding, noted by Lackovic (2020, p.48). Educators rarely have a window into how students interpret the concepts that they are 'served'. In this research, I am interested in how they interpret student engagement at the intersection of scientific and everyday conceptual objects (what the literature says about student engagement and sociomateriality and how students describe their experiences themselves). This constitutes a holistic concept of student engagement. In that context, the multimodal potential of IGA provides participants in this research with opportunities to communicate meaning through their choice of image in "an expansive and contextualized thinking process that depends on semiotic inference, interpretation and prior experience" (ibid). This is illustrated in Figure 3.3 showing how the significance of an image is established through the application of the IGA model.

IGA is used in this research as a means of inviting participants (students) to think through images and explore their understanding of engagement with learning. The images chosen by participants represent things or situations they associate with

engagement and become artefacts or symbols of their engagement in a representational, material sense, showing places and symbolic ideas of what they find significant about their own engagement.

On one level, this is reminiscent of some of the visual methodologies outlined by Bravington & King (2019) and Glegg (2019), but as noted by Pauwels (2015) these approaches are rarely grounded by theory. In his reframing of visual social science (p.4), he suggests "visual methods seem to be reinvented over and over again without gaining much methodological depth".

As an approach applied in this study the model above (Figure 3.3) is an Inquiry Graphics (IG) structure with clear steps to support analysis between the image and the concept, as follows:

- Noticing and naming (of visible image elements)
- Describing the image, its meaning and individual element meanings connected to image content alone, contemplating connections between image descriptions and the concept.
- Actively connecting image elements and meanings with the concept of inquiry focusing on the image as a deliberate visual metaphor for the concept (establishing how the whole image and its details relate to conceptual meanings, conceptual body of knowledge, conceptual experiences)

Understanding the deliberate connection (why did you choose this image, how it represents the concept, etc.) is different from focusing on the image itself and reflecting on what kind of insight its individual elements can bring to understanding the concept itself (e.g., if the image shows a chair, the seeing and presence of this chair can then lead to exploring the meanings of the chair to lead to an insight about the concept – e.g. is comfortable seating a pre-requisite for engagement with learning and what kind of seating would that be?).

3.6 Following the semiotic route: Introducing the Sociomaterial Inquiry Model

Lackovic (2020) explains how images are objects of visual and sociomaterial culture, referring to Fenwick et al. (2015) to support the idea that materiality (that can be

usefully represented through pictorial images) cannot be separated from social inquiry. She also positions IGA in relation to posthumanist thinking by recognising the fluidity and vitality of matter (agency) and the complex interaction of human and nonhuman forces. Importantly, the author also posits that paying attention or focusing on different aspects or ingredients of the unit of an inquiry graphic (those of pictorial and those of conceptual meanings and characteristics) to bring them together and explore their relationship and dynamics is useful, as we would not be able to understand that something is enmeshed if we first were not aware of what this enmeshing may consists of. Even though an IG and any sign model consists of elements that are all interrelated and happening simultaneously, in a sense hard to separate, just as sociomaterial assemblages are difficult to untangle, the pausing of the moment and the interpretative processes are useful in foregrounding how things come together, whether mixed and interacting or blended and enmeshed.

This relationality is represented in the Dynamic Edusemiotic Relationality Metamodel that positions the IG sign as the mediator of a sociomaterial analysis (Lackovic, 2020, p.387). This has been adapted and is presented below as the Sociomaterial Inquiry Model of Student Engagement (Figure 3.4).

The model shows how in this research the IG triadic tool is positioned within the field of inquiry at an intersection of the social and material world, mixing what is traditionally observed as "abstract" concepts with their material grounding, as there are no completely abstract concepts, at least not in the process of their formation. This model informs the methodology but is presented here as it forms the basis for thesis, method and critical interpretive analysis. The images or IG artefacts selected by participants are embedded in and representative of students' sociomaterial world, and used as part of this IG structure to support analysis that focusses on image and concept as discrete aspects before bringing them together. Whilst acknowledging that reality can be understood through an ethnographic description of the whole, IG represents an analytical framework to interrogate matter and concepts individually in order to understand how they also coalesce to make meanings together.
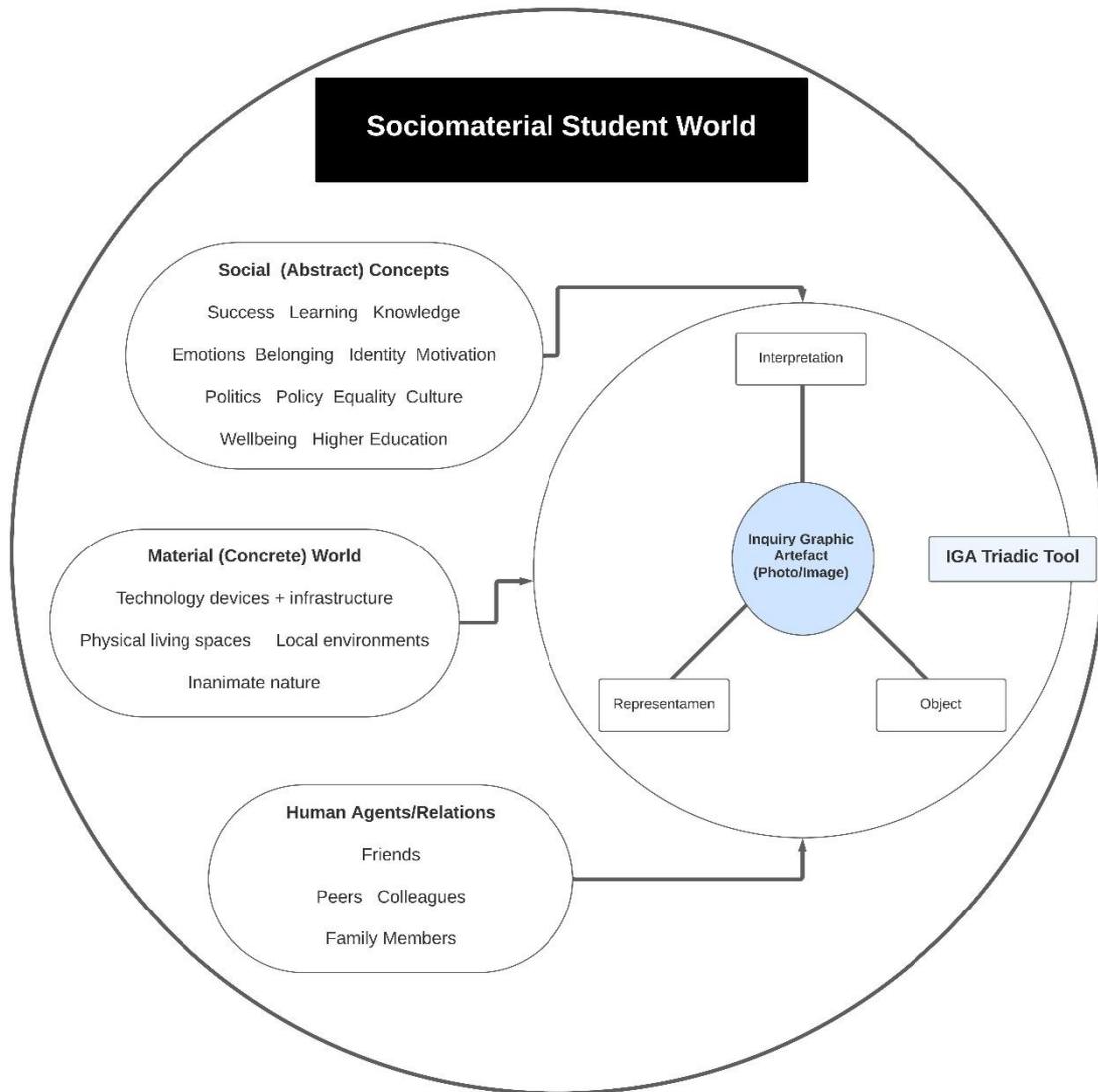
Figure 3.4:Sociomaterial Inquiry Model of Student Engagement (Adapted from the Dynamic Edusemiotic Model, Lackovic, 2020, p.387)

3.7 Summary

In the realization that this isn't all there is, … that there are other vantage points, and in fact there are boundless possible perspectives beyond where we've been, or even where we can go, there is imagination.
Reaching across the gap to experience another's way of knowing takes a leap of the imagination.

Sousanis (2015, p.88 - 89)

As a graphic novel, an iconic example of academic comic literature *Unflattening* by Sousanis acts not only as a manifesto for creative action against neoliberal ideology and market imperatives but invites us to think differently about academia. His work inspired me to see the possibilities of thinking through images and how that might offer new insights on student engagement. In addition to the new materialist and relational perspectives it connected with the ideas of Lackovic (2020) and the potential that Inquiry Graphics Analysis (IGA) offers in a situation where our concern lies beyond the individual and focuses on the relationships between abstract concepts and material objects.

As Sousanis suggests, it takes a leap of imagination, but in an effort to understand the student experience, we need to look beyond it, adopt a *post-student* perspective. To decentre the student in this research, we invite participants to choose image artefacts as representations of concepts associated with their engagement learning, the image becomes the central point of interest. The subsequent process of guided reflection and participatory analysis sees an elaborate understanding emerge giving insight into complex interrelationships between abstract concepts, material objects, physical and temporal spaces and how engagement in the everydayness is embedded as part of this.

These matters are addressed in more detail in the following sections of this study but are presented briefly here as a milestone in the journey through the literature connected with student engagement in Higher Education. This chapter builds a foundation for the research project by drawing on multimodal, sociomaterial and posthuman perspectives to look beyond the shackles of established institutional structures and frameworks. It offers an opportunity to make progress in the quest for more holistic understandings of the student experience (Kahu, 2013; Zepke, 2018; Tight, 2020) and as Lackovic (2020) suggests begins to address the paucity of relational and multimodal research in Higher Education.

Chapter 4: Methodology

4.1 Introduction

This chapter outlines how the theoretical and conceptual approaches related to new materialism, relationality and Inquiry Graphics are methodologically applied to the research questions guiding this study.

RQ1	In what ways do students understand engagement with learning at the intersection of the sociomaterial world and their individual experience?
RQ2	What kind of sociomaterial conditions and phenomena are connected to student engagement with learning?
RQ3	How are the sociomaterial forces that influence their engagement with learning characterised and assimilated into their experience of being a student?
RQ4	What are the implications of the research for understanding and conceptualising student engagement?

The chapter begins with a broad overview of the process and then provides a more detailed account of the method in each phase. It leads towards an elaborate presentation and analysis of data in Chapter 5.

Guided by interpretive values, this research has a concern for the individual, and recognises their experience as the basis for truth (Cohen, et al., 2018; Flick, 2020) Crucially though, it also recognises that individual experience is only part of a broader, more complex reality that extends beyond the human condition (Barad, 2014; Braidotti, 2006). Deployed in this context as a complementary theoretical and methodological tool, Inquiry Graphics Analysis (Lackovic, 2020) offers a pragmatic and robust way to unpick the interrelationships that connect individuals to the notion of being a student and the environments in which they are situated.
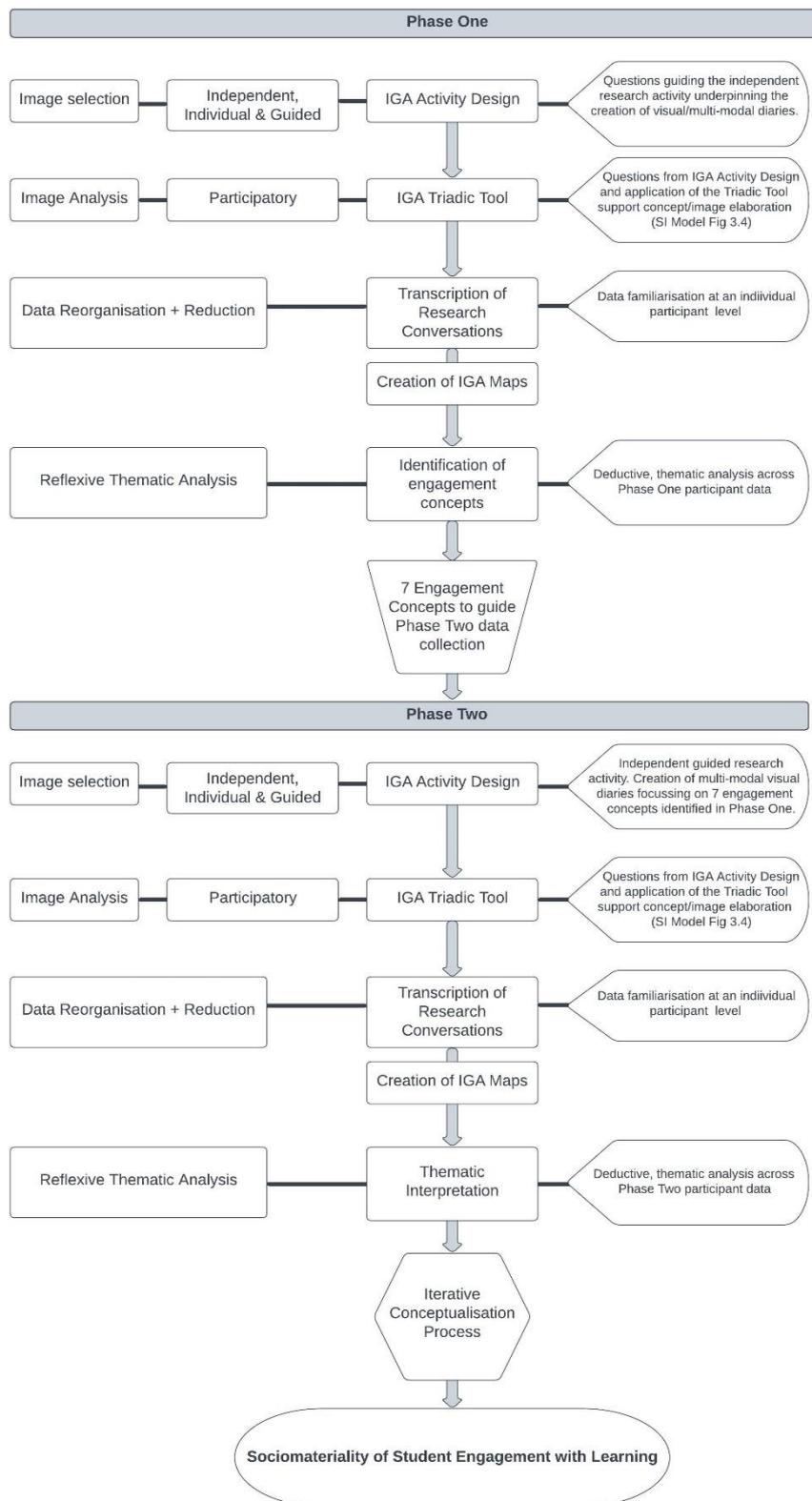
Figure 4.1:Phased data collection and analysis chart

4.2 Process Overview

The analytical process relies on the significant and thoughtful contribution of participants as they reflect on their experience and make sense of it through the images they select. These image artefacts offer a stepping stone to help individuals connect abstract concepts to the complex reality of their student experience. The process of data collection and analysis is illustrated by Figure 4.1 (above) and shows how the phased approach leads to a new conceptualisation of student engagement of learning.

The initial step in Phase One involves participants reflecting on their experience and understanding of student engagement and selecting or creating three images to represent their ideas around this. This independent stage is guided by the IGA Activity Design (Figure 4.2), a series of scaffolded questions following protocol similar to that established by Lackovic (2020).

Figure 4.2:Phase One Independent Inquiry Graphics Activity Design

In Phase Two, this step was modified with participants guided more directly to consider the seven concepts that were the outcomes from Phase One. The rationale here was to deepen understanding around key themes identified by participants and explore sociomaterial relationships between them in the context of their student experience.

Throughout both phases, the process of analysis begins as individual participants embark on the guided task, reflect on their experience, consider their ideas regarding engagement, search for, and decide on images to represent their thinking. In this sense, the collection and initial analysis of data at this stage is combined as a single activity aligned to the participatory aims of the research. Each participant was then able to meet me online where I facilitated a research conversation led by their ideas and guided by the application of the IG Triadic Tool (Figure 3.3).

Defining the online meetings as research conversations rather than semi-structured interviews was a conscious effort to equalise my relationship with participants and maximise the participatory nature of the activity. Essentially, this was a way of foregrounding the student's experience and ideas of engagement over my own position as lead researcher and ensuring the image analysis was anchored to their perspective rather than being led by mine.

During the research conversations, raw data in the form of annotated images curated by individuals became transformed through the abstract-concept elaboration process central to the IG analytical model. Hosting these conversations online (Blackboard Collaborate) made it also possible to record the sessions consequently supporting transcription and the production of IG Maps (Appendices 1 & 3). The recordings and transcriptions were deductively analysed by me as lead researcher using Inquiry Graphics and sociomaterial perspectives as pragmatic and theoretical guides. This approach was also guided by principles of Reflexive Thematic Analysis (Braun & Clarke, 2006; Byrne, 2022) acknowledging my active role in knowledge production and the validity of my interpretation of patterns of meaning across the data. In this sense, the IGA Maps reflect my interpretation at the intersection of multimodal data, theoretical assumptions, and my own analytical skills and positionality. They represent themes or ideas brought together around the central organising concept of student engagement

and are given structure through the application of IGA and the theoretical lens of sociomateriality.

In both phases, deductive analysis began with an interpretation of data from individual participants before moving to the interpretation of aggregated meanings across the group. In Phase One, this led to the identification of the interrelated concepts (Figure 5.5) then applied in Phase Two to further explore perspectives of engagement. Deductive analysis in Phase Two led to a deeper understanding of engagement as a relational phenomenon and subsequently the conceptualisation of the sociomaterial model of student engagement with learning (Figure 6.2).

4.3 Recruitment of participants

In recognition of the qualitative nature of the data, the manner through which it was to be collected, and the detailed interpretative analysis associated with Inquiry Graphics, the research design was built around a sample size of ten student participants.

The recruitment strategy aimed to attract students from across the four university faculties and involved an email campaign that began by reaching out to academic programme leads and sharing details of the research project. The intention here was to avoid the large scale 'cold call' email to potential participants and use the existing relationship between students and programme leads to make the initial connection to the research. This kind of strategy reflects the guidance offered by (Cohen, et al., 2018, p.220-222) regarding sampling approaches for qualitative research. In this way, programme leads were fully aware of my invitation to their students and what the nature of my inquiry was. Invitations were posted by via module distribution lists and as announcements on student facing module pages within Blackboard.

This purposive and pragmatic strategy targeted approximately 1500 potential participants. However, my early assumptions regarding response rates, the lure of what I had envisaged to be an interesting research project and the challenges I might face in refining the number of participants down to the target of ten, were quickly brought into

question. Two weeks after the initial invitations were posted, having received only four positive responses, which rapidly translated to three confirmed participants, I began to reflect more critically on the strategy. I assumed at this point that the limited response was symptomatic of the ongoing Covid-19 pandemic (March 2021) and the distance that twelve months of disruption had created between students and the University. Recent literature captures a sense of the challenges faced by Higher Education throughout this period. Farnell et al (2021), reporting significant impact on teaching, learning and research practices; Goldstone & Zhang (2022) highlighting the challenges faced by post graduate researchers, and Eringfield (2021) imagining post coronial futures and methodological innovations. The true extent to which this influenced recruitment to the study is difficult to establish, more importantly at the time, was the need to adopt a pragmatic solution rather than ponder such unknowns. This is the context that then drove a more informed, agile, and phased approach to recruitment and data collection.

Rather than delaying the data collection process until the recruitment target was reached and therefore risk losing momentum with the initial participants, I began Phase One and shared the independent guided research activity (Figure 4.2, above). The email dialogue with each of the three participants at this stage focussed on supporting their understanding of how the IGA activity was designed to scaffold their thinking around engagement with learning and the collection of images to represent that. As an independent task it offered some flexibility for the participants over a two-week period with time for them to reflect on their experiences as a student and make links to concepts associated with engagement.

In parallel with this, I planned a refocussed email campaign using more personalised invitations targeting Subject and Departmental Student Representatives across the university. This was deployed as students returned in the new academic year (September 2021) and proved to be a more successful strategy attracting a further twelve positive responses that eventually translated to seven confirmed participants. Table (4.1) provides an overview of all participants that were recruited to the study. Although not initially envisaged as such, the phased approach provided space to focus

on the data collection and participatory analysis in Phase One which led to preliminary findings to usefully inform the approach in Phase Two.

	Student Participant	Male/Female	Study Pseudonym	Level of Study	Mode	Subject Area
Phase 1	P1 (WD)	M	Michael	UG	FT	Education
	P2 (SR)	F	Jane	UG	FT	Psychology
	P3 (ED)	F	Megan	UG	FT	Education
Phase 2	P4 (PC)	F	Amy	PG	FT	Education
	P5 (RB)	F	Sarah	UG	FT	Environmental Sciences
	P6 (JA)	F	Lorna	PG	FT	Public Health
	P7 (RN)	F	Beth	PG	PT	Psychology
	P8 (CL)	M	Scott	UG	FT	Sociology
	P9 (CR)	M	Josh	UG	FT	Computing
	P10 (OJ)	M	Theo	PG	PT (DL)	Psychology

Table 4.1: Overview of study participants

4.4 Phase One Method Description: Visual diaries and conversations with 3 students

Participants worked independently and to their own schedules as they reflected on their experiences and how they engaged in learning before choosing or creating images to represent these thoughts. In this way and supported by the Independent IG Activity (Figure 4.2), the images become a bridge between abstract concepts related to engagement and the complex reality of their individual experiences. The prompts embedded in the IGA activity encouraged participants to think through the images, prepare for the research conversation and develop some ownership in the process. Essentially, I was asking students to provide (find or create) images to reflect their experience of engagement with learning over a two-week period.

The analysis of participant image diaries in Phase One was carried out over the course of three research conversations between me and each of the participants. As mentioned above, these were not framed as semi-structured or structured interviews as the

intention was to empower participants in a process where the focus was on their experience and the analysis of images they were bringing to the conversation.

In each case, participants chose the order in which they introduced the images from their visual diary, at the same time as clarifying if each was a found image or one that they had created. These images were largely digitally sourced through participant's online searches, the exception being Jane who chose to present two of her own photographs. Regardless of the medium chosen, each became a digital artefact as part of their visual diary to be shared during the online research conversations.

These conversations took place online through Blackboard Collaborate, an environment familiar to all participants, being part of the University virtual learning platform and used widely to support synchronous and asynchronous online teaching and learning. In the context of this research, it provided an opportunity to meet in a dedicated and secure space where participants could easily share their images as the basis for an in-depth reflective and analytical conversation that also provided (with the consent of each participant) the facility to record to support later thematic analysis. Additionally, it was a convenient and effective means of addressing the ongoing challenges presented by the legacy of COVID-19 and the restrictions still imposed on face to face, on-campus meetings.

The research conversations were anchored by the process outlined in Figure 4.2, and the application of the IGA Triadic Tool as part of the Sociomaterial student engagement metamodel (Figure 3.4). In this context, the images curated by each participant were the central unit of analysis where the value of the visual artefact was retained through a detailed interpretative dialogue offering an insight into the relationship between individual circumstances and the way they engage in learning as university students. The IGA model and process provided the basis for a sociomaterial analysis of image elements, and the concepts or experiences they represented. This guided elaboration led to a detailed insight into how the material objects and abstract concepts represented in the image related to and influenced their engagement with learning.

The recording of research conversations through Blackboard Collaborate ensured the dialogue that emerged from the participatory analysis of images was captured in detail. These recordings and my own field notes supported the transcription of conversations which were summarised and illustrated in the series of IG Maps (Appendix 1). Although this was a time-consuming exercise it was an important step in helping to preserve the meanings that each participant attributed to the image artefacts in their visual diaries and identifying relationships between those meanings and their perceptions of engagement. This process and the subsequent thematic analysis of outcomes across Phase One data was guided by the approaches defined by Braun & Clarke (2006), Byrne (2022) and Flick (2018). As a result, seven broad engagement concepts were identified in Phase One and formed the starting point in Phase Two as existing thematic categories.

The following section outlines how the method applied in Phase Two was informed by the process and outcomes of Phase One.

4.5 Phase Two Method Description: Visual diaries and interviews with 7 students

The seven participants involved in the second phase of this research were students studying in three of the four faculties in the university bringing a broader spectrum of experience to this research and as such, opportunities to find new vantage points from which to examine concepts identified in Phase One.

Recruitment to this phase was an agile process and occurred in parallel to the Phase One activity. In practical terms, this meant that while I was engaged in the analysis of images with Michael, Jane and Megan in the online research conversations, I was also able to maintain a dialogue with other students expressing an interest to become involved. Competing priorities became an issue at this point and balancing the needs of active participants with potential participants was a challenge. My concern focused on the need to hold Phase Two participants whilst I completed the analysis from Phase One to use the interim findings to give direction to the research as it moved forward. Unsurprisingly, this resulted in some attrition to the number of students ultimately

participating in the research activity, losing five of the early respondents ahead of launching the Phase Two activity with Amy, Sarah and Lorna. The four remaining participants (Beth, Scott, Josh and Theo) were recruited as Phase Two was underway. In retrospect, this was beneficial to the process as it helped to stagger the dialogue and interaction with participants and represented a rolling programme of research conversations and analysis over a period of four months.

Despite the challenges outlined above, outcomes from Phase One usefully influenced the design of the independent research activity in Phase Two and supported a more directed approach to the reflective activity that underpinned the creation of visual diaries. The template design for the activity in Phase Two was created using Padlet, an online collaborative tool allowing users to create and share media rich, digital pinboards and was ideally suited for this task. The activity template is illustrated in Figure 4.3 (following page) and reflects how the open agenda in Phase One was refined to focus on the seven engagement concepts that emerged from that initial analysis.

Figure 4.3 (following page) shows how participants are first guided to reflect on their student experience generally and think about the things they associate with learning before being guided to think specifically about the seven engagement concepts (green label). As outlined above, these concepts stem from the research conversations and thematic analysis in Phase One and feature here as a means of diving deeper into their meanings and associations with engagement in the second phase of research.

The research activity template was personalised for each participant and distributed as a link embedded in an email to their university address. This allowed each participant, to complete the activity independently and in their own time, before emailing me to confirm completion and arrange a mutually convenient date for the online research conversation. Although this activity was designed to collect seven images from each participant, the Phase Two process generated a total of 56 images with some participants returning more than one image for an individual concept category. Figure 4.4 (following) is an example of how the completed image diaries looked in Padlet.
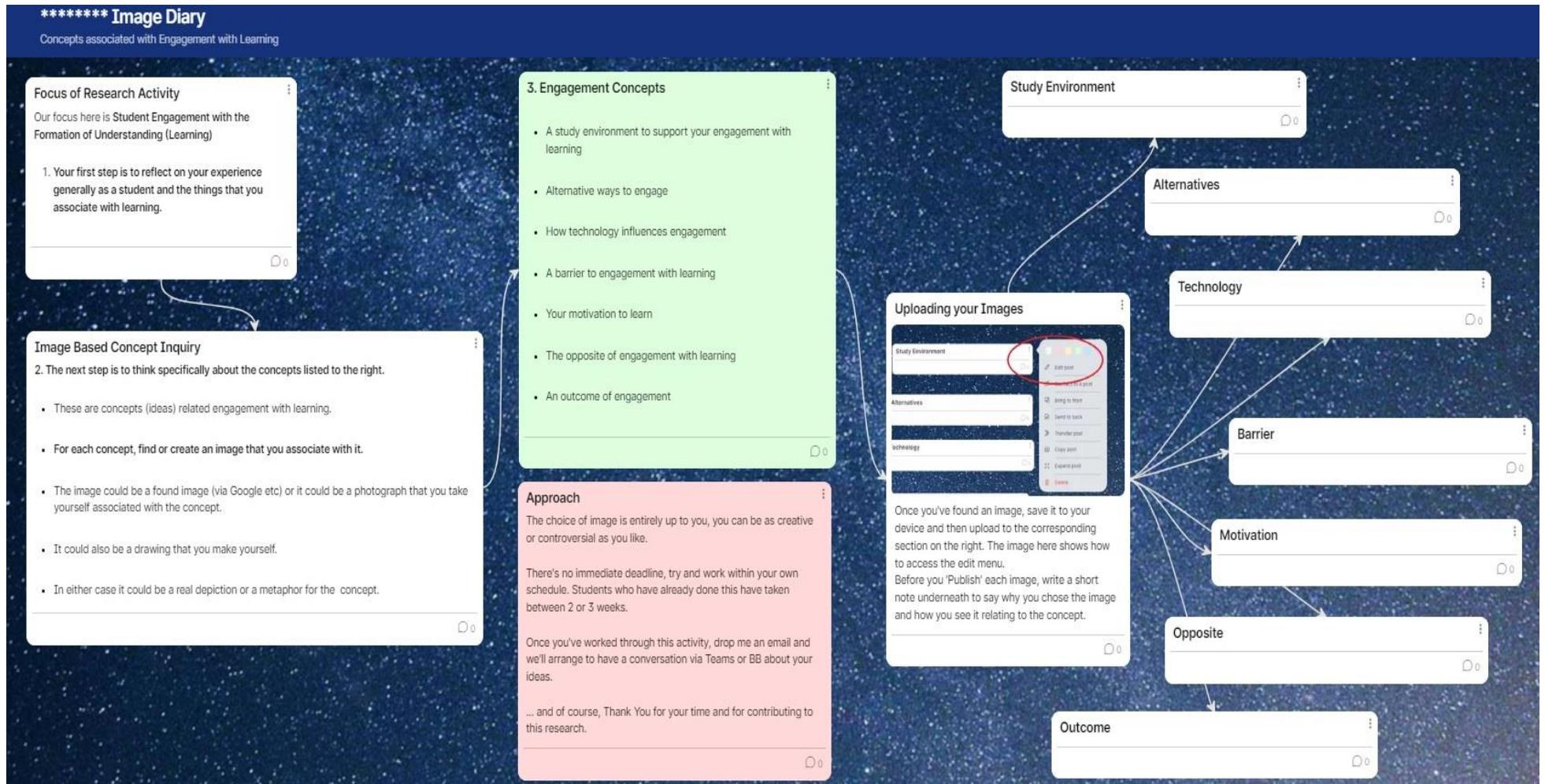
Figure 4.3:Phase Two research activity template

Study environment conducive to learning

No traffic, no noise, lost deep in thought.

The image that best represents stillness to me, which is what I believe to be most important to a study environment.

How Technology influences my engagement with learning

It's 24/7. As a distance learner I can pick up my tablet/phone/laptop anywhere and start studying.

Technology influences how I manage my timetable.

⬭ 0

What is the outcome of my engagement with learning?

So many choices.

The outcome of learning- Actually having choices in life and, potentially, lots of choices.

⬭ 0

Barriers to my engagement with learning

Mental health- How it effects what (or what I believe) I can and can't do. This has proved to be a significant barrier in the past and in the present.

I picked this image because sometimes it is as simple as feeling 'bad' that creates a barrier to studying.

⬭ 0

What motivates me to engage with learning?

My child.

Being a single parent to a small child; My daughter is my motivation, I'm fairly certain without her I wouldn't have returned to education.

The opposite of engagement with learning

The red pen

I still think of this as being synonmymous with getting something wrong or failing.

⬭ 0

Alternative ways to engage with learning
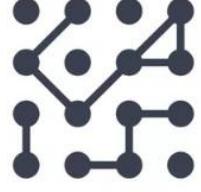
Unstructured

The luxury of seeing where learning takes you, beginning with one subject and ending up on another, with no firm direction or guidance.

Figure 4.4:Example of multimodal diary in Padlet (Beth's)

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4.6 Application of Inquiry Graphic Analysis

This section builds on the theoretical perspectives introduced in Chapter 3 (3.4 and 3.5) and details how IGA was practically applied in both phases of this research.

During the research conversations, each image was considered in turn and initially contextualised by participants as they described their approach to finding or creating it. This was an opportunity to externalise their thinking regarding how they were linking the abstract concept to the image. Furthermore, by exploring their decision-making process it supported the understanding that although multiple visual interpretations of the same concept were possible, it was their specific choice that opened avenues of inquiry important to the focus of this research.

The analysis was guided by Peirce's triadic model defined by Lackovic (2020) and the sociomaterial metamodel (Figure 3.4) which involved a gradual process of image-concept elaboration moving from descriptive representation to interpretation and signification. As the central unit of analysis, the image as an Inquiry Graphic (IG) artefact becomes the focus for a narrative that externalises thinking, which begins with a detailed consideration of the elements or activity depicted within it.

Defined as 'Representamen' in the triadic process (Figure 4.5, below), image elements are acknowledged and named, pausing the thoughts about symbolic meaning. This establishes a foundation for the analytical conversation that then develops into an exploration of how the image and its materiality and the materiality it represents relates to student engagement. In essence, this representation is acknowledging the image, and the things identified within it, as objects of the material assemblage in which the participant's experience and understanding is rooted. This sociomaterial framing supports the idea that these individual elements are not consigned as inert contextual features, but possess agency, reciprocal influence, act together and in part.
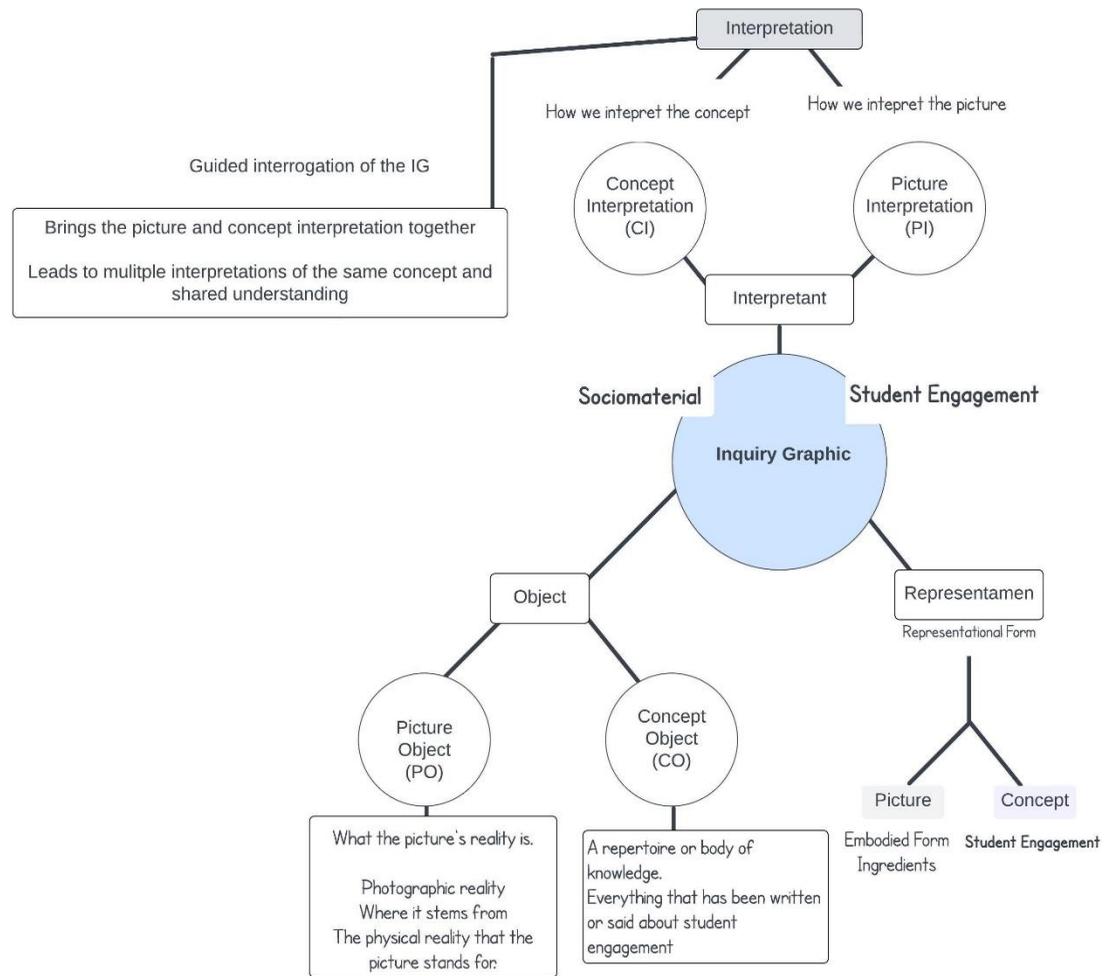
Figure 4.5:Triadic process applied to SE research

These objects are purposefully brought together by the student as the IG artefact and thereby configured to represent a recognisable situation or thing in the real world. The guided and staged analytical process begins with a descriptive consideration of the image as a Picture Object (PO). This is primarily a descriptive stage in the analysis, examining the image without assigning a concept, to explore the image itself and what it could mean, so that different meanings can be brought together. The following stage of the triadic process offers a way to further unpick the layers of meaning contained within the image by shifting the perspective to a more conceptual level. Contained within the Object, Concept Object (CO), in this research becomes an explicit expression of the student engagement concept providing visual insight into how the participant understands it, how it is associated with their own experience and how it connects the abstraction of engagement to their own reality and senses. The final stage in the analytical process was a guided interrogation (PI + CI) of meaning leading to a detailed, participant-led interpretation of the image and its association to student engagement.

All images across both phases were analysed following this process, which preceded secondary analysis of conversation transcripts leading to the creation of Inquiry Graphics Maps (IG Map) as a graphical representation of the process. The IG Maps (Appendix 1, Appendix 3) summarise the dialogue associated with each image artefact and capture the detail of how each image in the participant's multimodal diary differently represented student engagement at a conceptual and experiential level. Figure 4.6 (following) is an example of an IG Map from Phase One.
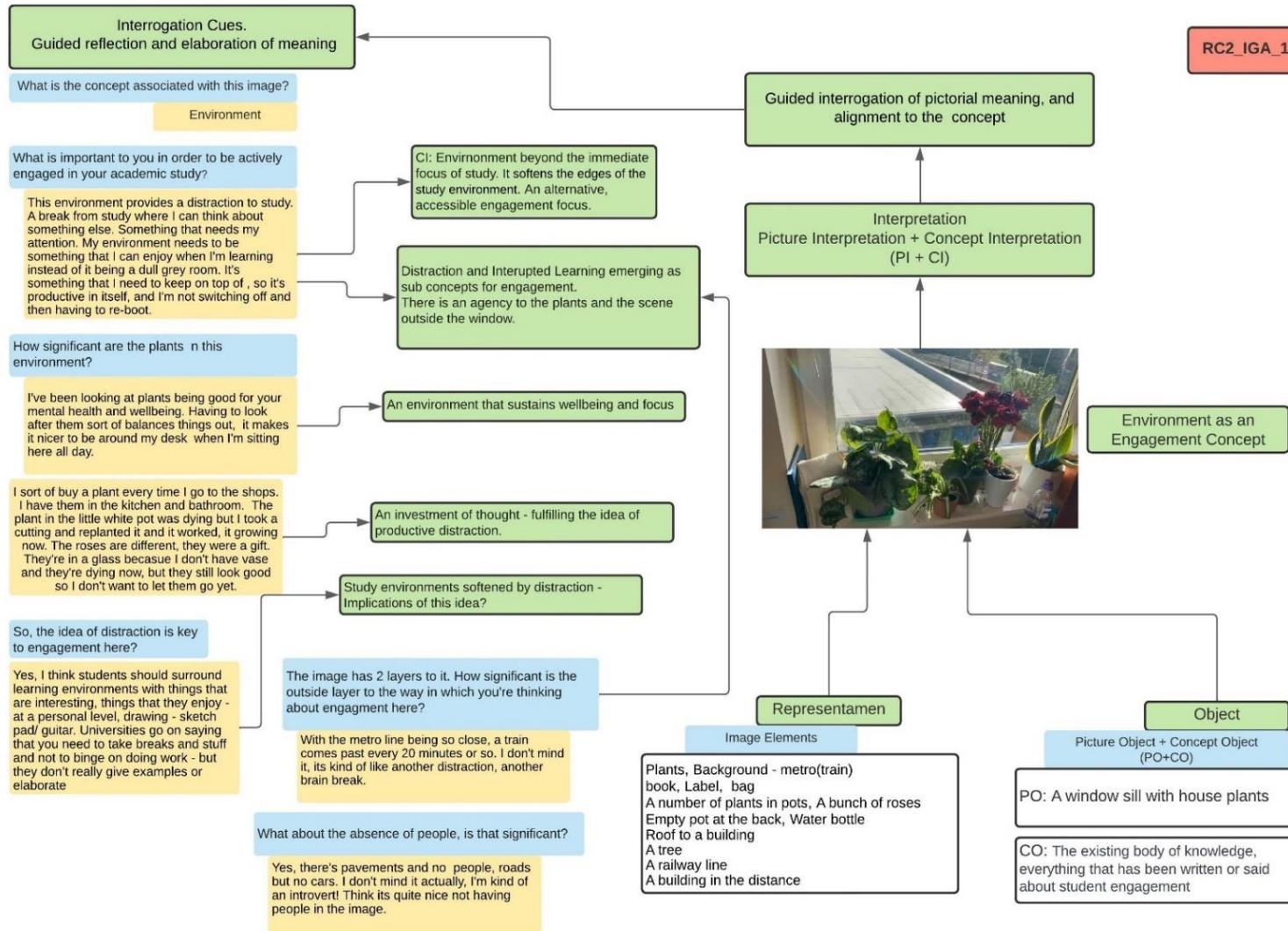
Figure 4.6:IG Map Example (Jane: Phase One)

4.7 Ethical Considerations

This study is first and foremost concerned with the experience of individuals who are enrolled as students at the university in which I hold an academic post. In that context, I make professional, often data informed assumptions about the student experience and outcomes over the medium and long term. However, my interest in this research requires a different approach, a close-up perspective to gain insights into the student experience that are not readily accessible through arms-length quantitative tools or learner analytics systems. Engaging with individual participants in this kind of research requires an understanding of the tension between the beneficent intent to investigate the nature of individual experiences and the requirement to adhere to the ethical imperative and intent to do no harm (NU 2017). In this case, to protect the interests and wellbeing of participants I took action to ensure they understood:

- the focus and purpose of the research,
- the nature of informed consent
- their right to withdraw,
- how their anonymity would be protected, and
- how their ideas and opinions would be accurately represented.

In taking this action I was guided by the Research Ethics Code of Practice at Lancaster University and my proposal was approved through the process overseen by the Faculty of Arts and Social Sciences Research Ethics Committee. As Cohen et al (2018) suggest, the considerations above underpinned all stages of the research activity and influenced its overall design. This included the approaches I took to recruit participants, the information I shared with them throughout the process, the pragmatic decisions concerning the activities I would guide them to do and the use of technology to facilitate our research conversations.

Myers (2019) offers useful advice in this context regarding the ethics of insider research and positionality which helped me to constantly reflect on my approach throughout this

research process. On the question of anonymity, the participants were not known to me as students and were unaware of the identities of other participants in the research. Their identities were further masked throughout the research analysis by using participant codes and then by allocating pseudonyms in the thesis.

Regarding issues of power related to my position within the university, I took steps to resolve this as much as possible by recruiting student participants through the email campaigns described earlier, and in particular by targeting student cohorts that were not within my immediate programme area. In this way my intention was to provide space for participants to reflect on and share their experiences with me in a neutral capacity, although their knowledge of my position as an academic would inherently influence that exchange.

These are common and widely recognised considerations in higher education research carried out by researching professionals in their own institution rather than by professional researchers (Wellington & Sikes, 2006). More particularly, Gray (2013) and Myers (2019) prompted me to reflect on the 'close-up' perspective of student engagement that I was hoping to gain and the need to exercise care, attention and tact in these conversations. The IGA framework is a valuable ally in this respect as it provides an analytical structure to do justice to the input of participants and helps to ensure they represented accurately in the research.

A further consideration is also highlighted by Myers (2019) and relates to the nature of information disclosed by participants during the research process. Myers describes this as 'guilty knowledge' and relates to the elaborate descriptions of experience shared by participants as they invite me, through the affordances of technology and the IG activity, to see into their domestic worlds. Myers describes this as a case of "hiding myself (behind a cloak of alleged neutrality) while expecting revelations from my research participants" (p.7). Reflecting on this I rely on my own professional integrity to ensure the research is conducted in a 'responsible and morally defensible way' (Gray, 2013, p.

69) and am reassured by the potential of the IGA framework to structure and depersonalise the dialogue through its focus on abstract concepts and material objects.

4.8 Summary

This chapter has outlined how the theoretical and conceptual approaches introduced in Chapters 2 and 3 were pragmatically developed as a phased research activity involving students from across the university. The process supported a guided reflection on their experience and an interpretive, analytical dialogue foregrounding material relations as a means of understanding the concept of student engagement. The following chapter presents data resulting from this process, provides further detail of the analysis and leads to a summary of findings.

Chapter 5: Presentation of data: Phase One and Phase Two

5.1 Introduction

The process described in the previous chapter led to the identification of broad themes and interrelationships associated with student experiences and engagement with learning. This chapter is an extensive presentation of the data emerging from both phases of the research and builds into a complex discussion of findings to explore student perceptions and the sociomateriality of engagement. It begins with a detailed account of the involvement of Michael, Jane and Megan as Phase One participants before I present their individual stories as vignettes. I then summarise the findings from Phase One before leading into a detailed discussion of findings from Phase Two supported by the first iteration of the new sociomaterial model of student engagement.

This process is guided by the overarching research questions restated below:

RQ1: In what ways do students understand engagement with learning at the intersection of the sociomaterial world and their individual experience?

RQ2: What kind of sociomaterial conditions and phenomena are connected to student engagement with learning?

RQ3: How are the sociomaterial forces that influence their engagement with learning characterised and assimilated into their experience of being a student?

RQ4: What are the implications of the research for understanding and conceptualising student engagement?

5.2 Phase One: Analysing visual diaries with Michael, Jane and Megan

Michael, Jane, and Megan were all undergraduate students at the point they became involved in this research. Michael was in his third and final year, Jane, and Megan in their second year at the university. Michael and Megan were both Education students following a course of study that would lead them to Qualified Teacher Status (QTS), Jane

was studying Psychology. Their reflections, generated through the independent and guided IGA process resulted in a total of ten images (Figure 5.1) representing their individual and collective conceptualisation of engagement with learning. The majority (n=8) of these were 'found' or 'stock images' resulting from Google searches using participant defined keywords generating results aligned with their ideas associated with a particular image concept. In some cases, participants explained they had a particular image in mind and adapted their search until they found a close match, in other cases they scrolled through results with an open mind until they found an image to associate with the concept.

> *".... I remember seeing this image of a candle burning and made me think about how we pour ourselves into the work that we do…"* (Michael)

> *"… I've got a vision in my head, and I've tried to find something that closely represented it. Sometimes, I've come across things, and I've thought ah! That fits better than what I was thinking."* (Megan)

Figure 5.1:

A Visual Overview of Student Engagement Image-Concepts (Phase 1)

Although the default approach in Phase One appeared to involve an online image search, two were photographs taken by Jane. During the research conversation, she explained how the photographs, taken of her immediate, everyday environment were more powerful representations of her ideas of engagement because they directly reflected her experience. Megan also provided some additional insight into her own decision making regarding the choice of approach,

> "… the first one I actually started to try and draw, but I thought, no, I can't really capture what I wanted to show and then that's when I went online to see if I could find something that really fitted what I was thinking in my head."

Jane and Megan also commented specifically on the use of images as a way of thinking about student engagement. They contextualised their thoughts on this by reflecting on their experience of responding to institutional survey requests seeking their views on issues related to the student satisfaction agenda.

> "I liked how the research was different than just a questionnaire, it _was_ engaging thinking through images. Taking pictures of _how_ I engage in my own learning is actually quite interesting in a way that I hadn't thought about before." (Jane)

> "We've had quite a few surveys particularly about online lectures and stuff … you can never have enough boxes though to establish what everyone is really thinking because everyone's different. Thinking about images felt it was a bit more about me and my experience, it did make me stop and think. (Megan)

The initial thoughts shared by the participants about the IGA approach provided some early, albeit limited, indications that the research design had the potential to offer an insightful perspective regarding the student experience. Central to this was the application of the Sociomaterial Model of Student Engagement (Figure 3.4) incorporating the Triadic Model (Figure 3.3) as a way of anchoring the dialogue to the image object as the entry point for analysis.

5.3 Research Conversation Outcomes

In this section, to give a further insight into the findings I present students' individual stories as vignettes of how they represented and interpreted student engagement (SE) with learning.

5.3.1 Student vignette (Michael): "Nurturing vocation" as a SE concept

In Figure 5.2 (following), Michael explores the notion of career goal or vocation as a concept that influences his engagement with learning. This concept is an assigned CO (conceptual object) for this picture, the picture itself does not show this object but the student gives it its meaning (or CO). Using the image as an IG artefact provides a way of developing a rich narrative and the opportunity for him to elaborate on his initial ideas. Describing the detail of the image is straightforward in this case as the elements are easily recognisable and are configured to represent a scene that is broadly familiar. This Picture Interpretant (PI), 'an adult standing in a room, where children are seated', is not yet defined at a conceptual level, in a sense it is still open to interpretation as an image embedded with multiple meanings representing differing views of reality. However, by aligning the image to his ideas around vocation and career goal, it connects to the Concept Object (CO) anchoring the image at a conceptual level to Michael's experience and understanding of engagement with learning as something deeply connected to practice and his career aspirations. The process of interpretation in this way is focussed at the intersection of the material world (represented by the things shown in the image) and individual experience (RQ1). The sociomaterial conditions that are connected to, and influence Michael's engagement with learning are embedded not just in the policy and practice of the university (his experience as a student) but also the expectations and culture of the teaching profession he hopes to join (RQ2, RQ3). This widens the locus of inquiry beyond Michael as a student to see that engagement does not "flow purely from the decision making and actions of the individual" (Gourlay & Oliver, 2018, p.80). In this way the analysis begins to align with posthumanist ideas recognising the potential of the exploratory space in between a picture and an idea (Lackovic, 2020) and becomes more than asking Michael questions about engagement.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Career Goal

What is important to you in order to be actively engaged in your academic study?

My end goal has always been to have a classroom of my own. I wasn't interested in the people in the image it was that idea of the classroom space. This is important to me, I think my engagement with learning would differ if I didn't have such a concrete idea of where I want to end up. The scenario could be the same for any subject you're studying at University in terms of end goal, you have this picture perfect ending in a sense and that drives a lot of your engagement.

Elaborating on the role/positioning of the adult in this image.

The adult is a teacher by virtue of his position within the image. There's informality in the way in which he's dressed, a more realistic view of a current classroom and the experiences I've had as a student teacher. He looks like he has a good relationship with the pupils, its the kind of approach I assoicate with being a primary teacher.

In what ways might this translate to a University scenario?

I've always enjoyed active learning and its those workshop groups which are in a similar set up, a group of you in a room with a lecturer and its generally a more engaging activity than a whole cohort lecture - you're more engaged in more practical activities that you can only achieve in a small group setting. You're sort of excited about what you're going to learn - the sort of wow factor I guess.

How has this kind of experience been affected by events over the last 12 months?

Has been difficult to be sat in front of a screen and be engaged in learning in the same way because the practical hands-on activities or the group talk is very different in an online setting. Being put in breakout rooms is not the same. It takes out some of the engagement and I've found it at times difficult to be as interested. It challenges the end goal motivation because it removes that social aspect that's really important. It changes the way you perceive learning because now when I think of being in a lecture, I think of being in front of a computer listening to someone talking at me for an hour which I guess is a very traditional view of university looks like.

Guided interrogation of pictorial meaning, and alignment to the concept

RC1_IGA_2

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

CI: Related to the concept of vocation but this is repesented here by a very specific scene. The ability to visualise this provides clear motivation to engage with learning.

Specific detail. There is a clear visualisation of career goal supported by current learning and experience.

Vocation represented by IGA_1 represents teaching as a noble ambition. It contrasts with the reality signified here. Motivation to engage in learning is enhanced by opportunity experience this real scenario but driven by the noble imperative..

Engagement driven by relationship with lecturer, interaction in a space that is open, welcoming & conducive to learning.

Student experience has consisted of contrasting learning scenarios - placement/campus/remote. Engagement in each is different and highlights the importance of social interaction as an engagement concept.

Career Goal (Vocation) as an Engagement Concept

Representamen

Image Elements

Furniture, tables, chairs, smartboard, storage, poster, open window, curtain open.Group of young children with one adult.

Object

Picture Object + Concept Object
(PO+CO)

PO: An adult standing in a room talking to children

CO: The existing body of knowledge, everything that has been written or said about student engagement

Figure 5.1:Michael IG Analysis Image 2

Mediated by the broad context described above, Michael's engagement with learning is driven strongly by his sense of vocation of being a teacher in the classroom. The IG Map (Figure 5.2) captures the key aspects of the narrative around this as he elaborated and explained how his ideas, the image and the concept of engagement were linked.

> *My end goal was always to have a classroom of my own. I wasn't interested in the people in the image, it was the idea of the classroom space. This is important to me; I think my engagement with learning would differ if I didn't have such a concrete idea of where I want to be.*
>
> *(Michael, RC1_IGA2)*

The scene depicted in the image represents a specific kind of environment; it represents Michael's visualisation of a vocational goal that relates directly to his experience as a student and creates an opportunity to explore engagement from different angles. In this case, he has a strong connection with the image in that it not only represents an outcome of engagement with learning in the long term, it also represents the reality of his experience as a student. In this sense the image as an IG artefact provides insight into the relationship between career goal as an outcome of engagement, as motivation in the short term and how these are manifested in his experience at university. This is clearly a strong association for Michael and although he states that he 'wasn't interested in the people in the image', through the process of IG analysis and the guided reflection it offers, he elaborates on this as follows,

> [Describing the adult (teacher) in the image] *There's an informality in the way he's dressed, a more realistic view of a current classroom... He looks like he has a good relationship with the pupils.*
>
> *(Michael, RC1_IGA2)*

The narrative progressed beyond his reflection on school-based placements to a consideration of learning environments he had experienced at university.

> *...it's those workshop groups which are in a similar set up, a group of you in a room with a lecturer and its generally a more engaging activity than a whole cohort lecture...You're sort of excited about what you're going to learn.*

What emerges from his thinking here is a deeper understanding of how Michael understands engagement with learning. Not only how he conceptualises it but how he recognises the centrality of it to being a student, how it exists as a motivating factor mediated by the physical and sociocultural environment of the university, and how it relates to his career goals as an outcome over the longer term.

The sociomaterial conditions for Michael are defined by the university and his status as a student, his relationships with people at university and beyond, and by the profession that represents his current career goal. These concepts are entangled with the reality of his experience, and it is as part of this that his engagement with learning manifests as a state that he can reflect on, and as behaviours that may be recognisable to others. IGA invites questions about student engagement that acknowledge the interplay of these sociomaterial conditions and positions it as a highly distributed concept rather than one embodied by the individual level or easily accounted for.

Leading with this perspective generates more questions and has implications not only for the way in which we talk about engagement but also its status as a commodity in the strategic discourse across Higher Education institutions (Komljenovic, 2022). I return to these issues in the following chapter as I reflect on findings from both phases of this research. The more immediate purpose here is to learn more about how the participants in Phase One understand engagement by examining the outcomes from Jane and Megan.

5.3.2 Student vignette (Jane): "Study Space" as a SE concept

At the time of this research activity, Jane was a second year undergraduate Psychology student; she identified the notion of 'study space' as being central to her engagement with learning. Rather than searching for an image online, she chose to take this photograph (Figure 5.3) and include it in her visual diary as a powerful representation of her study space. This deskspace is in her own room in the student halls of residence and in that sense is highly situated and has significant influence on the way in which she

engages with learning as part of her overall student experience. She describes it as "*a study space organised for me. It shows how I operate*."

The IGA process provides a framework through which Jane can be guided to elaborate on this statement, unpick the complex layers of meaning associated with the image and develop a deeper understanding of 'study space' as an engagement concept.

The descriptive stage (representamen) of the process provides an opportunity to acknowledge each element of this complex vignette taken from Jane's everyday experience as a student. What becomes obvious as this aspect of the conversation develops is that each object by the way in which it is identified has significance and agency:

- *My bookshelf with different library books*
- *Diary - I write everything down, I prefer a written one rather than online*
- *Coffee machine behind it - can't live without coffee*
- *A massive water bottle - holds a gallon. Motivates me to stay hydrated*
- *My computer (desktop) with post it notes (cos my memory's terrible)*
- *Underneath the desk is a massive sketch book*
- *A laptop on a stand with a lamp behind it*
- *Another notepad and then my plants (windowsill)*

There is little that is left to chance in this description of Jane's study space with a sense that engagement is not a passive concept here, that it is a managed state, reliant on a proactive approach to learning. The analytical dialogue develops into a consideration of how these individual elements are configured as a whole, giving Jane the opportunity to think through the image and elaborate on how this assemblage of things links to the concept of engagement and how this is assimilated into her day-to-day experience. The study space becomes a "*command centre*" with the PC/Phone/Laptop being fully integrated giving seamless access to university systems that support Jane's learning but also linking her to work.

Interrogation Cues.
Guided reflection and elaboration of meaning

bringing together the interpretation of picture + concept

RC2_IGA_2

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Engagement, Study Space/ Workspace

How do the objects here relate to your engagement?

CI: A personalised study space that provides access to learning supports engagement.

Access and organisation
It shows how I operate
Laptop tethered to work (call centre)
Desktop is University work (email)
PC/Laptop/ phone - integrated - all Apple - makes it easier.
It's a study space organised for me

Concurrent foci of engagement (multiplicity)
Engagement with learning doesn't happen in isolation - it happens at the same time as being engaged in other things? Remote working and learning happens at the same time.

PI = A student deskspace

CI = Student Engagement Study Space

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Is the paper based diary significant in that it isn't online?

Yes, I use a real one because I can highlight and stuff, the online one takes too long and I have everything colour coded and open all the time and its easy to see and schedule things in - so it's kind of like having 3 screens.

Are '3 screens' vital to your engagement in learning?

Well, the second computer was necessary for me to be able to engage in learning. Having this bigger screen, like a 27" screen means I can have 2 documents side to side as well.
This is easier than what I was doing which is going to the library, taking my laptop for work (remote call centre) so I can use the library one as my second computer.Yeah, everything's going on but all going on in the same chair - like I don't move, but this space makes everything more accessible.

Access to Learning/Opportunity
An enabling space designed to overcome a challenging student scenario.

How has this understanding of study space been influenced by previous experiences?

I'm not a crammer, it takes me a while to learn something but in a good way. I'm not a quick learner but I'm a dedicated one. I need to be orgalnsed. This is based on trial and error I think I've been influenced by how other people work, observing them and trying out. If I compare myself now with what I was like at the beginning in Year 1, I'm like a different person

Self awareness (metacognitive aspect) - importance of understanding oneself as a learner. How well established is this in student cohorts?

Implications for retention and student success?
Targetted interventions at transition.
Early career conversations

What influenced your thinking about this in the transition from Yr 1 to Yr 2?

I've become more engaged in my learning once I realised what I wanted to do with my life and how much work I need to put into it, and how much work I need to put into it compared with everyone else. Some people finds things easy that I find the most difficult thing in the world - like it takes me a while to read an article and make sense of it because I read the same line 5 times in a row.
I want to do a doctorate in clinical psychology and want to work with adolescents with learning disorders, I'm quite motivated.

Career Goal/Success driving engagement with learning.

Representamen

Image Elements

Bookshelf, books, a diary
Coffee machine
Reading Glasses, post it notes, a mug
water bottle
Computer (desktop) sketch book
A laptop, a desk lamp, smart speaker, notepad
window sill (Image 1)
cables, plants, window

Student Engagement

Object

Picture Object + Concept Object (PO+CO)

PO: A desk with a laptop, a PC and other devices

CO: The existing body of knowledge, everything that has been written or said about student engagement

Figure 5.2: IGA Example through Image 2 (by Jane)

Although she is a full-time student, Jane is also employed as a full-time Customer Service Advisor (CSA),

> *It's online call centre work, easiest job in the world. I sit here with a headset on waiting for a call to come through on the laptop and its normally resolved in like 30 seconds. It means I can't log out of the work system and be logged into uni at the same time so that's why I decided to buy a big massive screen and another computer. I sit logged into work and can do my uni work at the same time. I probably get between like 3 to 6 hours of sleep per night.*
>
> *Jane (RC2_IGA_2)*

Taken at face value, the image might be an obvious representation of a study space in student accommodation and in that respect the associations with engagement and learning would be easily identified. However, IGA extends the level of interpretation beyond the seemingly obvious to reveal a complex sociomaterial scenario where the concept of engagement with learning is set against engagement with employment.

As an IG artefact, the image provides Jane with the space to reflect on her experience and connect abstract concepts associated with engagement to the material reality of her day-to-day student life. Understanding how Jane engages in learning as a student is not feasible without appreciating how she negotiates the commitment to working as a CSA. Engagement (with learning, with work) is happening concurrently, it is not an abstract concept, but embodied in the arrangement of physical things seen in this image, by their proximity and connection to each other and in the nature of the intra-action between them and Jane.

Jane's engagement is facilitated largely through her interactions with the technology. As previously noted, she has taken explicit steps to assemble and connect the hardware into this configuration.

> *Well, the second computer was necessary for me to be able to engage in learning and having this bigger screen, like a 27" screen means I can have 2 documents side to side as well. This is easier than what I was doing, which is going to the library, taking my laptop (for work) so I can use the library one*

as my second computer. Yeah, everything's going on, but all going on in the same chair - like I don't move, but this space makes everything more accessible.

Jane (RC2_IGA_2)

Technology has a key role to play here with respect to engagement with learning, it connects Jane directly to virtual university spaces and ensures accessibility. It transforms this study space into an enabling environment configured to address a challenging scenario where she must also commit to work to support herself as a student. Technology as a facilitator, as an engagement concept and as a highly distributed network of physical devices is also a vexatious presence in Jane's study environment. It invites the possibility of paid work into this space, creates a potential barrier to learning and is a significant influence in the way in which she engages with university commitments. There are contradictory forces intersecting here to challenge normative assumptions about engagement with learning and create a blurring of spaces and identities that Jane must tactically negotiate.

The image as an IG artefact is a powerful representation of the reality of Jane's experience of being a student. Underpinning the choice to use this space for both work and study is Jane's clear understanding of how she operates and how she can best negotiate the inherent challenges and study in this space,

… it takes me a while to learn something but in a good way. I'm not a quick learner but I'm a dedicated one. It's just trial and error, I think I've been influenced by how other people work, observing them and trying out. If I compare myself now with what I was like at the beginning in Year 1, I'm like a different person. I really prioritise productivity.

Jane (RC2_IGA_2)

The metacognitive perspective is important here as it reveals Jane's choices regarding study space are logically informed by her reflections on past experiences which consequently influences how she now engages with learning. This narrative provides some insight into how student preferences regarding study spaces change over the

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course of their university experience. As such, there may be considerations here for faculty teams designing and creating flexible and sustainable learning areas on campus to support student engagement.

In Jane's case, the analysis of this single image further expands our understanding of the nature of engagement with learning. It offers an intricate, personal perspective on student engagement foregrounding the importance of space, the influence of technology, the nature of barriers to engagement and how the interplay between these in a complex sociomaterial arena is negotiated.

5.3.3 Student vignette (Megan): "Environment" & "Success" as SE concepts

At the time this research activity was carried out, Megan was a second year undergraduate Education student. Two images from her visual diary will be presented in this section of the study (Figure 5.4 and Figure 5.5 below) to further illustrate the process and to demonstrate how similar engagement concepts are represented and interpreted differently across the three participants in Phase One. Furthermore, it indicates how the common themes arising across the three research conversations at this stage inform the more directed approach to the guided independent research activity in Phase Two.

The image in Figure 5.4 was chosen by Megan to represent 'Environment' as an engagement concept. As previously mentioned, her initial intention was to capture her ideas as a drawing before reverting to an online search,

> *I started to draw an image, including a laptop on a desk, by a window, with warm sunlight flooding the room, but I didn't feel it captured the sunlight particularly well, so I found this image online using the search criteria 'warm sunlight home office' in Google.*
>
> Megan (RC3_IGA_1)

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

A study environment, engaging in learning

What is important to you in order to be actively engaged in your academic study?

An environment that is comfortable, tidy, safe and peaceful. Natural light, sounds & plants.

An environment that sustains learning

Sitting in this kind of environment gets me into the right zone to be motivated.

How do the things in this image relate to the concept of engagement and your experience?

They all work together, gives it a natural feel, the sunlight and breeze that lifts the mood. Feels like you're not trapped inside, there's a connection to the outside. At home there is a lane that goes down to the sea, people walk by occasionally but its not busy.

How does the laptop relate to engagement?

Most of my work is done via the laptop: accessing lectures, writing, researching. It connects this space to university.

The water bottle?

It represents for me that you got everything you need right there, you're going to be in this mode for quite a little while, you need a drink to hand. Everything you need altogether in one space. If it wasn't here I'd have to move and interrupt what I'm doing.

Mobile Phone?

Connection to the outside. This is not an isolated space. I control the level of interaction and block incoming messages.

In what way does this represent your idea of the student experience at University?

It's what I expected, what I had in my head when I tought about studying at home. The simple desk, natural light and greenery outside resemble the feel of the campus experience

bringing together the interpretation of picture + concept

Guided interrogation of pictorial meaning, and alignment to the concept

RC3_IGA_1

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

PI = A deskspace at home

CI = Student engagement
Study environment

CI: Engagement with learning is not an isolated experience in this environment. Supports motivation, calm & wellbeing

Environment as a sanctuary: A reinforcement of the student status within the home environment. This environment communicates a message and supports engagement with University learning.

Representamen

Image Elements | Student Engagement

Chair, Desk, Mobile Phone, Water Bottle, House Plant, Window, Sunlight, Curtain, Buildings, Trees

Object

Picture Object + Concept Object (PO+CO)

PO: A desk with a laptop in front of a window

CO: The existing body of knowledge, everything that has been written or said about student engagement

Figure 5.3:IGA Example through Image 1 (Megan)

As a photograph of a deskspace, there are some obvious similarities here with Jane's 'Study Space' but in the same manner that she presented it as a 'study space organised for me', Megan's image reflects an alternative reality, one that is defined by her own circumstance. There are also differences in the way in which the notion of 'space' is interpreted, for Jane, physical space embeds temporal and cognitive space as she responds to the demands of her CMA role. Megan's conceptualisation of 'environment' has a primary concern for the physical space and is less compromised by the type of vexatious forces described by Jane. I return to these ideas later in this analysis.

The similarities between Jane and Megan's deskspace are easily noticed at the descriptive level of the analysis with key objects present in both: desk, chair, lamp, mobile phone, water bottle, but there is also a comparative absence of things in Megan's case. In terms of it being more or less conducive to engagement with learning, what is more important to Megan than the assemblage of objects on the desk, is where it is located. Reflecting on her image choice through the structure of IG analysis Megan explains how the 'study space' becomes an 'environment', a more expansive scenario acknowledging the characteristics and the agency of the space beyond the desk and the confines of the room.

> *The chair is positioned facing the window. The wall beside the desk is basked in warm sunlight coming through the window, the curtain is drawn back. There are buildings, trees and church visible through the window. I'm imagining that I can hear birdsong through the open window.*
>
> Megan (RC3_IGA_1)

As the analytical conversation progresses from the descriptive to the interpretive stage, Megan begins to elaborate about how this image, labelled as "an environment with access to nature", links to the concept of engagement with learning.

> *I see a comfortable, tidy, safe relatively quiet working space, with access to nature. This is precisely my preference for an environment to work in which motivates me to learn. It quite closely replicates my own working space at home and when I can't be in such a space, it's the type of environment I try*

to imagine I'm in. I think it's important to have access to a space which relaxes your mind.

<div align="right">Megan (RC3_IGA_1)</div>

Megan conceptualises this space as a form of sanctuary, as a place to study quietly that might be removed from the "hustle and bustle" as she calls it, but at the same time does not feel isolated. Feeling connected to the outside world is an important factor underpinning Megan's engagement; the window, plants, trees, natural light act positively to sustain it.

Although not imagined in the same way, there is a clear association here to one of Jane's images. In addition to her conceptualisation of 'study space', Jane's diary also contained an image to depict 'environment as an engagement concept' (RC2_IGA_1). This was a photograph taken of her "windowsill garden", adjacent to her deskspace. Elaborating on this during the research conversation it was clear that the plants on the windowsill and the view through the window sustained her engagement in a similar way to the *environment beyond the desk* in Megan's case. However, Jane conceptualised this as a

… a distraction. A break from study where I can think about something else. Something that needs my attention and something that I enjoy.

<div align="right">Jane (RC2_IGA_1)</div>

This notion of environment, in both cases, appears to work against feelings of isolation as they study in their respective spaces. The natural elements bringing a connection to an extended environment with opportunities for short term, purposeful distractions that may have some positive benefits in sustaining engagement with learning over the long term. Although beyond the immediate scope of this study, there is evidence to support this line of thinking in literature associated with educational psychology and human cognition. Most recently, Preiss & Carmona (2023) examine the role of metacognition in mind wandering and mindfulness in relation to learning; Harerimana's (2019) consideration of the Zeigarnik Effect or interrupted learning as the secret to

sustainable performance, and Kirschner et al's (2018) review of cognitive load theory in relation to individual and collaborative learning.

Analysis of IG artefacts from Megan and Jane clearly establish that connection to an extended, natural, or external environment is an important component in their conceptualisation of engagement. Related to this is the importance of 'feeling connected' through the affordances of technology. Although there is a comparative scarcity of technology in Megan's case, the devices represented in her image still connect her to the virtual spaces of the university. This sense of connection also extends to the presence of the mobile phone in the image, but this is about feeling connected to other aspects of her life,

> *The phone for me is that there is always that connection to the outside world.*
>
> *… I'm working on something, I'm really engaged in it but I've still got that connection to other things that are going on that can come to me and are sort of directed by me, I've kind of got some control, I can turn the volume down, I can turn the notifications off. I can block out everything that I need to block out but still have that connection if I need it.*

<div align="right">Megan (RC3_IGA_1)</div>

What emerges from the research conversations with Jane and Megan is a clear indication of how they have chosen an image to represent a physical space connecting them to the idea of engagement. Their accounts provide an insight into how these spaces are differently conceived and how the materiality of these spaces connect to student engagement at a conceptual level and as part of their everyday experience.

What is evident from the analysis so far is that the IGA process has a diffractive capacity similar to the work described by Scholes in Fenwick et al (2015, p.136), as it begins to unpick layers of meaning in the image artefact. It supports participants in elaborate thinking and reflection to foreground relationships between representations of material objects and student engagement concepts. For Jane and Megan, it enables them to consider how they conceive of and experience engagement, to identify inhibiting and

enabling forces, and reinforces the importance of connection rather than isolation. It illustrates how the spaces represented in the images constitute a complex assemblage of human, material and digital entities where the integrity of the space and conditions for learning are preserved and challenged through these complex and dynamic intra-acting sociomaterial forces.

Before summarising the findings from Phase One in more detail, I now turn to consider Megan's conceptualisation of Success/Goal and how it aligns with Michael's concept of Vocation.

Megan associates the image in Figure 5.5 with the concept of 'success/goal', linking this to engagement in a similar manner to Michael. Although the concept association is the same, the image that Megan chooses to represent this is clearly different from that of Michael's. This alternative perspective on the concept of 'goal', encapsulated by the image of the bridge, offers a different analytical vantage point and an opportunity to gain more insight into how this engagement concept relates to the reality of Megan's experience.

This is an image object that Megan found through an online search (Google) using the criteria "bridging the gap to get somewhere", she describes it as,

> *… a rope slat bridge spanning a wide stretch of water… The bridge doesn't look completely secure, but it's not too rickety, it appears passable with care. The ropes are slack… the lats are quite far apart… a lot of care and effort required to cross.*

<div align="right">Megan (RC3_IGA_3)</div>

Interrogation Cues.
Guided reflection and elaboration of meaning

bringing together the interpretation of picture + concept

Guided interrogation of pictorial meaning, and alignment to the concept

RC3_IGA_3

What is the concept associated with this image?

Engagement leads to success

What is important to you in order to be actively engaged in your academic study?

Relevance of learning to progress and longer term goals.

How is the bridge related to the engagement and your experience?

The bridge represents a path to a destination (career goal). I'm most engaged when the learning is something that I know is important to this journey. I know where I'm going but I can't see the end yet.

The nature of the bridge?

It looks rickety, a bit unstable but passable. The slats are quite far apart and you could fall. You need commitment, care and effort.
There is challenge and jeopardy but this is part of the journey I need to go on.

What is the relationship between learning and the bridge?

The bridge is built on current knowledge and understanding - its fairly secure - it can get me to where I want to be, but I know that my path could be less stressful, more enjoyable if I could strengthen that bridge.

The River?

Adds to the jeopardy, but there isn't far to fall and the bridge provides support. There is security, you can engage safely.

Is the absence of people significant?

Its about myself strengthening my knowledge, strengthening the bridge, getting myself to where I need to be. I prefer learning on my own rather than in collaborative situations.

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

PI = A rope bridge over a river

CI = Student Engagement Success/Goal/Outcomes

CI: A learning journey with challenge, support and an end goal.

Engagement with learning is driven by the need the need to strengthen knowledge & understanding at a discipline level

Support structures facilitate engagement, motivation and success.

RC3_IGA_1 and IGA_2 are situated in this concept of learning journey.

Engagement with learning is not socially motivated.

Representamen

Image Elements	Student Engagement

Rope, Bridge, Wooden slats, water, rock face, mountains, sunlight, sky.

Object

Picture Object + Concept Object (PO+CO)

PO: A rope bridge spanning a river.

CO: The existing body of knowledge, everything that has been written or said about student engagement

Figure 5.4:IGA Example through Image 3 (Megan)

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It would be tempting to make simple associations between the search terms used by Megan, the image of the bridge and normative assumptions around the nature of the 'student journey'. However, as in each research conversation, the IGA process helps to guard against this by foregrounding the image as an IG artefact, a material representation of the concept in the first instance and then how it connects to Megan's experience. The diffractive capacity of IG artefact generates alternative perspectives and guards against obvious assumptions leading to a more insightful, holistic understanding of engagement.

Megan's starting point when asked to elaborate in this case was not to interpret this as a journey, but to see it as a challenge, where the bridge represents her knowledge and understanding and the spaces between the slats, gaps in her knowledge.

> *… what I'm learning is going to help me put extra slats on the bridge and make progress. If I can fill those gaps by understanding myself better or gaining more knowledge towards my career, I can progress more confidently.*

> Megan (RC3_IGA_3)

This challenge gives purpose to Megan's learning, supporting and sustaining it on the path towards her career goal. A journey of course, but conceptualised differently to one that simply describes a shift from A to B. The image of the bridge as a metaphor for that journey is significant not as a whole but because of the finer detail represented by the individual elements. What is also significant in this case is the absence of people in the image when compared to the scene that Michael associated with this concept.

Recalling Michael's interpretation of 'career goal' as a concept that strongly influenced his engagement, his image did show an environment with people in it. Although he initially explains that the people in the image were not his first concern, they do become centrally important to the nature of the classroom environment he perceives as his career goal. Thinking through the image, he elaborates on that point and begins to then

describe how he values relationships and opportunities to learn in collaborative situations. In Megan's case, she signifies the absence of people as,

> *… my life. I do everything kind of solo. The bridge as knowledge, I don't see anyone supporting me, it's more about me strengthening it, supporting myself to get to where I want to be.*

<div align="right">Megan (RC3_IGA_3)</div>

She explains further stating that she prefers to learn in situations where she can work alone rather than collaboratively, and that she feels the tension in situations where others might not be engaged to the same extent as her.

These conversations about a bridge signifying success or a classroom representing a career goal begin to reveal similarities in the way in which engagement is perceived by individual students. They also highlight entry points for inquiry into how the constructs they associate with engagement relate to learning preferences, which seems then likely to have a reciprocal influence on how they do engage. In Megan's case, success/goal is not perceived as a clear destination in the way in which Michael's image depicted it, her goal is less defined, engagement is associated with meeting the challenge of getting there. Central to this are the learning preferences Megan identifies and the explicit choices she makes about the strategies she adopts to make progress towards her goal.

The bridge as a metaphor for engagement is not a representation of Megan's everyday materiality (as in Jane's deskspace example) but something that she has abstractly connected to the concept of engagement and learning. This abstraction and the image as a material representation has an agentic presence in Megan's reflection with the bridge as a commonly understood structure to overcome obstacles and support progress.

5.4 Phase One: Summary of findings

Phase One involved online research conversations with each of the three participants during which the IG framework was used to analyse image artefacts from their multimodal diaries and explore the concept of student engagement. As the primary unit of analysis, each image artefact supported critical reflection and the development of a rich dialogue providing new and alternative understandings of how they understood engagement. The section above detailed this process and presented data in the form of IG Maps by specifically focussing on the analysis of four images (Appendix 1 contains all IG Maps from Phase One).

Clear lines of inquiry emerge through the subsequent analysis of the six remaining images in Phase One and the following discussion is a thematic summary drawing on this work. It gives an early indication of how students understand engagement, the sociomaterial phenomena that they associate with it and how these are assimilated into their everyday experiences. Findings so far indicate that a sociomaterial perspective realised through an IG approach helps to conceptualise engagement as an emergent and dynamic state rather than a fixed construct. IGA in Phase One exposes some intricacy in the students' understanding of engagement and creates multiple vantage points from which to examine it. What becomes apparent in the detail of the research conversations, is not so much how students acknowledge institutional constructs of engagement, but how they understand engagement at a personal level and how they assimilate into their lifeworld.

Figure 5.6 (below) brings together the images and the engagement concepts identified by the participants in Phase One. It illustrates alignment between ideas and is a starting point for this summary of interim findings.

The broad themes that emerge from Phase One are defined at the end of this section and further problematised to show how they informed Phase Two.
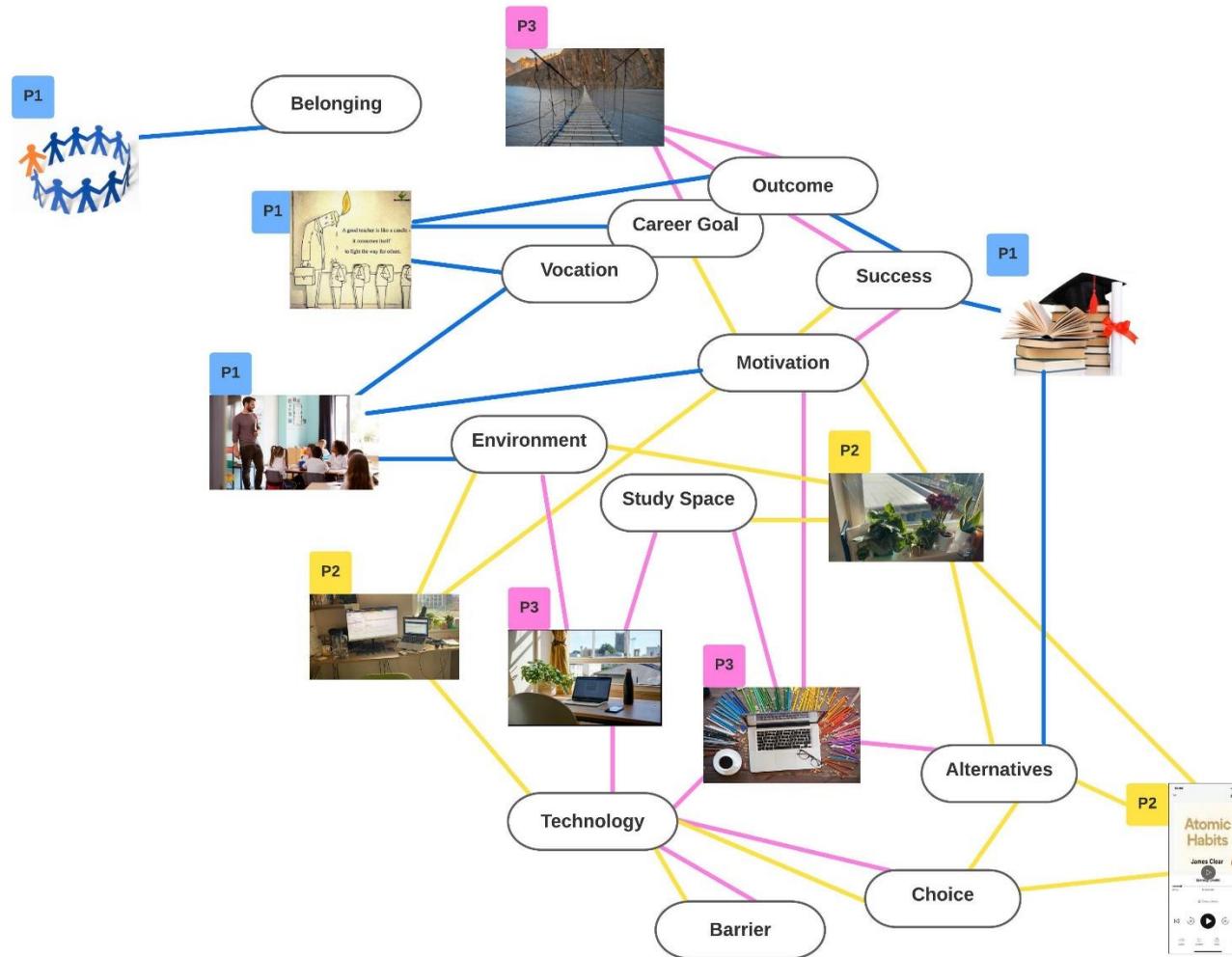
Figure 5.5:Engagement concepts identified by participants in Phase One

5.4.1 Study Environment

| Image 1 (Jane) | Image 2 (Jane) | Image 1 (Megan) |

Figure 5.6: Study Environment

The study environment or study space is a physical embodiment of engagement, and its characteristics are defined by the sociomaterial forces that define the circumstances of the student and the reciprocal action they take to assimilate and manage those demands. These spaces represent an assemblage of agentic devices, objects or things brought together by the student to bolster their capacity to engage with learning. In these spaces, students are physically isolated from others, finding sanctuary in an environment that they find conducive to study. However, the connection and proximity to the 'outside world', the spaces beyond the desk, appear to be significant features. Natural light, windows with a view and indoor plants create balance in a space that is otherwise created with learning in mind.

5.4.2 Technology

Connection to the 'outside world' is also facilitated by the technology that is a central feature of these spaces. The devices brought into these spaces by the students connect them to the virtual spaces of the university, to their peers, family and the internet of things, itself a sociomaterial phenomenon embodied in a myriad of other devices. Students identify connections to university systems as being central to learning as they engage with online lectures, tutorials and a wide range of resources. There is also a sense that technology has the potential to disrupt their engagement by inviting the outside world into their study space.

In that sense, IGA presents an opportunity to step back from easy assumptions that regard technology as a facilitator of learning and contribute to more nuanced understandings of its relationship to engagement.

5.4.3 Barriers

Technology as a facilitator and as a barrier was a theme that featured throughout the research conversations in Phase One. The study environment is undoubtedly compromised in a situation where full-time paid work can be undertaken alongside, and in the same space as learning takes place. Although technology helps to breach the divide between work and study, the barrier as such originates not in the technology or the digital space itself, but in the personal circumstances of individuals obliged to earn a salary to support themselves as a student. The position of technology in this situation is a complex one, as a force capable of disrupting engagement with learning it is also characterised and harnessed as an essential component in a solution that addresses a more embedded barrier.

The micro instances captured by IGA are likely to be replicated to varying degrees across diverse student populations where the individuality of circumstance is moulded by sociomaterial relations and sociocultural circumstance. Barriers to engagement require a level of negotiation and in the act of this, student agency is challenged by the agentic force of circumstance and material reality of everyday life.

5.4.4 Opposites and Alternatives

The dialogue in Phase One explored the participant's understanding of engagement with learning, but over the course of those conversations the idea of not being engaged or being alternatively engaged emerged as an important concept. The opposite to engagement with learning was characterised as being engaged in something not associated with learning that was directed by the university. In some cases, this was easily distinguishable for example, when Jane was involved in activity related to her role as an online Customer Support Advisor she was not engaged in learning.

In a similar manner, attending to house plants (Jane), taking calls from a family member (Megan) or feeling dis-engaged in a taught session (Michael) were all positioned as the opposite of engagement with learning. IGA provided an opportunity to explore these ideas and gain some insight into levels of complexity associated with the multiplicity of engagement.

Opposite behaviours were characterised as breaks in learning, often through choice but also as a result of interruption. Interruptions were perceived as a negative, disruptive forces that needed to be managed, whereas choosing to 'do something else' was a positive distraction seen to support engagement over the long term. Not being engaged through lack of interest in taught sessions related to being demotivated by the subject or mode of delivery and effectively shifted the obligation to engage away from the student.

The concept of being alternatively engaged, rather than not engaged as described above, is a related idea and was associated with purposeful distraction such as listening to a self-help audio book (Jane) or sketching (Megan). However, it was also conceptualised as 'alternative approaches to learning' which were described as having opportunities to be more creative (Megan), choice in how taught sessions were accessed (Michael) or adapted content to increase accessibility for individual needs (Jane).

Importantly, in the context of the research approach this work takes, these ideas and insights originate through the image artefacts curated by Michael, Jane and Megan. It shows how IGA supports their critical thinking about engagement with learning, thinking which takes a serendipitous turn revealing complex interrelationships and multiplicities at a conceptual level and how these abstract notions are connected to the material reality of students.

5.4.5 Motivation

Image 2 (Michael)   Image 3 (Michael)   Image 3 (Megan)

Figure 5.7:Interpretations of motivation

Each of the participants in Phase One described how the concept of motivation underpinned their engagement with learning but there is a level of complexity here that ensured this should be a continued focus in Phase Two. Motivation is clearly embedded in the fabric of the study environments described by Jane and Megan defined by the way in which they refer to specific objects or arrangements of things as 'keeping them motivated'. Furthermore, images from Michael and Megan related to career goals and success which were a source of motivation over the long term. Although Jane's images did not specifically refer to these concepts, it became clear during the research conversation that she had a clear ambition to pursue further study that would lead to a career in clinical psychology.

> *I've become more engaged in my learning once I realised what I wanted to do with my life and how much work I need to put into it, and how much work I need to put into it compared with everyone else. I want to do a doctorate in clinical psychology and want to work with adolescents with learning disorders, I'm quite motivated.*
>
> (RC2_Jane)

Here, long term goals are translated into short term action and represent powerful intrinsic motivating forces that bolster resilience and positively influence engagement as they are assimilated into the everyday experience of the students. Michael encapsulates this in his comment,

… we've had to put in as much as we can to our study, and it sort of leads to periods of burnout at varying stages but there was a motivation to keep going. My whole motivation behind working and learning is associated with becoming a teacher.

<div align="right">

(RC1_Michael)

</div>

Aligned with this is the concept of success, but more clarity is needed here to greater understand how students relate this to short term engagement. IGA in Phase One, certainly in the case of Michael and Megan, indicates that success is closely aligned with career goal in that it is a significant end point of engagement with learning over the long term. The success of graduating becoming the gateway to the career goal and in that sense aligned with the concept of 'outcome'.

5.4.6 Moving to Phase Two

The analysis and summary of findings to this point provide some indication of how students understand engagement with learning and how images as IG artefacts can help them to reflect on the forces that influence how they engage. These forces are assimilated into the individual experiences of students and were further problematised as follows to inform the approach in Phase Two:

- **Study Environments**: the study environments identified in Phase One are broadly similar in that they are represented by images of deskspaces. What other ways are study environments conceptualised by students? What characteristics are conducive to learning and therefore support engagement? Studying and learning are interrelated concepts, how do students understand this in the context of enabling environments?

- **Technology**: technology is positioned as an enabling force, as a facilitator of learning and engagement, and embedded into the reality of everyday student experience. However, findings from Phase One challenge assumptions about technology, highlighting its potential to disrupt engagement with learning. How do students assimilate this powerful force into their experience, manage the tensions and sustain learning?

- **Barriers**: Forces or conditions that inhibit engagement with learning are conceptualised by students as barriers. The intersection of everyday experience and expectations related to being a student represents a negotiated site where challenges and tensions impact in ways that directly influence engagement with

learning. Phase Two offers an opportunity to gain greater insight into how students conceptualise barriers, how they manage often conflicting priorities, and importantly what strategies they adopt, or support they seek, to resolve these tensions to maximise learning.

- **Motivation**: is characterised as a force that drives engagement with learning. There is a level of complexity associated with this perception, how it is conceptualised and how it is materially represented. The research activity in Phase Two offers an opportunity to further explore this an understand its relationship with the concepts of **Outcome** and **Study Environment**.

- **Alternatives** and **Opposites**: analysis of the dialogue from Phase One suggests these are interrelated concepts both offering insight into the behaviours that students associate with engagement and learning. How engagement is characterised by university, what behaviours are valued and seen to constitute engagement are important questions to explore in Phase Two. The notion of being disengaged as the opposite to being engaged resulting from a distraction, or differently engaged in an alternative activity as a purposeful step back, are complex sites for investigation in the context of this research.

- **Outcome**: is conceptualised as a function of engagement and is related to success over the long term. Completing a degree programme and moving into a graduate career is characterised by students as a successful outcome. Having a sense of direction or ambition in this context is described in Phase One as a career goal, a concept seen to sustain motivation to engage in learning. These ideas are explored in more detail in Phase Two of this research to more fully understand how students assimilate notions of employability into their understanding of engagement. Given the sense that outcome as an engagement concept seems to be associated with long term goals, a question arises here regarding how this might also be framed in the short term as part of a more immediate learning experience. In other words, how might outcomes related to module assessment for example, relate to and influence engagement with learning?

5.5 Discussion of Phase Two Findings

Figure 5.8:The many faces of student engagement with learning: Image artefacts gallery - Phases One & Two

This section of the thesis draws on the research conversations that were conducted in Phase Two of the research. The approach to data collection was informed by outcomes in Phase One and structured around the following main themes:

- Study environment – spaces that support engagement with learning
- Alternative engagement
- Influence of technology on engagement
- Barriers to engagement with learning
- Motivation factors
- Opposites to engagement with learning
- Outcomes of engagement with learning

The primary analysis of image artefacts in each of the seven research conversations generated an additional 49 IG Maps (Appendix 3). The following narrative builds from the subsequent thematic analysis across that body of work, drawing on recordings and transcripts of research conversations as well as acknowledging the outcomes from Phase One. The broad themes and interrelationships emerging from that process are represented by Figure 5.10 (following) as the first iteration of the new sociomaterial model of student engagement. Although this lacks refinement as a conceptual model at this stage, each element is extracted in turn to support the structure of the following discussion.

5.5.1 Enabling Environments

The analysis of images in Phase Two provides additional insight into the associations being made between environment and engagement with learning. There is a clear indication that the physical characteristics of the immediate space influence engagement behaviours and that students are cognisant of this. Guided to elaborate on their thinking through the IGA process, they begin to describe how they take proactive steps to adapt spaces to support their learning and how they choose spaces that align closely with their needs at the time.
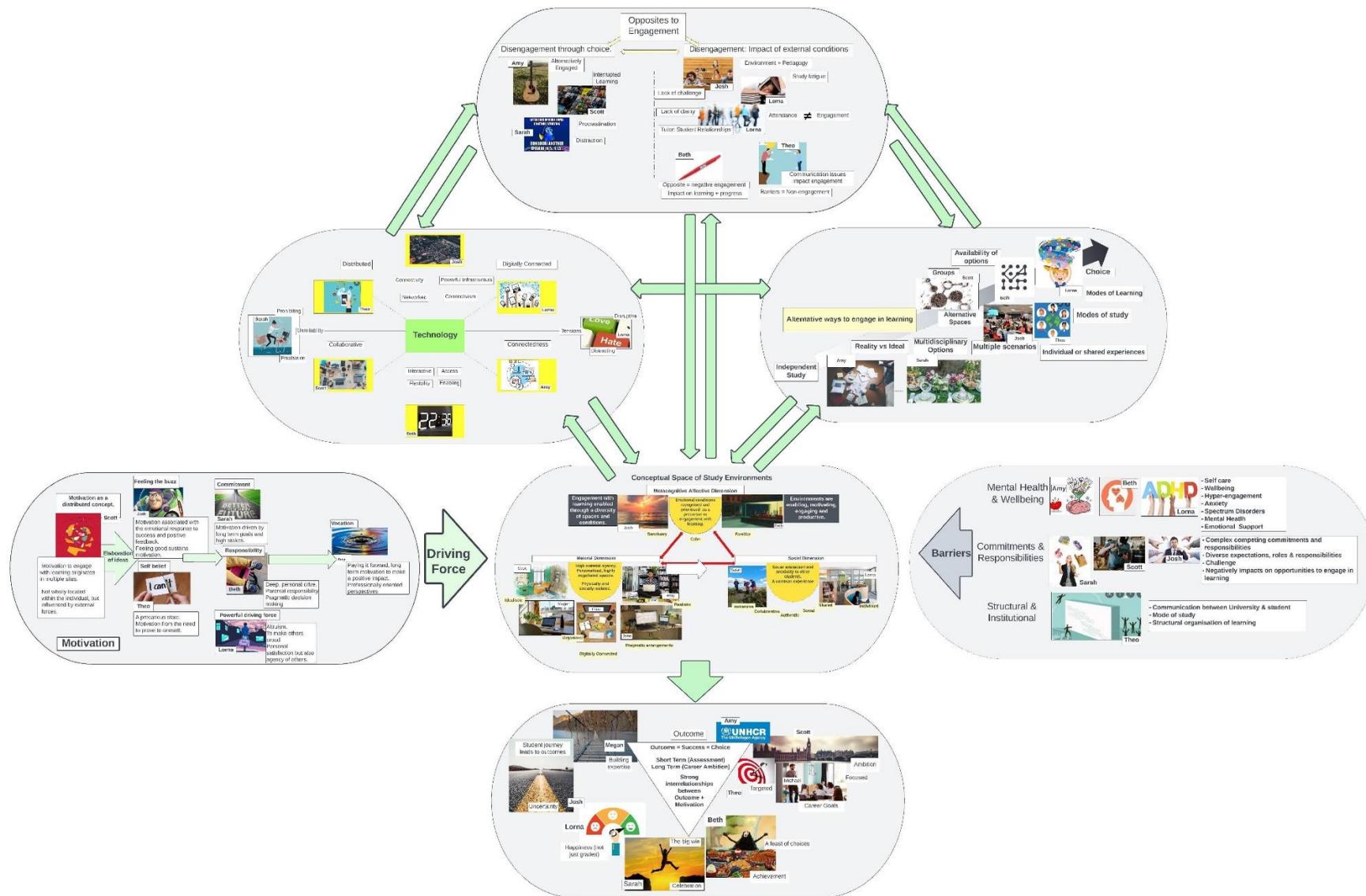
Figure 5.9:Student Engagement: Sociomaterial working model (1st iteration)

In this way, engagement with learning is conceptualised by students as a highly situated, carefully negotiated behaviour occurring across diverse spaces. These study environments are central to student engagement and the embodiment of social, material and digital phenomena that are differently assimilated into the experience of individual students. This has been extracted from Figure 5.10 and is illustrated below as the conceptual space of study environments (Figure 5.11).

In Phase One of this research, the concept of student engagement was associated with study spaces and environments deemed to be conducive to learning, and were largely represented by material objects such as desks, chairs, PCs etc. The contributions from participants in Phase Two expands the notion of study environment as an engagement concept and introduces diversity and complexity to this. The IGA process supports a detailed examination of the concept, moving beyond simple associations and towards an understanding of how these spaces connect to student perceptions of engagement with learning.

Study Environment: Metacognitive Affective Dimension

The images contributed by Josh and Beth were metaphors for study environments that evoked emotion or feelings about what a study space should be. This was an expression of the emotional conditions that they felt were not only conducive to learning but were important prerequisites to engagement.

Commenting on her choice of image, Beth explains that,

> *It represents stillness to me, which is what I believe to be most important…*
> *a place to be as productive as possible… a quiet space with little to no*
> *distraction.*
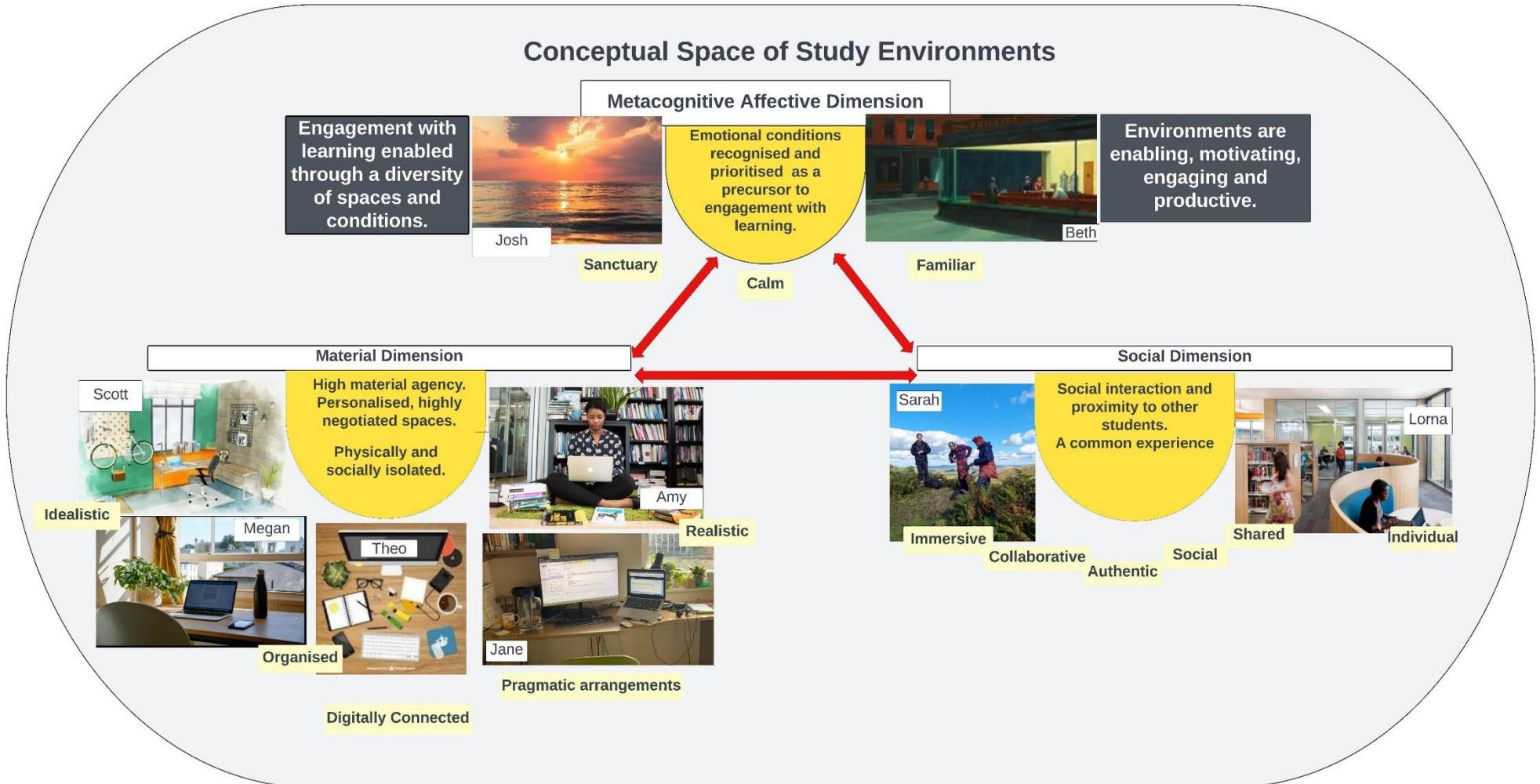
Figure 5.10:Conceptual Space of Study Environments

She elaborates and explains further that she has a copy of this painting (Nighthawks by Edward Hopper) in her house which is where she studies late in the evening. She describes the scene in the diner depicted by the painting as one with a degree of social connectedness but no collaboration and aligns this with her current experience of being on a course with other students, but not necessarily working with them. As a part time postgraduate student, she has come to understand the conditions that work best for her but explains that this was not always the case,

> *When you go to university for the first time, I don't think I knew what the ideal space was for me. I thought it was the library, but it didn't turn out to be. I found it an overwhelming big space.*

This sense of 'knowing' emerges as a metacognitive thread facilitated by the IG process and connecting other concepts and experiences in this research. In Beth's case, it leads to insights about how her experiences have strengthened affective connections to her study environment and what the essential characteristics of such a space should be.

A particular element of the painting depicted by the image is the interface between inside and outside created by the large window of the diner. This abstract representation connects with Beth's experience and her conceptualisation of engagement,

> *The windows mean it's very transparent, it's not claustrophobic when you're inside there's a lot of outside inside.*

Rather than being isolated, the quiet, still, seemingly solitary space gives Beth the "breathing room" she needs to study. Beth's interpretation of the image and the concept come together at an affective level as she reflects on the nature of this environment and how it represents a time of day when her commitments to others are minimised creating space for her to study. She understands study space as a concept with physical, temporal, and social dimensions that intra-act to influence engagement

with learning and in Beth's case minimise the influence of the social dimension to create the physical, temporal space conducive to learning.

These ideas correlate strongly with Josh's rationale for choosing to associate an image of a sunrise with the notion of a study environment,

> *I chose this because its calm. A study environment that is calm helps me to engage in learning, gives me space to think.*

Beth and Josh attribute a sense of sanctuary to these images and the spaces they represent using vocabulary that evokes feelings of calmness, quietness, familiarity, and minimal distraction. Importantly though, in describing the antecedents for their engagement with learning they are not describing the same kind of space. Beth is home, working late into the evening, Josh seeks sanctuary in the library, away from the distraction of what he considers to be the compromised environment of a busy student household.

Prioritising the affective dimension leads Josh and Beth to choose image artefacts that are a stark contrast to the deskspace images in Phase One, which without their interpretation would not readily be associated with the concept of student engagement. The metacognitive affective perspective offered by Beth and Josh provides some insight into the ways in which they assimilate often conflicting sociomaterial forces into their day-to-day experience of being a student. The agentic capacity of these forces influences the behaviour of Josh and Beth and their choices about when and where they study and in doing so leads to insights about engagement that extend beyond the tangible or physical nature of such spaces. The material and social dimensions or study environments are foregrounded by other participants in Phase Two and offer perspectives to complement this.

Study Environment: Material Dimension

Sanctuary extends beyond the affective dimension and is characterised by the images of study spaces that are physically and socially isolated from other learners. The spaces depicted by this group of images (shown in Figure 5.11) represent study environments that exist at the intersection of student and domestic life. As such clearly defined spaces, they preserve the conditions in which engagement with learning is possible and it is this protectionist characteristic that aligns them to the idea of sanctuary. As noted by Amy, in many respects they represent an idealistic view of what a study space might be,

> *I think most people assume people study at a desk and are quite confined*
> *and discrete,*

although her own interpretation of this is sitting on the floor amongst books and papers.

Central to the effectiveness of these spaces are the material objects brought in and arranged by the students. Seen through a sociomaterial lens, these objects possess agency and influence engagement through their presence, function and interrelationship. This was clear in Jane's account (Phase One) as she described the 'command centre' that was her deskspace and is also reflected in Theo's commentary,

> *My desk looks a bit like this in terms of it being organised chaos… If I'm not*
> *looking at the screen, then I'm a pen and paper sort of person and I've got*
> *all of that in one sort of relatively efficient place. There's a lot of structure in*
> *terms of where the things are and I'm a bit like that, but I just need them*
> *there. (Theo)*

There is some interplay here between Theo's interpretation of organised chaos and structure that also relates to a more elaborate description from Amy as she describes how the reality of her working floorspace contrasts with the ideal view. Regardless of the reality, it is the assemblage of material objects depicted in these images that sustain engagement and learning amidst other responsibilities, roles and interactions.

Ideal Study Environment	Study Environment Reality
This is my ideal, it's how I envision it in my head. *Sitting on the floor, I've always found it more comfortable to learn and I like being able to lay things around me so I can put things into place.* *RC4_IGA1 (Amy)*	*This is the alternative to the ideal, organised chaos really I think.* *Trying to stand back and make sense of it all.* *I'd spend hours sat there. I'd have multiple mugs, multiple glasses, plates, food, balled up bits of paper, loads of different books and notebooks. I used to print off the most useful research papers and put them next to each other rather than have them on screen.* *I'd have my laptop in there with other sources and notes from lectures, and in the middle I'd have what I'm creating.* *I guess the significance is that all the things here are here for a purpose, they're all important.* *RC4_IGA2 (Amy)*

Figure 5.11:Ideal vs Reality – Amy's perspective.

In common with Megan (Phase One), Beth and Theo, the study space Amy is describing is embedded within a domestic environment but there are clear differences in the characteristics of these spaces giving insight into individual learning preferences and subsequently the nature of engagement. Not only is the same concept being represented by different image artefacts, but the concept itself is being approached by the participants from different vantage points. Theo, Megan, and Amy foreground the physical or materiality of domestic spaces that have been repurposed to support their engagement with learning, whereas Beth approaches the same kind of space from temporal and affective perspectives.

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Study Environment: Social Dimension

Sarah and Lorna foreground the social perspective when considering the nature of study environments associated with student engagement and represent their thoughts as images they associate with shared experiences.

In Lorna's case this does not necessarily translate to collaborative working, but she explains how the booths, study rooms and spaces available in the library together with social proximity and a common purpose supports her engagement. The image artefact below (Figure 5.13) shows how she chose an image that closely resembles the reality of her experience giving her an opportunity to reflect on this and elaborate as part of the IG analysis on the interrelationship between social and material aspects.
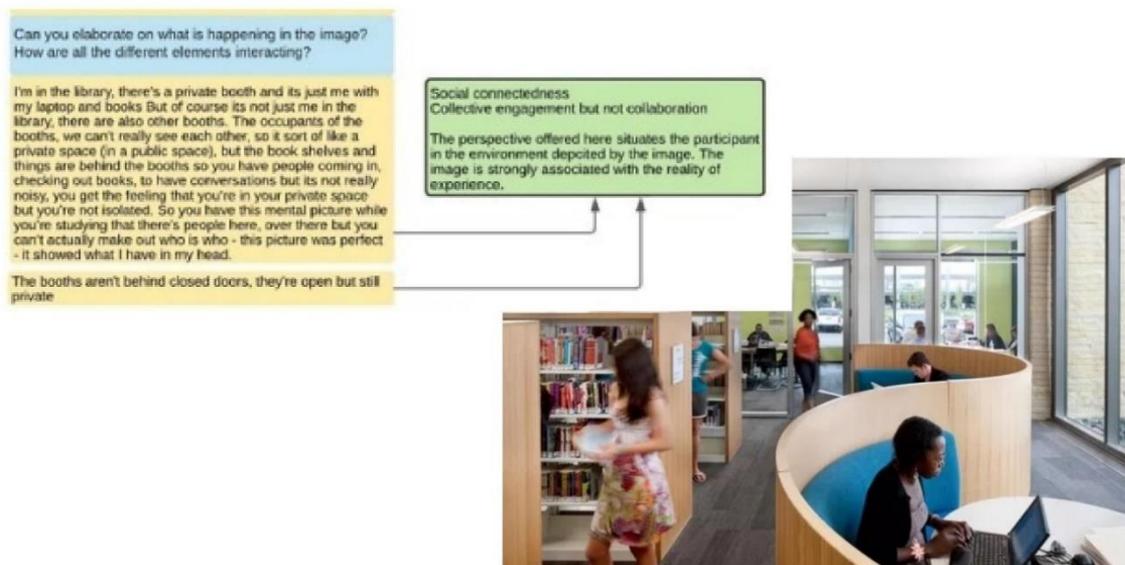
Figure 5.12:Study Environment connected to engagement with learning (Lorna)

The diversity of images chosen to represent study environments by students in this research is reflected in Lorna's analysis with the importance of choice not only aligned to preferences about the type of space but also the distinction between types of activity. Lorna describes how she understands learning and studying as distinct but interrelated concepts associated with different types of spaces, activities and preferences.

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Layers of complexity emerge as the research participants elaborate on their image choices and experience, exploring the relationship between study environments their engagement with learning.

Sarah's analysis (Figure 5.14) links engagement with an immersive and collaborative experience where social interaction is central to learning. As an Environmental Sciences student, the situation represented by her choice of image is a marked contrast to those described by participants from other disciplines. However, what is clear is that this is one instance from Sarah's experience, rather than a routine situation and is chosen by her to represent engagement as an immersive experience. The forces influencing engagement in this environment originate in the physical nature of the location, the investment of effort involved in getting to it, the joint endeavour and the resources brought together by the group. Engagement in this location is not a solitary activity, but a function of emotional and physical commitment and complex interrelationships.

I have different study environments.
At home, I don't really have a study space, my home is my home and its always a challenge. When I do work at home, I sit on my squishy seat and pile things around me It looks massively hectic.

… in a lecture theatre or similar where we are all just sat still in one place just listening to lecturers talking. Not that that's necessarily disengaging because some lecturers are more interactive. You know, using Kahoot or Jamboard or stuff it can be really engaging.

Figure 5.13:RC5_IGA1 (Study Environment_Sarah)

As a stimulus for reflecting on experience and thinking about the concept of engagement, the image as an IG artefact, provides Sarah with an opportunity to put her thoughts regarding the fieldwork session in a broader context. In doing so, she describes

how she is fully engaged in this kind of situation and contrasts it with learning in other aspects of her course.

Sarah's consideration of engagement extends to other environments to include a lecture theatre and her domestic space and in this way connects with the perspectives and ideas developed by other participants. She explains how she engages in learning in these kinds of spaces, and that each has its own dynamic, influencing her behaviour and how she feels about each scenario. The notion of situational agency emerges from this conversation with Sarah as it becomes clear how the choices she makes regarding engagement are always negotiated through her interaction with other social, material and digital actors. She explains how her home-based study environment is compromised by its primarily domestic purpose and how her engagement with learning relies on more than a digital connection to the university. The reality is that it relies on the 'squishy seat', the 'pile of things', and the brief suspension of domestic responsibility.

Sarah's experience suggests engagement is challenged differently in a lecture theatre. She recognises how these spaces, ostensibly designed for learning, position her in a more passive state where she is "*sat still in one place just listening to lecturers talking".* She appreciates how digital applications are integrated into teaching strategies to maximise interaction and enhance learning, but it is also clear that the materiality of the physical space exerts a domineering influence on her engagement and positions other students in a similar position*.*

Summary

So far, the analysis of images as IG artefacts has helped participants reflect on their experiences and elaborate on their understanding of engagement with learning. It provides some insight into the challenges associated with domestic spaces, and how these influence students' capacity to engage. The IG process reveals how multiple interpretations of the notion of study environment are linked to the central concept of

engagement with learning. Moreover, the IG artefacts provide an entry point for reflection and analysis of the concepts that foregrounds how social, material and metacognitive considerations interrelate and influence engagement.

The notion of study space as an environment conducive to learning was identified by students in Phase One as a concept linked to their understanding of engagement with learning. The analysis of images associated with this in Phase Two has revealed a level of complexity not immediately apparent in the initial analysis. Where Jane and Megan connected images of deskspaces as study environments to engagement with learning, the narrative emerging from Phase Two broadens this interpretation and introduces new perspectives that support a deeper understanding. Figure 5.11 models this as a multidimensional conceptual space where image artefacts associated with study environments are positioned to reflect how diverse phenomena are assimilated into the students' experience. In the case of Beth and Josh, the affective dimension is prioritised, they connect with their space at an emotional level and this search for sanctuary dictates when and where they study.

In a similar way, the images aligned to the Material Dimension (Scott, Megan, Amy, Jane and Theo) represent sanctuary spaces where the conditions for learning are established primarily through the pragmatic inclusion and arrangement of material objects. These spaces are often highly negotiated and carefully controlled by the individual, as they exist at the intersection of student experience and complex sociomaterial forces converging in that space.

In these spaces, learning is closely associated with the notion of studying as an independent endeavour, connected digitally to university resources and at times other students, but otherwise physically isolated. Lorna's interpretation of learning also aligns with this idea of independent study although the conditions that underpin her engagement are associated more with a sense of collective endeavour in a space that is more socially connected. The image choice she makes closely resembles the space in which she studies and the reality of her experience as a student.

Sarah's image shifts the vantage point and leads to a narrative that reinforces the sense of diversity being associated with engagement and learning. Her interpretation is sharply influenced by her experience as a full-time mature student who values the space that university gives her and the opportunities to engage with learning with other students across a range of contexts.

Study environments are centrally important to how students understand engagement and reflect diverse experiences, expectations and preferences for learning. Although generally characterised as enabling spaces the collective agency of their unique social, material and digital elements exerts forces to challenge engagement. In this sense, to fully understand engagement we must look beyond the student in isolation and consider them always in situ.

This insight stems from the participatory analysis of image artefacts as students connect their abstract ideas with the reality of their experience. The image associations made by student participants are aligned with one of three dimensions in the conceptual space of study environments. However, as reality is not fixed in this way there is interplay and fluidity in these positions as students seek optimal states and negotiate prevailing environmental conditions.

These findings place the notion of 'study environment' at the core of the new conceptual model (Figure 6.2) that originates from and is embedded in the diverse experience of students and their perceptions of engagement with learning. The analysis and discussion that follows explores this in relation to the associated concepts of barriers, motivation, outcomes, technology alternatives and opposites. The way in which these abstract concepts play out in reality influences and defines students' experiences and manifest as sociomaterial forces acting together in the spaces where they engage in learning.

5.5.2 Barriers to engagement with learning

The tensions that exist for students as they negotiate complex sociomaterial scenarios are first discussed here as "barriers to engagement with learning". Barriers are conceptualised in three ways and act against the enabling capacity of environments and the opportunities students have to engage with learning. The three distinct strands shown in Figure 5.15 (below) represent the dominant image led interpretation by each student accepting also that the lines are blurred at the experiential level. Nevertheless, this provides a useful structure for the following discussion.

Commitment and Responsibility

The images selected and analysed by Sarah, Scott and Josh (Figure 5.15) represent situations where complex and often competing commitments and responsibilities exert significant influence on the way in which they engage with learning as part of their course of study. These forces are deeply embedded in their wider experience and have a tangible impact on how they navigate student life. Sarah characterises barriers as "things that get in the way and make it difficult to engage"; Scott associates this with his need to work part-time to financially support himself through university and Josh with the barriers he puts up as a negative response to the expectations that others have of him.

In Sarah's case, the barriers to engagement are represented by the image of a woman juggling picture icons signifying mortgage payments, grocery shopping, transport issues and financial commitments. The image and the objects depicted by it are in this sense a metaphor for the complex challenges that Sarah needs to negotiate or resolve before she can engage in learning. Her own agency in the situation is limited by these situations and she explains how she takes proactive steps to optimise her student experience. Having made the decision to embark on a course of study as a full-time undergraduate mature student, her experience is defined not only by university structures, policies and procedures, but by domestic responsibilities and her status as a single parent to older teenage children.

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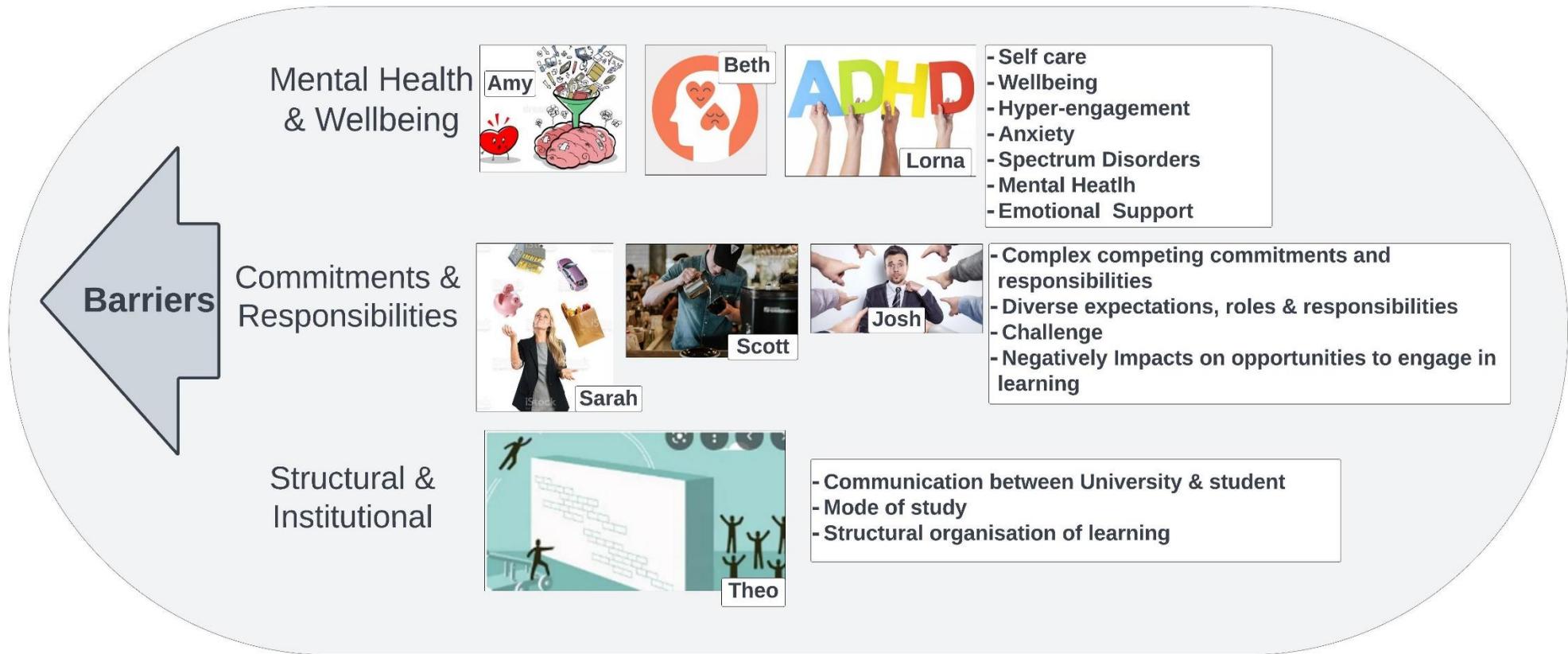
Figure 5.14:Barriers to engagement with learning

The IG process supports Sarah's reflection on this by altering the ethnographic focus, so it becomes primarily a consideration of the concepts and objects associated with the image. This leads to an expansion of ideas associated with the concept of barriers to engagement and it becomes clear that she recognises how the commitments and responsibilities are not barriers as such, but challenges to be negotiated in the pursuit of learning.

The following vignette is a summary taken from the research conversation with Sarah, illustrating how she understands engagement in this context and in relation to the sociomaterial phenomena that define her personal circumstances.

> *This kind of captures all the things I have to deal with on top of being a student.*
>
> *Well, even though there are barriers here, she's still smiling. I looked at a lot of images and there were people pulling their hair out with frustration and anger but that's not what I wanted to convey at all. The person here wants to learn, she's happy to do it, it was her choice, but it doesn't mean that she hasn't got all these other things going on.*
>
> *I mean they don't stop me from engaging but they really impact because I have to get past them before I can engage.*
>
> *So when there's one lecture on this day and another on another day… it's a two hour round trip each time and it makes fitting in other commitments a challenge. I mean for some students, they're still the child in the house if they live with their parents, so they may not have a care in the world, but if you're the parent that's the student you might have to think about childcare, petcare or who's going to put the bin out! That seems like such a simple thing, but for some students it isn't even a thing.*
>
> *I'm happy I made the choice, I left a full-time job and re-mortgaged and although for all that the student bit should be my main focus … but you know I'm not just a student.*

Although Scott's circumstances are different from Sarah's, his need to commit to working part-time represents a similar kind of barrier to engagement. As a non-negotiable commitment Scott must devote time to paid work as a way of sustaining his student experience and the opportunities it affords. In many ways, this reflects the experiences shared by Jane in Phase One and is a common aspect of contemporary

student life as the effectiveness of the bursary and loan systems are weakened by wider cost of living increases. There is recognition of this across the higher education sector with UCAS reporting most universities recommend less than 15 flexible hours per week (UCAS, 2023). The National Student Money Survey (Brown, 2022) reports that 69% of students work part-time, but broad summary data is unlikely to capture the reality that exists at an individual level.

Jane described how she often works forty hours or more as an online customer service advisor alongside the commitments of being a full-time student. Scott is contracted for sixteen hours a week but will regularly work more than twenty, the very nature of that activity prohibiting engagement in any activity associated with university-based learning. Though he only works when he is not scheduled for timetabled university sessions, his time at work influences how he positions engagement with learning as part of his overall student experience.

> *I have to be fully engaged in my work when I'm at work, and I have to work. What that means is that there's no way I can engage in my uni work. There are obviously times when I have it in my head, and I'm sort of thinking about an assignment if I'm not serving anyone, but generally there's no space for that stuff. I mean it's quite a good break actually but I do get anxious when there's a deadline coming up and I've got literally no chance of getting on with it because I'm making lattes all day!*

Scott's experience is consistent with Creed et al's (2015) concern for the impact of paid work on student engagement. Testing a role-conflict/enrichment model with 187 students, their study involved extensive quantitative analysis of questionnaire data. With findings suggesting that working while studying has both positive and negative effects on the student experience they concluded that more work was needed to understand the nature of the relationship. IGA is useful in this respect, successfully revealing some of the hidden complexity.

Summary data gathered at a national level (Brown, 2022) offers some insight into this complex scenario but the need to work is a powerful force deeply embedded in the

contemporary university experience. At the micro level it is the site of clear tension between the demands of studying and those associated with maintaining a degree of financial equilibrium. Scott assimilates this into his conceptualisation of engagement, and in accepting and understanding how it influences his strategy for learning is able to navigate the challenges encountered during his student journey.

Josh's barrier concept is also associated with notions of commitment and responsibility, but his vantage point is clearly different to both Scott and Sarah.

> *When I chose this image, I was thinking about it representing me and trying to fit everything together and deal with other demands on me, like other people's expectations. Sometimes I feel under pressure and like there isn't anywhere to turn and when I get into that kind of thinking I switch off, it's like putting the barrier down to keep things at arm's length and that includes uni work. I think that's why he's against the wall here, there's nowhere to go.*

The sense of responsibility Josh feels originates in the expectations that others have of him and manifests as a counter-productive force, a barrier that impacts on his engagement with learning through his own response to those expectations. IGA leads Josh to elaborate on his ideas around the notion of 'people', who he then characterises as tutors, parents and employers. As Josh reflects on this, his understanding of the conflicting nature of these expectations becomes more apparent.

> *… the regular expectations of being a student but then added onto that, parents. Not wanting to let them down, their expectations of me, they're investing in me I know that. Then there's work, I work in retail part time, so the expectation there is different, and it feels like they think uni is not as important as I do.*

Scott and Sarah describe similar commitments and responsibilities as barriers to engagement, taking proactive and pragmatic action to manage them. For, Josh the challenge is trying to assimilate expectations of others into his experience, without them becoming an inhibiting force.

Analysis of the image artefacts to this point brings to light how complex sociomaterial conditions connect to diverse student experiences and how the notion of engagement is interpreted differently at a personal level. Through the experience of Josh, we begin to understand how situations and relationships that present as barriers may be linked to anxiety and threaten student wellbeing.

Mental Health and Wellbeing

Figure 5.15:Mental health and wellbeing barriers

The barriers identified by Josh relate to conflicting demands and how these begin to impact on his sense of wellbeing. Amy, Beth and Lorna foreground mental health and wellbeing issues more explicitly as they consider barriers to their engagement with learning. Lorna is very specific in identifying ADHD as a personal barrier. Choosing the image shown in Figure 5.16 her intention is to demonstrate an awareness that this is a common diagnosis and therefore likely to be identified as a barrier by other students.

> *An image of 4 hands, from 4 different people, each holding up a letter so they spell out ADHD together. The hands are from different ethnic backgrounds, that's significant because it's not person specific, there's a lot of diversity here.*
> *This image is like an awareness thing, for me I've had it since I was a child and it wasn't diagnosed until later but it's been a really big barrier. I'm aware there's a lot of people like me even if it's not ADHD, there's a lot of people with anxiety and who find it difficult to engage.*

As she is guided to reflect on her experience, she recognises that through diagnosis and awareness of the condition, it has become less of a barrier and source of anxiety as she adopts strategies to manage it in the context of her learning.

… being able to talk it through with tutors, mentors has helped my confidence. It's a barrier that I expect, and I know how to get around it to keep me on track.

The images presented by Beth and Amy are more metaphorical but speak clearly to the idea that mental health and wellbeing are key to engagement and learning. Barriers occur where these are compromised through lack of *self-care* (Amy), or having a '*bad head'* day (Beth).

Amy describes herself as someone who throws herself 100% into multiple things at a time, she has high expectations of herself and as a result can often feel overwhelmed. In this scenario she characterises her own over commitment as a potential barrier to learning and recognises that exercising 'self-care' is essential in managing what might be conceived as 'hyper-engagement'. This behaviour is seen to compromise learning, not through lack of engagement but through recognisable and deeply rooted anxieties borne out of personal experience. There is an association here with the perspective offered by Beth and the manner in which she draws on her own experiences of learning in an attempt to define mental health issues as a barrier,

> *It's a white silhouette of a head on an orange background. In the white headspace there are two hearts, one with a smiley face, the other one is flipped with an unhappy face.*
>
> *Well, the good or bad head day thing is about positive or negative, about black or white. This has been the biggest barrier for me through all my education from GCSEs. Sometimes things just get in the way and you can't really stop them, but I understand them better now. I guess it's not really about being happy or sad which is what the hearts in the image seem to show, it's like there are feelings in your head that take up the space and then there's no space to engage with what you're supposed to be doing.*

In the wider discourse on student engagement, suggestions of an affective or emotional dimension have featured frequently in its conceptualisation (Fredricks et al., 2004; Kahu, 2013; Wilson et al., 2018). In this case, the IG process offers an opportunity to appreciate how those ideas manifest as emotionally charged responses to concerns

about mental health and wellbeing acting as barriers to influence and set the conditions for engagement with learning.

Beth, Lorna and Amy show in different ways how these concerns originate in prior experience and are impacting now as they intersect with the expectations of being a student in Higher Education. This complex interaction is played out in the physical and cultural environments that represent the material reality of their university experience.

As she reflects on her choice of image and elaborates on this, Beth suggests that the right kind of support can sustain engagement, prevent crisis, and prevent students from withdrawing. She is also aware of the challenges around this where universities are compelled to offer support and find solutions when at the same time, they might be part of the problem.

> *… an open door to access help, it's incredibly important … but I think it's really difficult,*
>
> *… I mean I just saw recently the uni sending an email around about accessing mental health help and an online form to get the ball rolling which I thought was really important in the context of the pandemic.*
>
> *I think there needs to be some kind of peer support because it's one thing speaking to a counsellor or a tutor but peer support is incredibly important when it comes down to finding ways around the barriers.*

The extent to which universities understand the complexity of the kinds of situations described above underpins the effectiveness of student engagement initiatives and positive experiences. However, as complex institutions universities maybe structurally and procedurally vulnerable to criticism where inherent organisational barriers exist and how these position students in higher education environments. These are the issues highlighted by Grant (2021, p.96) in his consideration of the readiness of universities to recognise and meet the needs of the current and future generations of student.

Structural and Institutional Barriers

Theo's interpretation of the barrier concept is characterised by an image of a high wall separating two groups of people and has a more institutional or structural focus than those considered so far in this section.

The barriers he is concerned with here are less aligned to the affective dimension or balancing expectations associated with being a student with other commitments. The distance learning programme that Theo is enrolled on is structured according to an approved design model that embodies university policy and dictates the parameters for engagement. Expectations for learning and communication protocols are defined by the institution, facilitated by technology and enacted by students and staff. Learning part-time, at a distance is a beneficial arrangement for Theo allowing him to work and commit to responsibilities beyond being a student.

In this highly negotiated space, physically positioned away from the university the quality of communication and importance of relationships is crucial. Digital connectivity and all that it entails, needs to work effectively to counter feelings of alienation. Where it is compromised, communication is characterised by Theo as a barrier that consequently inhibits his engagement with learning. Although he acknowledges that lapses in communication can be the result of his own behaviour, the IGA process leads him to reflect on aspects that can be seen to be embedded in the structure and relationships that constitute the university.

As a part-time distance learner, Theo understands that effective communication between the university and students on the programme is crucially important in sustaining his engagement. However, there is a complexity to the notion of 'effective communication' that must be acknowledged in understanding his experience. Ashwin et al (2020, p.123) position students as crucial role-players in the learning process who are encouraged towards a sense of agency and self-efficacy through the relationships they build with tutors. This might be a desirable arrangement in the realms of HE pedagogy, but as Ashwin et al also highlight, it is the academic staff acting on behalf of

the university that dictate the ground rules for this relationship. In addition to the obvious power differential here, there is an assumption that communication as a feature of this relationship is unproblematic, and that engagement derives from human agency alone. In a distance learning scenario, these ground rules extend to the influence and affordances of the digital assemblage and align to a posthumanist framing of HE experiences (Gourlay, 2022).

Analysis of the image shown in Figure 5.17 during Theo's research conversation helped him elaborate on his initial interpretation and make links between the concept and the reality of his experience. The two scenarios he describes, relate to a need for clarification about module content and a lack of confidence in the appropriateness of the questions he asks about specific tasks. Although this situation is explored here in a distance learning context, it may be a familiar challenge to those studying across all modes.
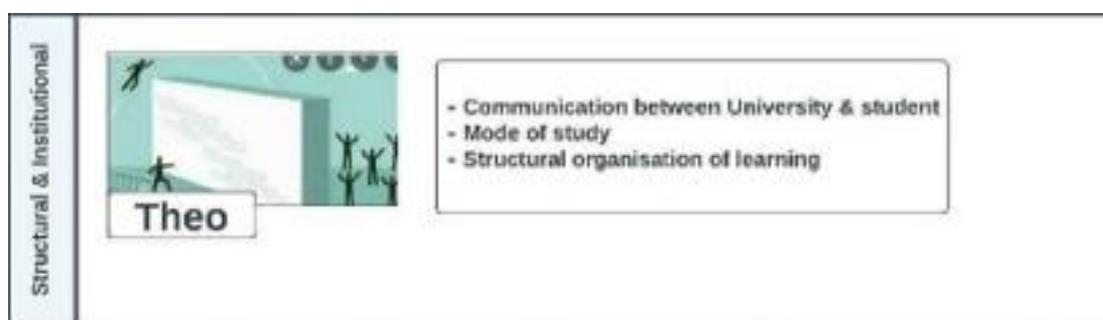
Figure 5.16:Structural and institutional barriers

Theo's concern, and the origin of the barriers he describes, is rooted in the effectiveness of the relationships between academic staff, the student cohort and how this is facilitated by the digital infrastructure. Beyond that which is afforded by the presence of technology, the conventions influencing this relationship are also embedded in the organisational culture of the university and the manner in which learning is structured and delivered. This is a relationship far beyond the immediacy of a face-to-face tutor: student dialogue as the questions Theo asks are filtered and interpreted through a complex cultural and technological medium. In this context, the wall in his image

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represents the challenges he faces when communication and relationships become compromised.

The collective influence of this distance learning medium may detract from the kind of ideal conditions described by Ashwin et al (2020) and the psychological safe space where Theo can ask the kind of questions, he feels he needs to give him the confidence to engage with the task.

His interpretation of the image extends to a consideration of the figures on either side of the wall and the relationship connecting these two groups. It describes a more complex scenario than one that simply positions students on one side of a divide and academic staff on the other. It signifies an interrelationship where, ideally, students are encouraged and supported by peers and tutors to overcome challenge and stay engaged. It highlights the importance of attending to the quality of human relationships and interaction (Ashwin et al, 2020) but it also offers a starting point to a closer examination of how Theo operates within the structural and organisational confines of the university. On one level, the notion of a wall representing a structural barrier to engagement in learning seems logical enough, but the opportunity afforded by the IG process to explore layers of meaning associated with this image deepens our understanding of Theo's student experience.

A posthuman perspective helps us to acknowledge that acts of engagement and meaning making are not straightforward (Gourlay, 2022), and provides new opportunities to theorise about the nature of barriers. In this case, the wall has multiple meanings: it represents a difficulty with communication, the distance of distance learning, a lack of clarity regarding a module task and Theo's reluctance to ask a question. His engagement is mediated by the social, material and organisational structure of the university, institutional culture, the capacity of digital technology and Theo's status as an enrolled student. From an institutional perspective, his engagement is reflected by his attendance at online lectures, seminars or tutorials, his interaction with the virtual learning environment and his communication with tutors. These are

behaviours typically featuring in online distance learning courses (Motz et al, 2019) and reflect a normative, humanistic position regarding engagement and fail to capture the complexity of the experience Theo describes.

Barriers inhibiting Theo's engagement occur, at a 'site of intersection' where forces originating in the structure and organisation of the university become entangled with the intimate environment of his study space. He describes instances where communication of information to support his learning becomes lost in translation at this 'fourth wall' (Ashwin et al, 2020) and how these might result from the actions of tutors, peers, or his own anxieties. His narrative, inspired by a reflection on the presence of silhouetted figures in the image (Figure 5.17) speaks to the vitality of relationships in overcoming these barriers. Key to this is the relationship he has with his Student Success Advisor,

> *The Student Success Advisors are based in London, they're not academic staff. I think it's something that's primarily for people like me - you know, distance learners so I guess it's that sort of let's have a chat contact that you might miss by not being on campus.*
>
> *More a sounding board than a coach or a mentor because the academic staff are really clear about what they want …, so I guess these guys are just checking in on you.*
>
> *I wouldn't say I'm that confident in the essay writing side of things, I read through them and read through them, and even though marks wise I've done OK (68%), I think talking it out with somebody helps me in my thinking. It helps me get to the point where I think I've done enough to pass.*

Summary

The narrative generated by the analysis of seven images in this section builds a complex picture of the challenges faced by students as they engage with learning across a range of scenarios. Conceptualised as barriers associated with mental health and wellbeing, responsibilities and commitments to others and the way in which their experience is structured as part of a large institution, they are resolved, managed and assimilated through negotiation and support. Powerful sociomaterial forces interact with personal circumstance to decentre individual student agency in situations where broad

assumptions are made about engagement. The narrative emerging from this analysis highlights the importance of looking beyond the individual to fully appreciate the dynamics of student engagement and ensure institutional actions reflect this understanding.

The conceptualisation of student engagement afforded by IGA provides insight to the conditions considered as inhibitors, and what strategies are adopted by students to manage them. Students' experience of these barriers seem likely to be as diverse as the broader student population itself. There is also a sense of specific phenomena being conceived as both an inhibiting force and a facilitator of engagement. This is explored in the following section through a consideration of how technology is positioned in the students' conceptualisation of engagement.

5.5.3 Technology as a Student Engagement Mediator

Technology is identified as a key factor to engagement with learning in both phases of this research. This section primarily explores the different ways in which it is characterised by participants in Phase Two but will also revisit the experiences of Jane and Megan where it supports the overall analysis.

The technology component of the conceptual model of student engagement is shown in detail by Figure 5.18 (below) and represents a thematic summary of findings drawn from the research conversations and the Image Concept Maps. Overall, it aims to show how students see technology as largely facilitative to their engagement, but also that these characteristics exist around an axis of unreliability and tension which has an inhibiting influence.

Normative views posit that digital technology has transformed the nature of learning (Bayne, 2015; Gourlay, 2022; Joksimović, et al., 2015) and the manner in which we interact with and generate knowledge. More broadly, its influence as a powerful force extends beyond those concerned with education and learning and into the fundamentals of everydayness (Buckingham 2020; Raine 2017).
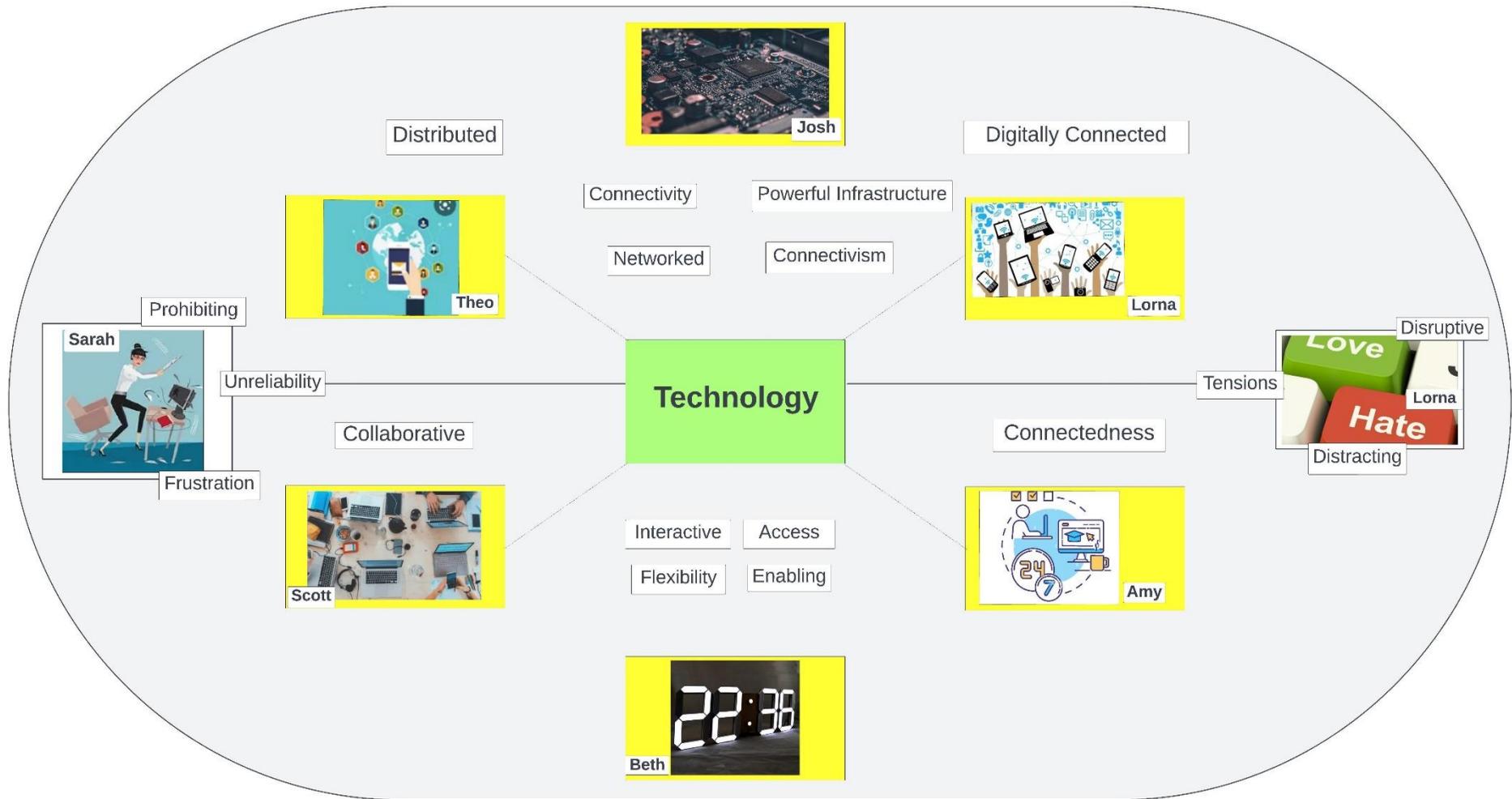
Figure 5.17:Influence of technology on engagement with learning

The narrative that emerges from the analysis of images is embedded in this context and acknowledges technology as a pervasive learning and cultural phenomenon (Raine, 2017; Selwyn et al., 2020). Aligned with the perspective developed by Gourlay (2022) these reflections on the relationship between technology and engagement represent posthuman anecdotes revealing details of how it is integrated into their student experience. The ubiquitous presence of technology weaving through the social and material dimensions of student circumstance, knitting together aspects of their life as an entangled and digitally connected network.

In this context, IGA offers an opportunity to learn more about the relationship between technology and engagement and how students use it to support their learning. Gaining a greater appreciation of this relationship requires that we try to understand the potent agency of powerful technologies, how they exert influence on individual students and compromise as well as enhance their agency to act.

Technology in this context is characterised by a multitude of devices, abstract spaces and the software and network infrastructure connecting this digital assemblage (Castells, 2004; Gourlay, 2021). Some of this lies within the digital domain of the university in the guise of Blackboard (e-learning portal), Microsoft 365, library resources and learning zones, where there are institutional expectations regarding student engagement. However, the lines are blurred between this institutional domain and a multimodal, digital landscape extending beyond the jurisdiction of the university. In this respect the affordances of technology sustain an entanglement of human-digital-material relationships that require an expansive view of engagement rather than one confined to institutional designations.

The analysis of images in this section provides insight into the complexity of these relationships, how individuals assimilate technological forces into everyday experiences and how this influences their engagement with learning as students in Higher Education.

Access, Connectivity and Flexibility

In the context of their university experience, all participants consider technology as fundamental to engagement and learning. Theo sees this through his experience of being a part-time distance learner, where his learning is facilitated and mediated by the digital campus. As part of an international cohort his experience is characterised by the technologically mediated interactions he has across a highly distributed network of peers and tutors. It is not just engagement with learning that is facilitated here, but his engagement with Higher Education per se is made possible through a university transformed by technology. His image serves as a metaphor for the digitally connected university, his experience illustrated by a world orbited by icons representing people interconnected by the power of the technology at hand.

> *Technology is the chain that connects me to the whole student experience because without it this course wouldn't exist for me.*

Technology brings the digital campus and his home environment together, his student experience interfacing directly with his domestic environment. Whilst fully appreciating this as an enabling force, Theo fully recognises the disruptive potential of this situation and exercises control by adopting strategies that help him to manage his learning.

> *I log onto Blackboard usually 2 or 3 times a week because what I try to get is each weeks reading and stuff at the start of the week, download it so I've got it and then sort of crack on then I just sort of log back if I've got a question or to check email occasionally.*
> *… some people (use) WhatsApp to connect and discuss assignments and other bits of work and don't get me wrong that's nice if you're into that sort of thing. But I'm cautious about doing that … so my sort of interaction with people is basically by Blackboard and you're out in the open as it were.*

Theo's experience reflects the kind of established models of online distance learning that enable universities to extend their reach, widen participation and operate across geographical and cultural borders. In this context, the extract above, taken from Theo's research conversation gives some small insight to help broaden understanding of engagement behaviours across different modes of study. As a distance learner, he is

able to engage with the scheduled release of tasks and activities through Blackboard but does so under his own terms. One aspect of this is a sense that distance learning in this case also means that he can 'keep his distance', maintain focus and minimises potential disruption by keeping interaction through social media channels at arm's length.

There are parallels here with Jane's experience (Phase One), where technology is characterised simultaneously as both a facilitator and a disruptor of learning. In her case, it brings the possibility of paid employment directly into the study environment where it adds a layer of complexity to the strategies she adopts to maintain her engagement with learning. On one level, the influence of powerful technology positions Jane in a tricky position, potentially compromising her engagement, but at a fundamental level, it enables her status as a student to be financially viable. This scenario reflects the broader context (The Sutton Trust, 2023) and trends in students working whilst studying to offset challenges associated with the growing cost of living crisis (Brown, 2022; ONS, 2022).

The different relationships Jane and Theo have with technology are important in sustaining their capacity to engage in learning whilst being employed, and without the affordances of technology, their student status would certainly be under threat. However, this potential is not universally beneficial as in Scott's case (discussed previously) where the need to 'have a job' is a barrier that technology can't help him to resolve in the same way.

Technology influences Beth's engagement with learning in a way that is similar to the one described by Theo, in that she associates it with access and flexibility. As a single parent, part-time postgraduate student, although not identified as a distance learner on the basis of her chosen course, she largely engages with learning from her home-based study environment. In this scenario, Beth characterises the influence of technology as an image of what initially appears to be a digital clock face. The time shown in the image (22:36) is a significant factor in her choice as she associates it with the way in which

technology allows her access to the digital campus late in the evening, a time when she can prioritise her learning.

It looks like a digital clock when you glance at it, but then you realise it's a sort of representation of a digital clock. When you look closer, the numbers look like they're propped against a wall and there's a sort of door in between the 2 and the 3.

I didn't realise the door thing was there when I chose it, but I think it is significant, I think it does mean something. Personally, for me I couldn't do my course without technology.

… if I need to I can pick up my phone and access the library and something when I'm getting a bus or whatever and primarily it really influences how I manage my time and engage in lots of ways. So, when I think about it the door in this image is giving me access to learning.

I don't look at 22:36 in the same way as I would have done before.Technology and time mean that you can do your own personal learning when you can, so engaging in a classroom or lecture is only part of it.

Figure 5.18:Time, Technology & Access (Beth, RC7_IGA_3)

This sense of technology as primarily a facilitative force in the context of engagement with learning is also present in the narratives of Amy, Lorna and Scott and represented by the following image artefacts.

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	Amy	**Lorna**	**Scott**
	• *Access*	• *Emancipatory*	• *Collaboration*
	• *Flexibility*	• *Powerful*	• *Connectivity*

Figure 5.19:Technology: Facilitative Themes

In a similar manner to Beth and Theo, Amy characterises technology as force for good, represented by an image depicting a flexible schedule helping her to access and integrate learning into other aspects of her day. Scott draws digital technology into his ideas around engagement by considering the impact it had on a specific project he had recently been involved in. Notably, he suggests that digital connectivity across multiple devices supported active engagement and learning in the collaborative group situation.

The sub plot to these vignettes of technology, engagement and learning comes from Josh. The use of the term 'sub-plot' relates to the notion of subterranean or below the surface and is used here to describe the alternative vantage point he adopts in his consideration of technology. While other participants focus attention on their relationships with it, Josh adopts a more fundamental perspective. The image (below) represents his thinking around this and through IGA he explores technology as a ubiquitous phenomenon that exists in and through the inner workings of devices, circuits and networks. He connects technology in the form of digital components and spaces to his conceptualisation of engagement and the reality of his experience.
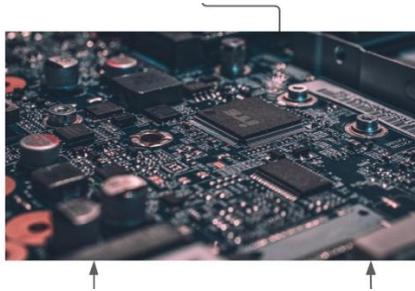
It's hard to imagine where technology doesn't impact. I chose this rather than an image of a laptop because it kind of made me think of how technology links everything together meaning I can engage and access what I need from anywhere. This is about the things that can't be seen but that make it all work and you get this stuff in literally everything but more than that, its inside these chips that my work is saved and where I log onto Blackboard and where I watch recorded lectures. When you start thinking about it at that level and think about technology it's hard to think about how it used to be …

… it looks a little bit like buildings, you know, the chips and things look building, well sort of, it reminded me of a campus map where each one of those might be a building with students and tutors inside and the other bits, the spaces between the building.

Figure 5.20:Technology as a fundamental structure_Josh

Gourlay's (2021) reflections on posthumanism and the materiality of digital education offer a useful perspective from which to examine Josh's ideas and position it in the context of a broader narrative. Whilst acknowledging the material presence of technology, he sees his engagement with learning as something which happens 'inside these chips', a kind of disembodied digital interaction.

However, he also makes an association between the structure of the circuit board and a university campus, which in some sense connects his experiences in the realms of the 'digital campus' and VLEs to a more embodied material reality. One that not only exists in relation to the large-scale bricks and mortar of the campus but also to his domestic environment and the places in between facilitated by mobile connectivity. This resonates with Gourlay's (2021) argument that there is 'no virtual learning', that all learning is grounded by our complex relationships with digital devices and other objects. IGA leads Josh to think about engagement in multiple ways, as learning at a cognitive level, to his physical interaction with digital devices, the component parts within and his presence or absence on campus.

This complex interpretation goes beyond simply accepting technology as an enabling force controlled and harnessed by the student as a human subject. It makes room for an appreciation of the agency of digital non-human elements in the consideration of engagement and gives an insight into entangled interrelationships running through the student experience (Braidotti 2019; Gourlay, 2021; Susen, 2022) and in this way deepens our understanding of student engagement.

Disruptive Forces

The participant narrative indicates that the presence and agency of digital devices and connective technologies can both enhance and hinder engagement and is shown to be problematic where reliability issues create tension.

Lorna (RC6_IGA_3) felt compelled to offer two images as she considered the influence of technology, noticing how this illustrated that tension. As a full time, international Master's student she positions technology as a powerful emancipatory force (Figure 5.22), a view she suggests is influenced by her cultural heritage and experience of learning prior to arriving in the UK. However, this is very much a 'Love, Hate' relationship as she explains below,

> *The zoomed in image of the keyboard with the Love and Hate keys next to each other, it's like they have to be next to each other because you switch between the two feelings so quickly. Sometimes I think it really gets in the way of learning and all you're engaged in is trying to solve a problem with technology and sometimes it works perfectly, and you don't even think about it.*

Technology as a 'taken-for-granted' enabling force, contrasts starkly with its potential to disrupt when reliability becomes an issue. The potency of this situation underpinned the image search that Sarah undertook when thinking about the relationship between technology and engagement. Reflecting on her experience, she used the keywords *technology, learning and frustration* (RC5_IGA_3) which led to her choice of the image below, which is shown together with Lorna's keyboard image.

Sarah
Technology, Learning, Frustration

Lorna
Love, Hate, Technology

Figure 5.21:Disruptive force of technology

When Sarah thinks about technology with respect to engagement and learning, her immediate stance reflects her recent experiences of being a student during and emerging from the COVID-19 pandemic. The abrupt shift away from the physical environment of the campus, lecture halls and field visits facilitated by digital technology, shifted and dispersed the pedagogic locus, radically altering aspects of the student experience. The impact across the sector is well documented examining such themes as the impact on academic roles and student recruitment (Watermeyer et al., 2021); changes to study habits of online distance learners (Aristeidou and Cross, 2021); changes to digital learning (Guppy et al., 2022) and the consequences of prolonged disruption to learning for students entering Higher Education for the first time (Pownall et al., 2021).

The IG process adopted in this study provides opportunities for the participants to add layers of detail illustrating how that disruption played out in their individual realities. In Sarah's case, this manifests as the frustration she feels in situations where technology impedes engagement,

> *It's definitely not helping here by the looks of it. When the tech doesn't work, learning doesn't work. I mean I'm on a schedule, I've got kids and all the domestic things being a single parent. I couldn't do my course without all the*

tech and online learning, but it has to work, I can't sit around waiting for it to get sorted.

When we're at home using lots of different technology, it seems to be taken for granted, but when the slightest problem occurs its anarchy… there are times when you need to or want to get on with stuff and it just doesn't work. It's like the end of the world, your temper rises, you've got an hour block, you can't stay there all day. You begin to think what's the point in turning up online or in class if there's going to take so long to sort out.

Although largely focussed on her relationship with technology in her already compromised domestic study environment, Sarah's narrative (RC5_IGA_3) also points to disruption in campus-based sessions when tutors experience issues with classroom technology. She alludes to the cumulative effect of this working against engagement and eroding confidence in the capacity of technology to enhance learning.

Resisting normative assumptions about the value of technology and its potential to enhance learning, a focus on the 'breakdown' or disruption aligns with the perspectives developed by Adams & Thompson (2016) and Gourlay (2021, 2022). In that respect, the sense of frustration brought about by technology not operating in the manner expected affords a balanced and more informed consideration of its relationship to engagement and the student experience.

Summary

Digital technology as a sociomaterial force is interwoven throughout the experiences shared by participants, it blurs the boundaries between home and university, acts on a spectrum of 'disruption – enhancement' and invites us to reflect on the notion of "human exceptionalism" (Braidotti, 2019) in the context of engagement.

Technology is central to the students' conceptualisation of engagement but there is a danger in being lured into making simple associations between its presence and the nature of the force it exerts. The IG process deployed here guards against that by offering "insightful glimpses" (Adams & Thompson, 2016 p.17) into the experience of

students and their relationship with digital technology. The interrogation of image artefacts provides a vantage point from which to better appreciate the spectrum of "human – technology – world relationships" (Gourlay, 2022 p.32) in the context of the day-to-day student experience and their conceptualisation of engagement.

The participant led image analysis in this study primarily considers embodiment, hermeneutic and alterity relations between students and technology (Ihde, 1990 in Gourlay 2022, p.32). However, Josh's analysis could be seen as aligning more with the '*interpassive*' or background relations to technology infrastructures and their pervasive presence.

This infrastructure supports the digital campus activity of universities, underpinning and facilitating institutional notions of how technology enables learning, supports engagement, and represents a force for good. Data (or learning) analytics are deployed across this environment to capture 'engagement' data generated by a defined set of behaviours such as attendance swipes and system logins. The behaviours captured serve as a proxy for engagement with learning and are considered useful intelligence to support and justify strategic policy. Sector wide interest in learning analytics continues to grow and these technologically driven big data methodologies are increasingly used to bring about change (Foster & Siddle, 2020). Third party Customer Relationship Management (CRM) tools such as 'Solutionpath' have been widely adopted across the HE sector offering an integrated platform providing insights into behaviours that reportedly inform a proactive and personalised approach to student support.

The momentum of this is sustained by research outputs reporting the positive impact of data driven initiatives (Gascoigne, 2019; Summers et al., 2023) and suggestions that such measures of engagement (or non-engagement) are predictive of future behaviour and outcomes. The discourse associated with this is explored in more depth earlier in this study (Chapter 1), but the cautionary note offered by Fawcett (2021) seems particularly relevant in light of the insights generated by the IGA methodology. Her suggestion that 'data-doubles' generated by analytics solutions are one-dimensional

representations of students failing to account for the intricacies of individual behaviour. Sarah encapsulates this in an opening comment during the research conversation,

> *If they're using things like how many times someone has logged onto Blackboard, from what I can gather that means nothing whatsoever because as students we get bombarded with emails on a daily basis. Not exactly from lecturers themselves but when a lecturer puts something on Blackboard we get pinged an email straightaway so I know whether it's important or not, and I click to view which brings me into BB, I get to see what the item is and then I log straight back out.*

> *Also, for our little group we have a WhatsApp group going on because there's so many students don't even bother looking at their emails so it might not look like they engage.*

Data driven approaches support assumptions that associate measurable and identifiable behaviours with engagement and learning. In doing so, they provide narrow interpretations placing value on some behaviours over others, failing to capture how digitally mediated sociomaterial forces act at an individual level and influence engagement.

5.5.4 Opposites & Alternatives concerning Student Engagement

> *I think it's important for universities to recognise the individuality of it. I'm sure I'm similar to some students and really different to others, and it's that acknowledgement of difference … that inclusive understanding that everybody is going to study a little bit differently.*

> Amy (Research Conversation 4)

The sense that the relationship between engagement and non-engagement was not a simple binary one emerged during the analysis of Phase One and led to participants in Phase Two being asked to explore this by considering what might represent opposites and alternatives to engagement. Amy's comment introduces notions of individuality, diversity and inclusivity and sets the scene for the following analytical discussion.

There is some interrelationship between the two concepts of opposite and alternative in that one might be alternatively engaged in an activity that could also be viewed as the opposite of something that was planned or intended. However, participants in this study approached these ideas in the following manner:

Alternatives – Not seen as the alternative *to* engagement, but as alternative ways to engage with learning.

Opposites – related to non-engagement or disengagement. This was either disengagement through choice (sometimes seeking an alternative) or as a result of an external force, or the impact of environmental conditions.

The images curated by participants to represent these ideas suggest a level of detail that expands our understanding of the 'engagement – non-engagement' binary that data driven methodologies aim to capture. The analysis of these images took place during the Phase Two research conversations, is summarised by Figures 5.23 and 5.25 (following), taken from Figure 5.10 and forms the basis of the following discussion.

Opposites as Disengagement: Choice

Amy, Sarah and Scott consider the opposite to being engaged is to be disengaged and associate this with making the choice to do something else. Amy considers that while playing her guitar is to be disengaged from an intended learning activity, it also represents being engaged in an alternative pursuit that has intrinsic value or benefit.

Scott and Sarah interpret this in a different way and share the opinion that the choices they make to disengage are perhaps less of a proactive choice and more associated more with a personal trait that manifests as procrastination. Influenced by the disruptive power of social media and digital technology they describe how they become distracted by the lure of video streaming services.
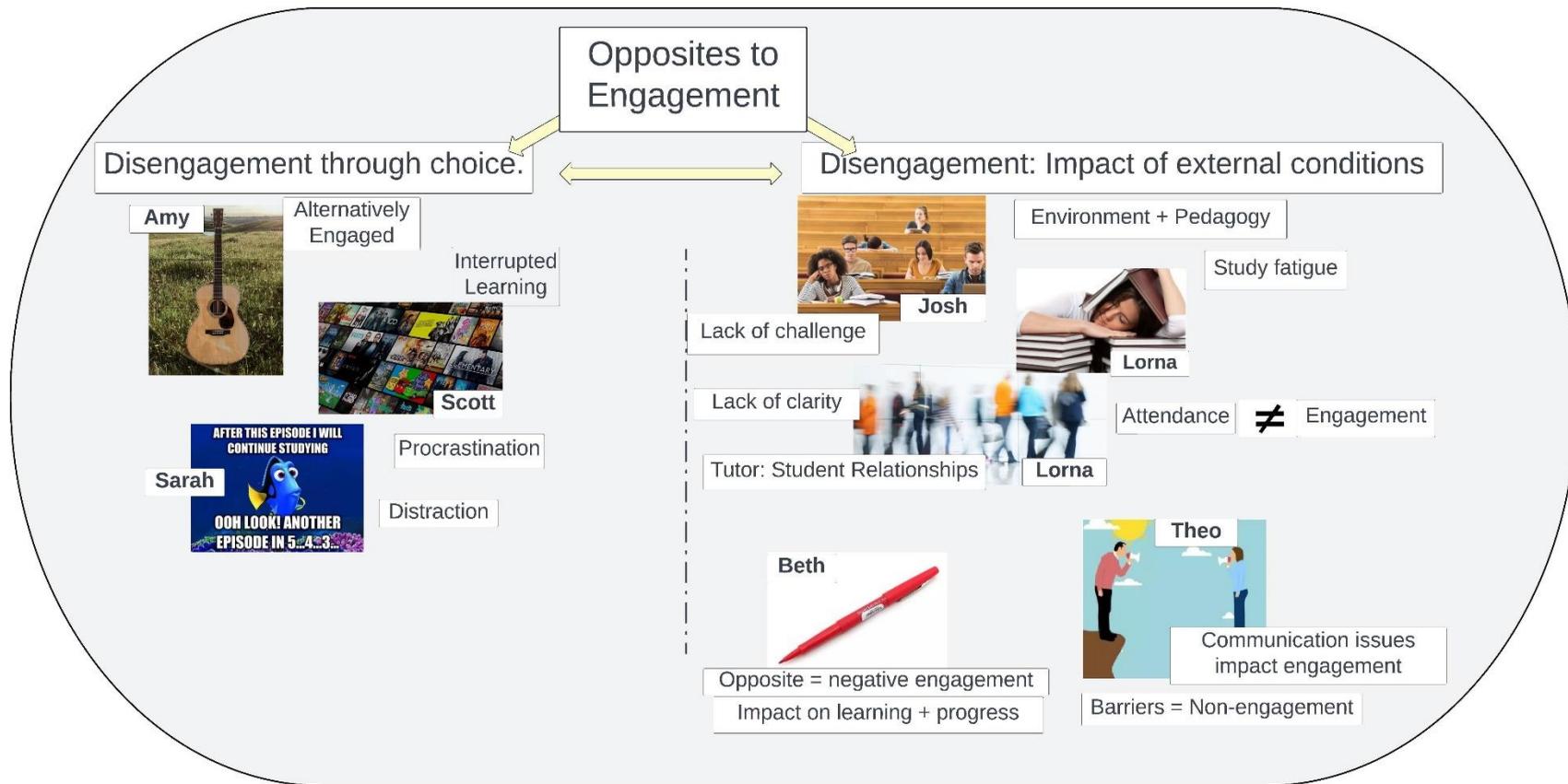
Figure 5.22:Opposites concerning engagement with learning

In this context, Sarah's image depicts a well-known cartoon character with a famously short attention span with which she describes a strong association,

> *It's a meme around the topic of studying. I was looking for images about studying and distractions mostly because I was thinking about procrastination which is always something that is there for me.*
> *You know, with best intentions, you go on some type of tech, your laptop, your phone or whatever, with Environmental Science in mind, you might search for David Attenborough and then you'll notice something interesting but only slightly related, and you think I'll quickly have a look at that but then before you know it that leads you somewhere else and you go down a wormhole and you get lost in everything and before you know it, your assignment that you left until the last minute to finish off, you've suddenly now got no time left. That's where worry and anxiety comes in.*

Scott describes his image *'as a shelf of DVDs or multiple screens showing different programmes'* and relates this to the *'whole binge-watching experience'.*

There are important considerations for our understanding of student engagement in this respect. Attempts to understand the antecedents to this type of behaviour underpin research into academic procrastination which in turn may offer new insights into notions of disengagement. In work focussed on the student experience, Steel & Klingsieck (2016) outline a typology of procrastination that recognises the situational and contextual influences on personality traits related to conscientiousness. In this case, the disruptive potential of digital technology as a powerful sociomaterial force acts with impulsiveness and low self-discipline as facets of conscientiousness to inhibit engagement with academic tasks such as essay writing.

The choice to disengage or not engage with academic tasks in favour of the types of behaviour described by Sarah and Scott is recognised widely as bingeing (Naughton & Murrin-Bailey, 2018; La Tour & Noel, 2021). Associated with a decrease in memory and satisfaction over time, the binge mindset is shown to lead to more passive absorption of content and an increase in processing fluency (LaTour & Noel, 2021). There are

interesting implications here from an engagement perspective where binge behaviours may also influence how students interact with different types of academic tasks. In those that involve self-directed study, behaviours such as cramming as a deadline approaches, are defined as 'back-bingers' (p.181) where procrastination leads to the kind of situation described by Sarah. The quality of learning here is inhibited not only through the action of disengaging but also by conditions where cognitive overload compromises retention of information.

Furthermore, attempts to understand engagement behaviours through the use of data analytics tools would need to be interpreted through a lens that factored in the measure of 'clumpiness' and how that impacted on the quality of learning (LaTour & Noel, p.176). In the context of the binge mindset and significant influence of digital technology, Naughton & Murrin-Bailey (2018) speculate that these kinds of behaviours and patterns of engagement are indicative of students adopting new ways of learning and offer thoughts about how they might develop more broadly in Higher Education.

Opposites as Disengagement: External conditions

The themes identified on the right-hand side of Figure 5.23 also represent disengagement as the opposite of engagement but are seen by the research participants to result less through choice and more due to external factors or conditions. Underpinning disengagement here are issues of clarity and communication, the student-tutor relationship and level of challenge associated with the activity. Falling within a pedagogical or relationship realm and framed by students as things that impact negatively on their learning, these occur in the complex psychosocial – institutional space that Kahu & Nelson (2018) identify as the *educational interface*. It is here where our engagement with teaching is intertwined with students' engagement with learning (Ashwin et al 2020) and an appreciation of the symbiotic nature of that relationship is central to a deeper understanding.

The vantage point offered by the IG process provides a student led insight into this relationship and shows how inherent characteristics may inhibit engagement and become barriers to learning. In that sense, it adds more depth to the understanding, established in the previous section, of forces that work against engagement and how these are conceptualised and experienced by individuals.

Challenge: *'… the opposite of engagement with learning because I've been in these kinds of situations, and I really don't think I learnt anything because I completely switched off.' (Josh)*

Clarity: *'You can sort of make out face but it's all a bit blurred and you're a bit lost. This is me disengaging because you're not clear on what you're supposed to be doing.' (Lorna)*

Communication: *'…if you don't get that right then engagement doesn't work' (Theo)*

Figure 5.23: Antecedents of disengagement

Challenge, clarity and communication are identified above as characteristics that are key to an engaging learning experience. These play out at an individual level and if compromised, elicit the kind of tangible responses shared by Theo, Lorna and Josh above. In this sense, engagement should not be positioned as the sole responsibility of the student but one that exists as a potential and desirable outcome of synergistic activity encompassing interrelationships with tutors, peers, and the material/digital environment.

In some part, the responsibility for creating and managing these conditions of learning lies with the academic as teacher. As a highly sophisticated behaviour, effective teaching reflects and relies on a wisdom of practice (Shulman, 1987) representing more than knowledge of content at a disciplinary level and more nuanced than pedagogy alone.

Sustaining conditions that are conducive to learning in Higher Education arguably requires the special kind of knowledge defined by Shulman as pedagogical content knowledge, "a form of teacher understanding that combines content, pedagogy and learner characteristics in a unique way" (Gudmundsdottir & Shulman, 1987, p.59). From a sociomaterial perspective, it returns us to the vitality of relationships and a sense that to understand engagement we must look beyond the student.

Unpicking this further, image analysis and participant narratives indicate that where lack of challenge, issues of clarity and miscommunication of ideas become precursors to disengagement, they are invariably associated with matters that align to the notion of pedagogical content knowledge. By the very nature of their role, academics possess highly specialised disciplinary knowledge but may struggle to engage with students as novices entering their field. Some of this may relate to a lack of teaching experience (Remmick et al., 2013) or the perceived value of teaching activity to a successful academic career (Hollywood et al., 2020). Ashwin et al (2020) explore engagement in the face of such challenges and consider how learning might get lost amid multi-faceted academic roles, research priorities and institutional agendas. Sector wide and institutional level initiatives have sought to address these challenges through a formalisation of probationary expectations and professional recognition schemes (E.g. Post Graduate Certificate in Academic Practice and Fellowships associated with AdvanceHE), and strategic alignment of activity in response to the Teaching Excellence Framework.

Critical perspectives recognise that such institutional projects seek to enhance the academic workforce to assure the quality of a quantifiable student experience that in turn bolsters university reputations in a highly competitive market. These policies manifest at the educational interface and become part of the students' university experience. In this respect, the antecedents to disengagement may relate more to discrepancies between real and expected, measurable engagement behaviours than issues of pedagogy.

The situation raises questions about what universities know about student learning and the assumptions that are made in that respect. In a consideration of the values that might be central to a thriving teaching and learning relationship, Ashwin et al (2020) advocate taking time to understand student experiences of learning and making knowledge more accessible through the building of strong relationships.

Lorna's analysis of the blurred image initially associates issues with messaging with a lack of clarity similar to Theo's thoughts on communication. However, her narrative also points to the notion of 'knowing' and connects in this way to the narratives of Beth and Sarah as they reflect on what the university 'knows' about how they engage with learning. The thoughts expressed by the participants here reflect the sentiments expressed by Ashwin et al and indicate the importance of messaging and communication. Moreover, it is the extent to which these should reflect an informed knowledge of the diverse needs of learners but also what students understand about themselves as learners,

> *I mean, do students know about themselves as learners as they begin university? I don't think students know this about themselves, all they know is that they want to go to university.*
> *The point is that universities should know this and help students understand.*

> *Lorna*

Alternatives concerning Student Engagement

The idea of 'knowing' and a metacognitive perspective link the narratives associated with 'opposites' and 'alternatives' at an affective level as participants describe engagement with learning as a complex state far from a uniform, easily quantifiable behaviour in response to a taught input. Disengagement through choice or in the face of external influences is seen as a negative position, whereas to be alternatively engaged is presented as a positive behaviour having either an intrinsic value or representing one of a number of possible learning responses.

In the context of this explanation, Amy's image of a guitar (in Figure 5.23) is anomalous because she aligns it with the opposite of engagement with learning, something she is doing through choice, yet her narrative positions this as a positive action,

> *I thought that opposite to engagement with learning was about going to do something different. Not engaged in learning but maybe being engaged in something else. So, one of the things I like to do is play the guitar, not that I'm amazing at it, but it's something that I like to practice at. I feel like its creative, a break from studying.*
> *… this feels like a reset when I'm feeling overwhelmed. If I spent ages doing this it wouldn't help, I'd feel guilty for wasting my time, but picking up the guitar for ten minutes keeps you going.*

Amy (RC4_IGA_6)

In this way, Amy's interpretation of the concept and how she associates this to the reality of her experience links the discussion of 'opposites' to the analysis of 'alternatives'. These are summarised in Figure 5.25 below showing participant image artefacts representing a spectrum of alternative behaviours and diverse ways of engaging with learning.

Independent study is an accepted and expected feature of the student experience, that happens in diverse spaces, often as a highly negotiated activity in the face of disruptive influences and inhibiting commitments. This was examined in some detail in the earlier section focussing on Study Environments where Amy's image represented ideal conditions, the image she uses here offers an alternative vision to that ideal space. Amy's reality is a messier version of the previous, standing over what appears to be an amalgam of things, she is gaining new perspectives, stepping back, making sense and formulating a response to the task. As an image to represent the vitality of independent study as part of the student experience it would be an unlikely choice for a marketing campaign to attract students. However, as Amy's reality it is an alternative to assumed ideals and where the material objects represented in the image image possess the agentic potential to support her learning, "*the significance is that all the things here are here for a purpose, they're all important*" (RC4_IGA_2).
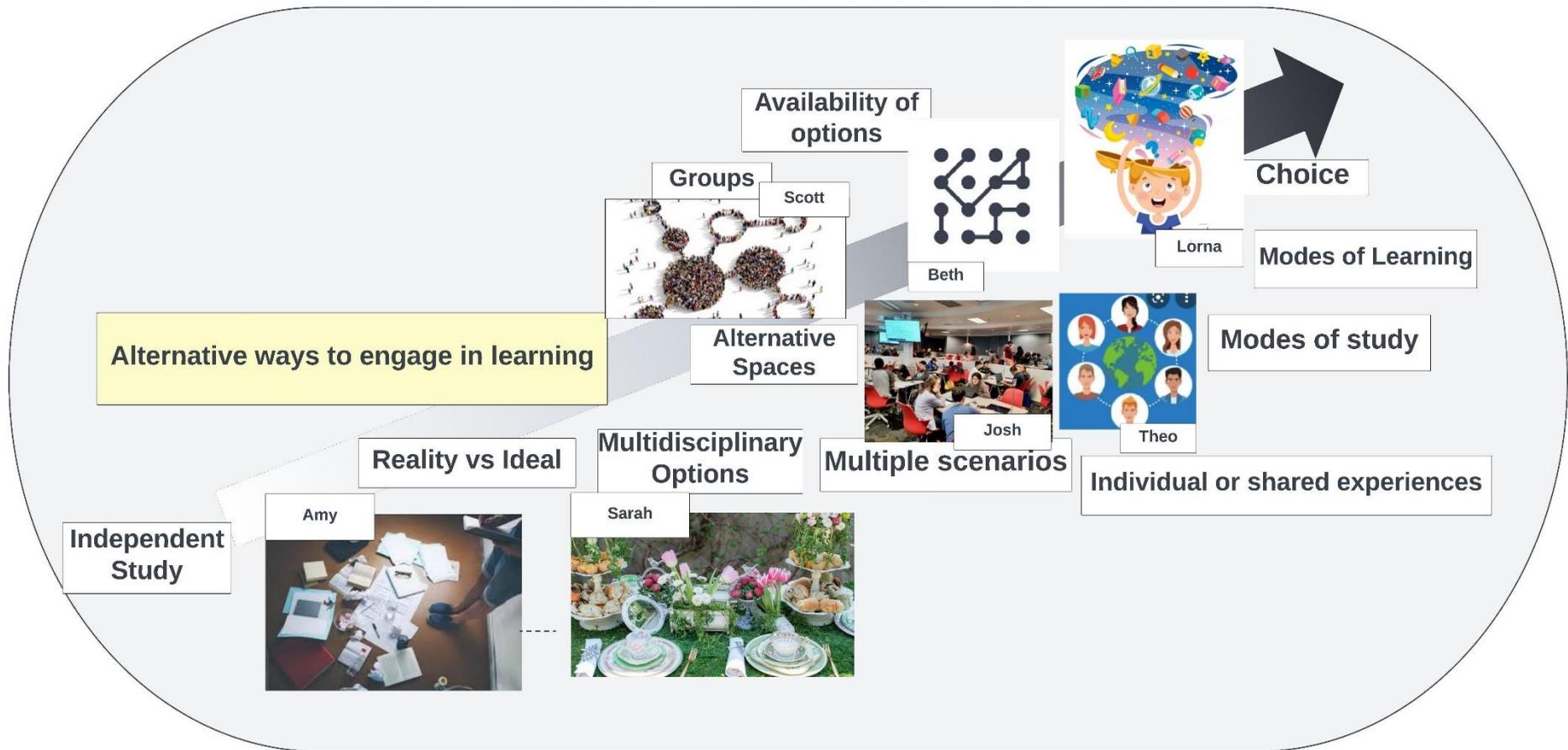
Figure 5.24:Alternatives concerning engagement with learning

Looking beyond Amy's interpretation, the images represent alternative ways of engaging rather than an alternative to engagement. Sarah associates her image of a garden party with multidisciplinary opportunities where the chance to mix with other students in an alternative, more social setting is seen by her to enhance engagement by shifting the dynamic of a typical lecture scenario.

> *… usually, we're in a lecture theatre or similar where we are all just sat still in one place just listening to lecturers talking. Not that that's necessarily disengaging but not all the lecturers are very interactive. You know, using Kahoot or Jamboard or stuff it can be really engaging.*
>
> *Trying to mix in a lecture theatre is difficult because you're all seated, there's not much room or moving around there's generally not much interaction between the students.*

<div align="right">

Sarah (RC5_IGA_2)

</div>

In a detailed consideration of the nature of lectures, Gourlay (2021) challenges contemporary assumptions that position them as broadcast events where students are "passive, inert listeners" (p.76). She argues for a different interpretation that recognises their intensely interactive nature on the basis of co-presence and ephemerality; where interaction beyond interlocution is an acknowledgment of the commitment and energy that is embodied in such a face-to-face encounter.

As Sarah reflects on her experience and elaborates, she describes her own commitment to 'turn up', and despite her commentary (above) seemingly aligning with normative assumptions about the passive nature of the experience she also recognises strategies used to influence the dialogue between the lecturer and students. What she seems to be searching for in an alternative to this, is not focussed on the teacher- learner interaction in a lecture, but on the interaction between students themselves. This is a subtlety different vantage point, not one that necessarily positions the lecture in a deficient capacity but one that recognises the challenges associated with the kinds of spaces in which they occur, and the potential offered by situations where the student dynamic is activated through more social interaction. Indeed, Ashwin et al (2020) reinforce the central role of dialogue in these situations and the effectiveness of strategies to encourage it.

These ideas are reflected in the narratives of Scott and Josh and by their images shown in Figure 5.26. They associate the notion of alternative ways to engage with learning with the potential offered by diverse group scenarios. However, rather than viewing these group settings as an active choice embedded as part of an ongoing experience, Scott interprets his image as a campus where different rooms cater for different groups learning different things. In essence, he is linking this to the expectations students may have about how learning is organised in their chosen discipline. Scott's reflections give some insight into how the degree to which these scenarios match student expectations of 'being at university' influence their engagement.

Scott

Alternative spaces/groups

Josh

Multiple scenarios
Individual and shared experiences

Figure 5.25:Alternative spaces and experiences

Josh's previous image (opposite to engagement) of students in a lecture theatre adopting a seemingly passive role is in stark contrast to the scenario depicted above. His alternative to the lecture is,

> *… noisy, crowded but everyone is engaged in learning together. It's a lot like the learning zone in the library.*
>
> *Lots of students grouped around tables, most with laptops. They're in a big room with divided off sections. It looks busy and social but definitely a learning area. They might all be doing the same thing but then again, they might not, I don't think it matters.*

Josh (RC9_IGA_2)

The point that Josh makes at the end of the statement above is interesting in that arguably, from a student engagement perspective, it does matter. Josh elaborates on the statement above suggesting that in these kinds of places, students might be involved in shared projects or activities associated with a lecture but not in writing an assignment which is seen as a solo endeavour. Through a detailed consideration of alternatives Josh is describing a diverse set of circumstances where engagement with learning is embedded as part of a complex sociomaterial entanglement. A multiplicity of engagement states exists across subject disciplines, spaces and activities, constituting the student experience of countless individuals.

Characterised by students in this way, engagement as a measurable, quantifiable state becomes an elusive commodity for institutional strategists. It is difficult to imagine how data driven solutions can distinguish and account for the differences between collaborative and individual engagement in the scenarios described by Josh. Monitoring attendance data is unlikely to capture or account for the richness or relevancy of the dialogue in such collaborative or group scenarios. Engagement reduced to a binary state cannot capture the holistic nature of what is happening or account for the complex interaction of sociomaterial phenomena.

The value of choice and an appreciation of how different approaches to learning impact and influence engagement is also characterised in the images presented by Lorna and Beth.

Lorna   Beth

Figure 5.26:Options and pathways

Beth defined this image as 'alternative learning pathways' and found the image through a search using 'unstructured', 'circuit boards' and 'circuitry' to find a visual representation of her ideas. She envisages the pathways on the grid as representing three students following their own approach, and describes it as a kind of openness, "knowing that you have to go from A to B, but you don't have to go straight there." Connecting this to her experiences of learning in a university setting, she elaborates further regarding this idea of an unstructured alternative,

> *… an alternative to a classroom setting where there's a structured presentation or a seminar or lecture or whatever, that you go there to learn, you write notes, you come home, you know a kind of traditional way of learning I guess.*
> *Unstructured for me meant that you went into a kind of classroom or you started a classroom online or you were working online in a workshop where it is completely unstructured so to speak - so you go there, you've got a point of conversation or topic or subject matter that you're wanting to explore and then you can just take a deep dive and just see where it goes and it might completely move away from your original subject or topic to something completely different - it just gives you the luxury of seeing where it goes.*

Beth (RC7_IGA_2)

There is a sense here that in exploring the notion of alternative ways of engaging with learning, Beth is beginning to describe how an inquiry driven pedagogy might offer interesting opportunities to enhance and sustain that engagement. Taking a 'deep dive' and 'seeing where it goes' are certainly attractive propositions on one level but perhaps rather idealistic in reality. In that way, Beth does recognise the inherent challenges in these kinds of approaches, suggesting that the subject matter might become obscured and assessment strategies compromised (RC7_IGA_2).

The vantage point offered by IGA offers some insight into the student experience of learning in the context of learnification (Biesta, 2015). Aspects of Beth's analysis also resonate with notions of serendipity and Connectivism, where "learning is a process that occurs within nebulous environments of shifting core elements – not entirely under

the control of the individual" (Siemans, p.5). Acknowledging Gourlay's (2021) critique, this reference to Connectivism is not intended to champion it as *the* 'learning theory' to secure engagement, but rather to illustrate how its ideology and the rise of the language of learning (Biesta, 2015) might act as sociomaterial forces and influence student ideas around alternative ways to engage.

There is evidence of this in Lorna's narrative too as she analyses the image of a "young boy with a bubble of imagination" (RC6_IGA_2) and explores the notion of learning preferences. As in Beth's case, there is a 'student-centredness' to her analysis echoing the language of learnification criticised by Biesta (2015), but there is also a recognition in Lorna's statement that learning is not an abstract state and that *what is being learnt* is crucially important. She also questions the university position in this relationship with regard to expectations about *how things are learnt* and what engagement behaviours are recognised and valued,

> *… they may choose not to engage with something that the university is*
> *proposing or in the way that the university is proposing.*
> *If the student thinks OK, I've discovered this alternative way that I can*
> *engage and that I get more from, the university can actually help us by*
> *tapping into this and acknowledging the alternatives.*
> *Goes back to what we were saying. Just because you log onto something*
> *that the Uni expects you to, doesn't mean that you are engaged in*
> *learning, they're sort of not acknowledging the alternatives.*

<div align="right">Lorna (RC6_IGA_2)</div>

Summary

The analysis of images associated with the concept of 'alternative ways to engage' is grounded by the experiences of student participants. In this sense, it is embedded in the subject matter of individual disciplines and the sociomaterial world; learning in this context is not an abstract phenomenon but embodied in the array of spaces and moments that constitute the student experience. In this complex scenario, and considering the cumulative response from the student participants, the notion of alternatives and its close alignment with the concept of opposites, becomes tricky in that it reinforces the idea of accepted norms and the desire to do something different.

To talk not of 'alternatives' and more of diversities and possibilities may offer a more productive means of considering the implications for engagement led pedagogies in Higher Education.

5.5.5 Student Engagement: Motivation & Outcome

In Phase One, *outcome* was conceptualised as a function of engagement, related to the success of moving towards a graduate career which provided a motivating force sustaining engagement over the long term. The interrelationship between motivation and outcome was further explored by participants in Phase Two of this research, their image analysis forming the basis of a deeper understanding of how students assimilate notions of employability into their understanding of engagement. The image artefacts in Phase Two supported participants' reflections helping them to make connections between motivation and outcome as abstract concepts and the reality of their day-to-day experience. In this way, the process provided an insight into how long-term goals influenced engagement with learning in short term goals such as module assessments.

The sub-concepts of motivation and outcome are addressed together in this final phase of analysis. The narratives from student participants indicate the interrelated nature of these, resonating with findings from cognitive research suggesting self-determined (intrinsic) motivation leads to better learning outcomes (Conti, 2000; Deci & Ryan, 1994).

Also, that outcomes are more assured where barriers are minimised and motivation is sustained through ambitious content (Youngs et al, 2022), enabling relationships and engaging pedagogies (Ashwin et al, 2020). The student led conceptualisation of engagement that is emerging from this research, adds fine detail to the notion of motivation as an enabling force, how it works to counter inhibiting conditions (barriers) and support positive outcomes. The complex interrelationship of these things is shown in the two images following (Figures 5.28 and 5.29), again taken from the first iteration of the conceptual model (Figure 5.10) and giving structure to discussion in this section.
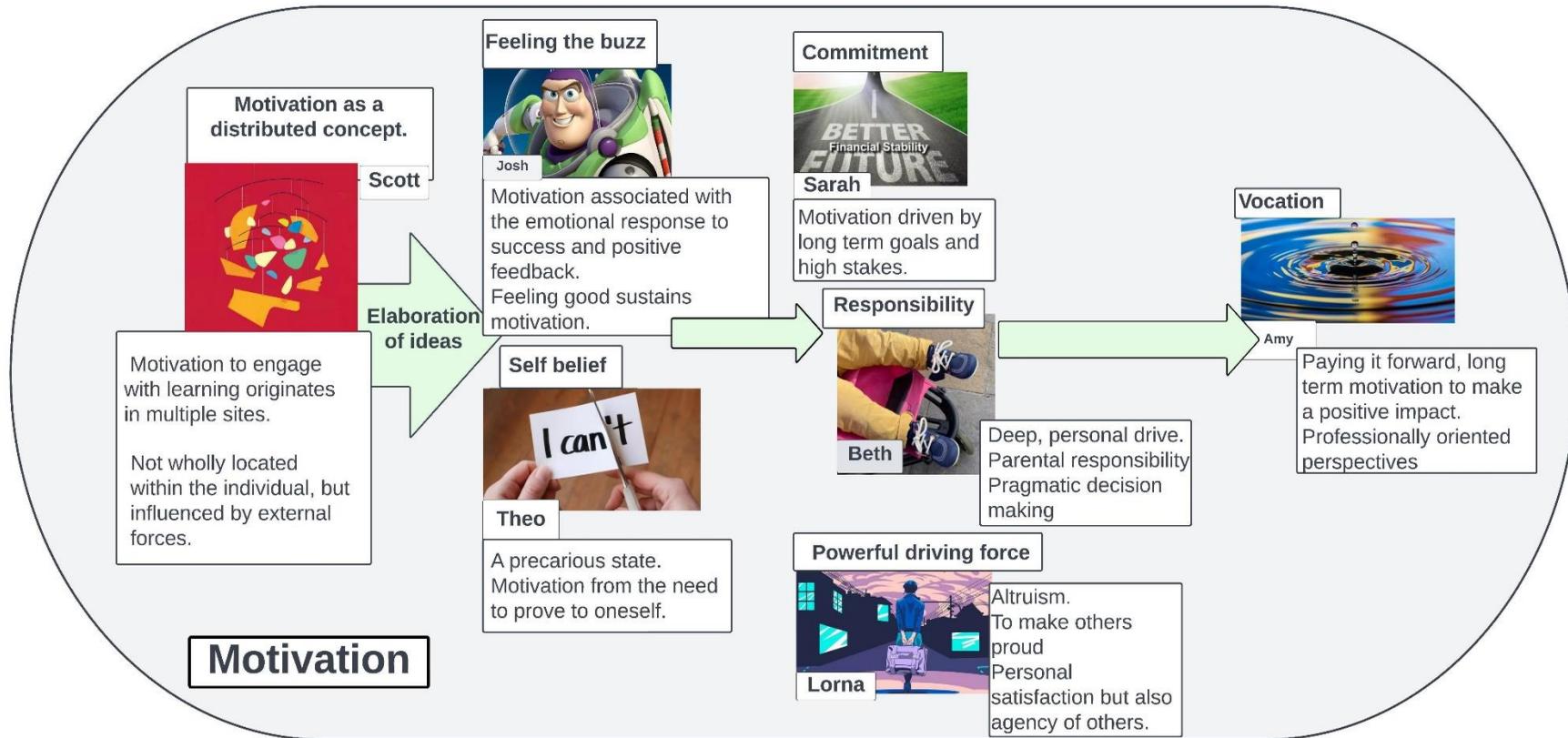
Figure 5.27:Motivation – an enabling force
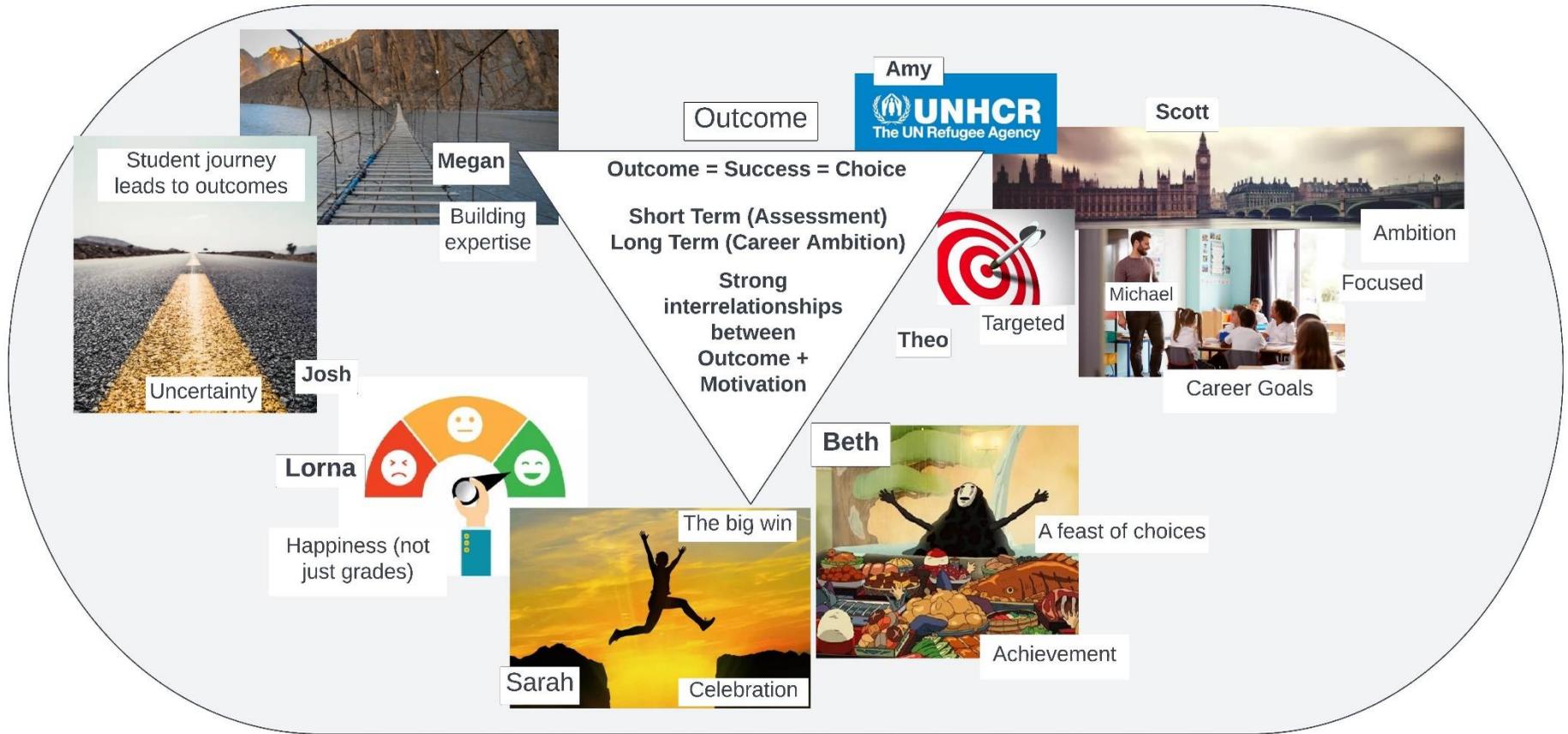
Figure 5.28:Engagement with Learning - Outcomes

Beth is motivated by a strong sense of responsibility to achieve the best outcome for herself and her daughter. Rather than search for an image to represent this, she chose to take a photograph of her daughter's feet as she sat in a pram. The stakes are high for Beth, she made a determined choice to return to study and she presents an image that positions the dependency of her daughter alongside a determination to succeed. These core values drive and sustain her engagement in the short term, translating to positive outcomes over the long term. In Beth's case, no specific career goal is identified but she uses the image artefact seen in Figure 5.29 to signify how her engagement with learning will lead to a "feast of choices",

> *… it's about the choices you have if you engage and the doors that open up to you when you complete studying. Gives you so many more choices. I appreciate it a whole lot more in my situation.*
>
> *Ultimately, it's down to you when you engage it's a personal, individual choice but knowing about the choices I might have when I graduate helps that. Like different options I guess, research roles, PhD, assistant psychologist, teaching - a lot of options, a feast.*
>
> *It's really exciting I think, and I can make choices that influence what happens in the 20 years. The ghostly figure (in the image) is a bit unnerving when I think about it, but maybe that's what it's like, you know it's all a bit scary isn't it and all you can do is make sure you do what you're supposed to do.*

Beth: (RC7_IGA_7)

Without the perspective that Beth brings to this analysis, the rather abstract image has seemingly little connection to the concept of engagement. However, her narrative provides an insight into the powerful influence of personal circumstances and how university wide graduate outcome initiatives might be assimilated into these and become an influential force on engagement with learning.

Beth's suggestion that an uncertain outcome is 'all a bit scary' could also be associated with Josh's choice of image of a long road ahead leading to an uncertain destination.

However, he interprets the uncertainty as something that is fundamental to his student journey, knowing that his continued engagement will lead to graduation but beyond this, the decisions he makes will determine what happens next.

> *With a degree in computing, I think there's all sorts of possible outcomes and I haven't really decided on any one particular one at the moment, I quite like the idea of doing a Masters, I don't know. Maybe there are different roads depending on what you choose*?

<div align="right">Josh: (RC9_IGA_7)</div>

As a visual metaphor representing the student journey, Josh's choice of image shares meaning with Megan's image of a rope bridge and is similar to Sarah's image of a "road to a better future." Megan imagines her image, as a representation of her student experience, to be a bridge to a clearly defined outcome. Her ongoing engagement strengthening her capacity to gain Qualified Teacher Status and begin a career in teaching immediately after she graduates.

Although Josh's engagement is also influenced by a sense of outcome in the long term, he does not identify this as a factor influencing engagement with learning in the short term. In the absence of a definitive outcome, Josh explains through his choice of image that his motivation to engage in the short term derives from the 'buzz' of receiving positive feedback about his work. Motivation in this sense being situated in the relationships that are fundamental to teaching and learning and therefore more likely to be influenced by complex and competing day to day sociomaterial forces.

Sarah's representation of motivation is an image that is visually similar to Josh's however, it is conceptually more aligned to Beth's narrative around outcome and how the long-term commitment to a better future is a powerful and sustained motivational force. Outcome and motivation are intertwined in Sarah's conceptualisation, the leap of faith she is taking is a high stakes investment in a better future for her family. The "big win" associated with the notion of outcome is a celebration of success, a feeling of

achievement, but she also associates this *leap* with the "little wins" and the short-term successes that sustain her motivation to learn.

Financial stability is what I've always aimed for and I'm not a massive gambler, but I've taken a massive gamble on me. Like I've re-mortgaged the house because I don't want to be in any student debt. Full time employment was safe and secure and stable but if I wanted to progress, which I did, then I had to gamble to reach the end goal. The road goes up its challenging, you do still have to work for these things, there's a road to travel. Without doubt all this drives my motivation to learn especially when it's difficult.

Sarah: (RC5_IGA_5)

Little wins - getting things right - doing well in assessments - getting decent marks.
The big win from this degree is graduating and being so proud of myself that I've managed to get to the end of this journey.
There so many challenges along the way and when you go into your very first lecture when it sounds like they're talking a different language because you only understand 2 words that were said there, you feel so out of your depth, even going from there to your next lecture is a win.

Sarah: (RC5_IGA_7)

Figure 5.29:Motivation and outcome acting together (Sarah)

Amy's motivating force is a sense of vocation like the classroom ambitions of Michael and Megan in Phase One but characterised as "paying it forward". She uses the image of ripples emanating from a pebble dropped in a pool to explain how she is motivated by a desire to make a positive impact on the life of others. The image that Amy offers (in Figure 5.29) in association with the concept of outcome is less a metaphor and more a direct communication of intent with successful completion of her studies seen as a stepping stone rather than the outcome. There is a sense of altruism in her analysis that extends beyond the confines of a classroom to her ambition to work for UNHCR in a role aligned to refugee education. As a motivational force, this sense of vocation over the

long-term acts, in the same manner as the commitment described by Sarah and Beth, to sustain engagement with learning.

Scott has a similarly ambitious outcome in mind, his image of the houses of parliament helps him to situate his thoughts on this and serve as the basis of his analysis. Scott's opening search for this image was "MI5 graduate careers", but he aligned this more with an interest in Civil Service careers rather than a specific intelligence role. Like Josh, these career goals were not established at the time he opted for, and subsequently enrolled, on the sociology course but are now central to Scott's sense of direction acting as a positive influence on his engagement with learning.

The analysis of image artefacts associated with motivation and outcome gives some useful insight into forces that influence engagement and show that students distinguish between those that act more immediately and those that are fundamental over the longer term. In this manner, Scott's analysis of the fragmented head (Figure 5.31) describes such a distinction and is an attempt by him to capture multiple influential and more immediate scenarios and relationships.

Motivation comes from different things. Sometimes just one of those things gets you going and sometimes they all need to be there.
When I thought about this, I thought about the reason why I chose the course, I loved Sociology as a subject, so I guess that was motivation. I didn't really know what I wanted to do for a job, I wasn't thinking that far ahead at that point, but it was Sociology that got me here.
It's different for assignments and the day to day things though, yes it's still sociology but, some tutors motivate me more than others, I find some tasks more interesting than others, and then there's the other people on the course, I mean not all of them, I mean the four or five other students that I work with and I guess have a bit more of a relationship with, being able to talk things through with them really helps.

Figure 5.30:Scott's Motivation

The relationships and interactions described by Scott represent different motivating forces and are key to his engagement. They create a sense of belonging, collaborative and collective endeavour and support the development of long-term goals and ambitions.

Lorna's ambitions centre on gaining a Master's in Public Health, and like other participants in this study, this long-term outcome is a motivating force. As the product of her engagement, her interpretation of this outcome is anchored by the image of a 'dial' (Figure 5.29) where the pointer is turned to 'Happy'. The emotional state that Lorna attributes to this image contrasts directly with the feeling of sadness that she associates with the image, that for her, characterises the concept of motivation. This silhouette of a young woman carrying luggage, walking down a lonely road represents a significant journey for Lorna,

I had to leave my home country and family. It necessitated a significant amount of sacrifice. This is what inspires me to keep going because I want to make them and myself proud. It's my main motivation when I think about engagement.

Figure 5.31:Lorna leaving home

Central to Lorna's analysis is a sense of commitment derived from her significant decision to leave family in her home country. Similar in many respects to the commitment described by Beth and Sarah, this investment is described as a "big deal", fundamental to the emotional connection that Lorna makes with her studies.

Lorna goes beyond the scene in the image to describe the multi-faceted nature of motivation that reveals similarities with Scott's interpretation. Initially, she describes walking through the doors of the campus for the first time as 'more motivation than I could imagine' and then reflects on a specific interaction with a tutor:

Feeling supported by tutors is really key for me, it's motivating to feel like we're in this together.

There was a tutor that actually went out of her way to give me feedback in a seminar about work I was doing, she said she really liked my ideas, gave me ideas on how to refine it and said send me an email and we can work on something like this together.

I felt so good, if I hadn't had that feedback I would have gone home and done something else but as soon as I got home this time I just decided I gonna do this because I felt like there was someone out there, to support my ideas, I didn't feel like I was alone to figure it out for myself - it gave me confidence and really motivated me.

When you feel like the tutors know you and understand something about how you got to university, what your history is, what you're used to in terms of learning, all of this keeps the motivation there.

Lorna: (RC6_IGA_5)

Summary

Lorna's analysis adds an emotional dimension to the collective narrative that explores the complex interrelationships between motivation and outcome. These act together to influence engagement with learning in complex sociomaterial scenarios. In this context, she describes how feelings of sadness and uncertainty are transformed as a motivating force that sustains engagement towards the realisation of long-term goals. Key to the success of this emotional investment is the support received from tutors and the enabling relationships that are the foundation of this. Engagement as a nurtured state is likely to thrive in conditions where human interaction is valued above data led solutions, and where welcoming environments foster wellbeing and a sense of belonging.

5.6 Chapter Conclusion & Research Summary

In the context of the research questions guiding this work, the analysis and summary of findings in Phase One established the foundation for Phase Two and an in-depth exploration of key engagement concepts identified by students. In this research, the experience of students is centrally important to the framing of the research questions and in reconceptualising engagement as a sociomaterial phenomenon. Here, I present key insights aligned to those guiding questions as a summary to the research.

> **RQ1**: *In what ways do students understand engagement with learning at the intersection of the sociomaterial world and their individual experience?*
>
> **RQ2**: *What kind of sociomaterial conditions and phenomena are connected to student engagement with learning?*
>
> **RQ3**: *How are the sociomaterial forces that influence their engagement with learning characterised and assimilated into their experience of being a student?*
>
> **RQ4**: *What are the implications of the research for understanding and conceptualising student engagement?*

The images brought into this research process by the student participants represent key aspects of their experiences at university. As image artefacts in an Inquiry Graphics Analysis of those experiences they foreground the conditions in which students engage with learning (RQ2) and create opportunities for individuals to reflect on their experience in an expansive way (RQ1). Data gathered through image diaries and research conversations highlight how student experiences and therefore engagement is embedded in (rather than separate from) lifeworlds that include university, domestic, sociocultural, and digital contexts. Students clearly understand engagement is associated with learning, teaching, and their overall experience of being at university (RQ1) but the IGA approach affords greater insight into the sociomaterial complexity of these experiences. In that sense, the spectrum of images offered by participants becomes a visual representation of the entanglement of intra-acting forces that

constitute diverse student experiences (RQ3). Acknowledging this complexity through the IGA process aligns with Barad's (2007) notion of inseparability and usefully decentres the student in the discussion on engagement to better understand it as a sociomaterial phenomenon (RQ2, 3). In this way, engagement with learning is transformed from a routinely quantifiable, binary state (Trowler et al, 2022) to a dynamic, emergent phenomenon in a complex and mutually constituted reality (RQ4). These diverse realities are represented in individual image artefacts and collectively as a corpus of visual data. As snapshots of student lifeworlds they are linked by participants in this research to the material reality of their everyday experiences and multiple conceptualisations concerning engagement with learning (RQ1, 3).

The perspective developed in this research looks beyond the student to understand their experience of engagement in relation to their social, material, and digital surroundings. The diffractive power of IGA not only allows us to see these entities in their own right, but similar to Fenwick et al (2015), to also appreciate how things that might be seemingly loosely connected come together and participate actively with each other to produce particular phenomena (engagement) (RQ3, 4). In the context of this research and the experiences shared by students, there is evidence to show for example, how desks, chairs, books, devices, lecture theatres, domestic environments etc, might intra-act in the relational formation of engagement and new knowledge (RQ2).

Environment emerges as a key concept related to engagement with learning and becomes central to the new sociomaterial model defined in the next chapter of this study. Participants in this research go beyond simply describing the spaces where they engage in learning, using IGA to unpick and analyse the environmental conditions, attending to the quiet but powerful work (Taylor, 2022) done by the things assembled in these places (RQ2,3). Engagement associated with the environments represented by the image artefacts in this research is more than a question of individual student will. As an "emergent process of co-constitutive acts arising from objects-bodies-spaces-temporal relations" it reflects Taylor's (2022. p.207) posthuman perspective and the

complex, entangled nature of student experiences seen from new materialist perspectives (Monforte, 2018; Sojot, 2020).

These diverse spaces reflect students' changing needs as they journey through their university experience and are central to how they envisage learning. Conceptualised in this research as spaces that enable learning, participants also acknowledge the presence of inhibiting forces and characterise these as barriers to engagement. IGA leads to important insights regarding students' often conflicting personal commitments and responsibilities and there is evidence across the visual data to show how students differently experience, understand and resolve these tensions to maintain an equilibrium conducive to learning (RQ1, 4). Where the stability of this state is compromised, students describe how this exacerbates mental health issues, threatens wellbeing, and impacts negatively on learning. The image and narrative data in this research indicate how sociomaterial perspectives developed through IGA have a capacity to identify entry points for targeted interventions and offer ways to support students in negotiating the challenges created through the agency and intra-action of diverse, influential entities (RQ4).

The dynamic, multimodal nature of contemporary culture reflected in the university experience creates a complex mix of conditions that are reflected across the images curated by participants in this research, and it is in that context in which their understanding of engagement is realised (RQ1). The assertion that context matters, that agency is distributed across social, material, and digital dimensions is central to this study and findings support the notion that engagement is shaped by the dynamic processes of relational materiality (Fenwick et al., 2011; Sorensen, 2009). Facilitated by the image analysis process, elaborate student narratives emerge that disrupt institutionalised notions implicating them as the dominant agents in a complex process.

Decentring the student in the discourse of engagement leads to an understanding of it as a shared responsibility, where it becomes an emergent phenomenon originating in a multiplicity of relationships (RQ4). This notion is not limited to a sociomaterial framing

and can also be appreciated in the work of Evans et al (2015) through their research into the relationship between high impact pedagogical strategies and student engagement. Although not explicitly aligned to a relational perspective they present engagement as a shared endeavour in the context of student/staff dispositions, pedagogy and subject/discipline characteristics. Participant narratives across Phases One and Two show how students understand engagement in the context of pedagogy and often foreground the vitality of relationships with peers and tutors in this respect (RQ1, 4). However, it is also clear how the sociomaterial perspective extends their appreciation of relationships beyond the social dimension to consider their relationships with physical spaces, material objects and digital technology.

Students currently enrolling at university have a digitally mediated relationship with knowledge that fundamentally questions the role that Higher Education plays (Bramley & Morrison, 2023; Grant, 2021). The sociomaterial perspective explored through the application of IGA creates opportunities for students to reflect on their experiences in the context of such prevailing societal conditions. Outcomes from this research reflect the kind of multimodal everydayness described by Kress (2010), Lackovic (2020) and Selwyn & Gasevic (2020). Image analysis and narratives show how engagement with learning is directly influenced by the relationships students have with technology and the capacity of the digital domain to blur the lines between university and domestic/employment scenarios. The collective narrative gives detailed insight into how students manage these tensions and assimilate this powerful force into their everyday experience of being a student (RQ2, 3). They acknowledge its significant influence and characterise technology as an enabling phenomenon but with an inherent capacity to distract and disrupt engagement. Furthermore, there is evidence in the student narrative of their awareness of how technology is deployed by the university to monitor their behaviour and that this surveillance data (Fawcett, 2021; Gourlay, 2022) is used by the university as a measure of their engagement. Importantly, students also understand how these strategies overlook much of the fine detail and gritty reality associated with their experience and engagement with learning.

This research shows how IGA has the potential to foreground new sociomaterial perspectives associated with engagement that reflect the complexity of contemporary student experiences at university. It represents a structured, analytical framework encouraging participants to reflect on a multitude of possible engagement/non engagement scenarios and consider these in relation to their wider experience of being a student.

Chapter 6: Conclusion

6.1 Introduction

This research expands the existing body of work on student engagement in Higher Education, offers new vantage points and introduces a new conceptual model. The outcomes from this qualitative and critical inquiry show how students conceptualise engagement with learning as a complex, multi-layered phenomenon thoroughly intertwined with their day-to-day lives. In this way the study addresses previous calls for research to explore student engagement from a more holistic perspective (Tight, 2020) and open up new ways of thinking about it (Zepke, 2018). The sociomaterial perspective builds on Gourlay's (2017) argument for a reframing of student engagement as a radically distributed function of human and non-human interaction and shows how it is connected to and influenced by diverse social, material and digital dimensions. This valuable sociomaterial perspective provides opportunities to view engagement from the student perspective, gain a deeper understanding of the conditions and forces that influence it, and consequently enhance what we know about their relationships with university and how their experience might be optimised.

This final chapter draws the work together and explains how over the course of three iterations, a new sociomaterial model of student engagement with learning is developed. As part of this, I explore the implications of the research and how the insight it offers could contribute to faculty initiatives to enhance learning and build positive and purposeful relationships with students. The chapter closes with a consideration of the challenges encountered during this research and the new opportunities that this kind of work offers.

6.2 Student Engagement Reconceptualised: A Sociomaterial Take

This study set out to seek a new perspective on the well-established theme of student engagement and address gaps in knowledge about the nature of student experiences by developing an approach situated in the emerging field of relational and multimodal studies of Higher Education (Lackovic, 2020; Lackovic and Olteanu, 2023). It contributes

to the growing body of research (Adams & Thompson, 2016; Fenwick, et al., 2011; Gravett, et al., 2021; Lackovic and Olteanu, 2023) concerned with how materiality in educational environments impacts social and therefore student experiences. Encouraging us to think beyond the human position (Braidotti, 2016; Gourlay, 2021), these sociomaterial perspectives offer new and interesting ways to examine the notion of student engagement. In doing so it also responds to the calls for a more holistic understanding of student engagement (Kahu, 2013; Tight, 2020; Zepke, 2015) in the context of a highly marketised sector that prioritises data led reductionist perspectives (Fawcett, 2021).

To this effect, IGA (Lackovic, 2020) supported a close examination of student experiences to show how sociomaterial forces constitute and influence their university experience. The research findings show how the complex interrelationship of social, material and digital dimensions act as enabling or inhibiting forces to influence engagement at the micro level.

Overall, the research generates an understanding of engagement that recognises it not as an innate quality or attitude that students are expected or contracted to demonstrate, or a tangible entity to be harnessed, measured and monitored. Rather that, engagement as a sociomaterial concept is an emergent phenomenon originating in relational complexity. Informed by the relational perspectives of Lackovic & Olteanu (2023) it shows how new knowledge of student engagement can gained as a result of understanding the complex relations that constitute the social, material (environmental) and digital dimensions of experience. In that manner it offers insights into symbiotic and multimodal relationships, how these influence individual learning and leads to a more holistic framing of student engagement.

The research leads to a reconceptualisation of student engagement and through an iterative, reflexive process (Figure 6.1, below) defines a new sociomaterial model of engagement which I summarise in the following section.
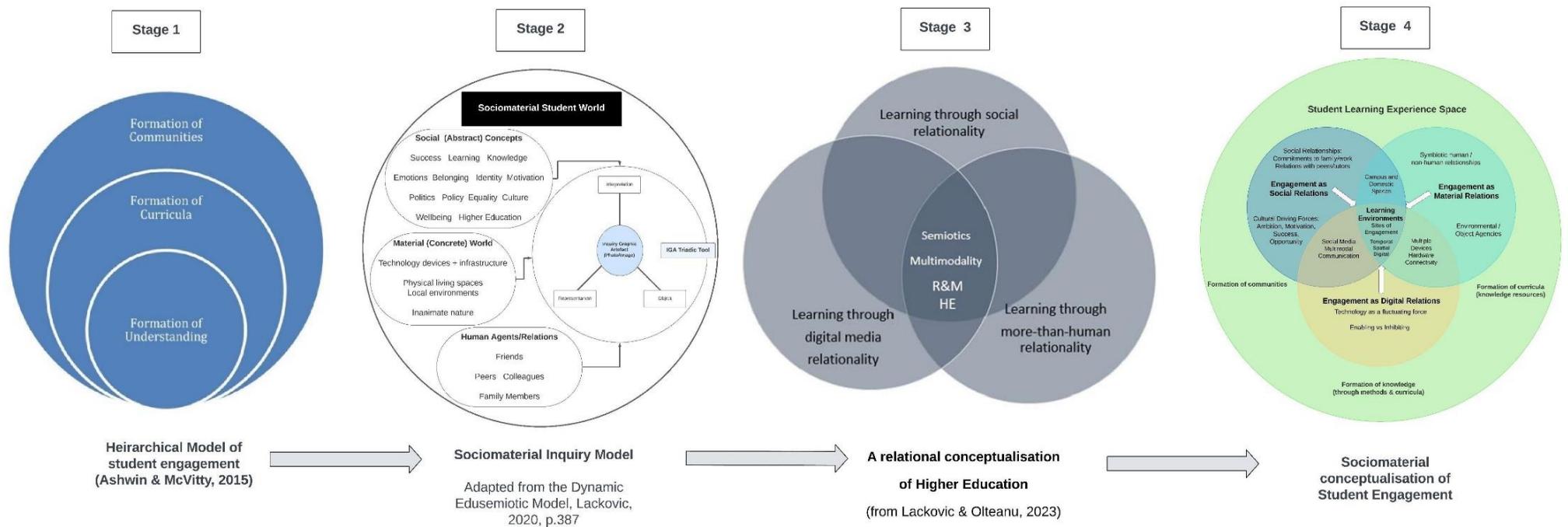
Figure 6.1:Reconceptualising student engagement: The iterative process

6.3 The iterative process

Identifying the focus of engagement was an early step in this research, a decision that was informed by a consideration of the hierarchical model presented by Ashwin & McVitty (2015), the conceptual models of Kahu (2013), Kahu & Nelson (2018) and the work of Lackovic (2020). It was the notion of engagement as the formation of understanding (Ashwin & McVitty) that specifically led to identifying engagement with learning as the object of this research and is why their work is positioned as it is in Figure 6.1. A focus on learning enabled participants to reflect on their experience as students and from this individualised perspective consider how social, material and digital phenomena influenced their engagement.

Ten multimodal visual diaries created over two phases of data collection generated over seventy image artefacts (Inquiry Graphics) representing multiple engagement concepts. The outcomes were summarised as IGA Maps (Appendix 1 & 3) and through a subsequent, reflexive analysis of this body of evidence, further supported by the recordings and transcripts of research conversations, seven engagement themes were defined. These are reflected in the first iteration of Sociomaterial Conceptual Model of Student Engagement (Figure 5.10) that provided the structure for the Phase Two discussion in Chapter Five. Despite the rather crude and unwieldy nature of the model (5.10) the integration of image artefacts and keywords drawn from the IG Maps and participant narratives ensured it was effective in giving structure to a detailed discussion in the previous chapter. However, although it was practically important as a working model it is omitted from Figure 6.1 in order to retain the conceptual focus of this final process diagram.

An important step in moving from pragmatics to a more conceptual perspective was to revisit the application of the IG analytical framework to the student experience. The Sociomaterial Inquiry Model (Figure 3.4) appears as the second stage in the iterative process because it shows how the diffractive power of the triadic tool was applied to unpick the student experiences associated with engagement and begin aligning them

with sociomaterial dimensions. This stage is useful in illustrating the application of the IG analytical framework but to make sense of the findings and reconstitute them at a conceptual level I returned to the Relational Conceptualisation of Higher Education (Figure 3.1) appearing here as the third stage in this iterative process. This brought some clarity to the process as it allowed me to see how the research findings aligned with the three relational dimensions of learning identified by Lackovic & Olteanu (2023). Importantly, it helped me to refine my thoughts and led to the design of the model that appears as the fourth and final stage of this process, the Sociomaterial Conceptualisation of Student Engagement (Figure 6.2, following).

6.4 Sociomaterial Conceptualisation of Student Engagement

The model retains the notion of engagement with learning as a highly situated phenomenon and positions learning environments at the centre as 'sites of engagement'. Participant narratives point to the diverse characteristics of these spaces. Often compromised and carefully negotiated, learning (or study) environments possess temporal, spatial and digital qualities reflecting the influence of intersecting sociomaterial forces. Student participants present multiple interpretations of these sites of engagement using the IGA framework to untangle and make sense of the relationships and forces that exert influence in these spaces and consequently their capacity to engage with learning. Students describe their experiences through the ways in which they manage or negotiate these scenarios and respond to the complex interaction of forces.

Relational processes at work here reflect tensions that exist at the interface of often competing subjectivities, responsibilities, and commitments. In these scenarios, students reinforce their position, gathering together material objects and using the affordances of technology to support their learning, maintain engagement and protect their defined space or time. The contrast between Jane's 'command centre' and Megan's minimal deskspace is an embodied representation of their response to these
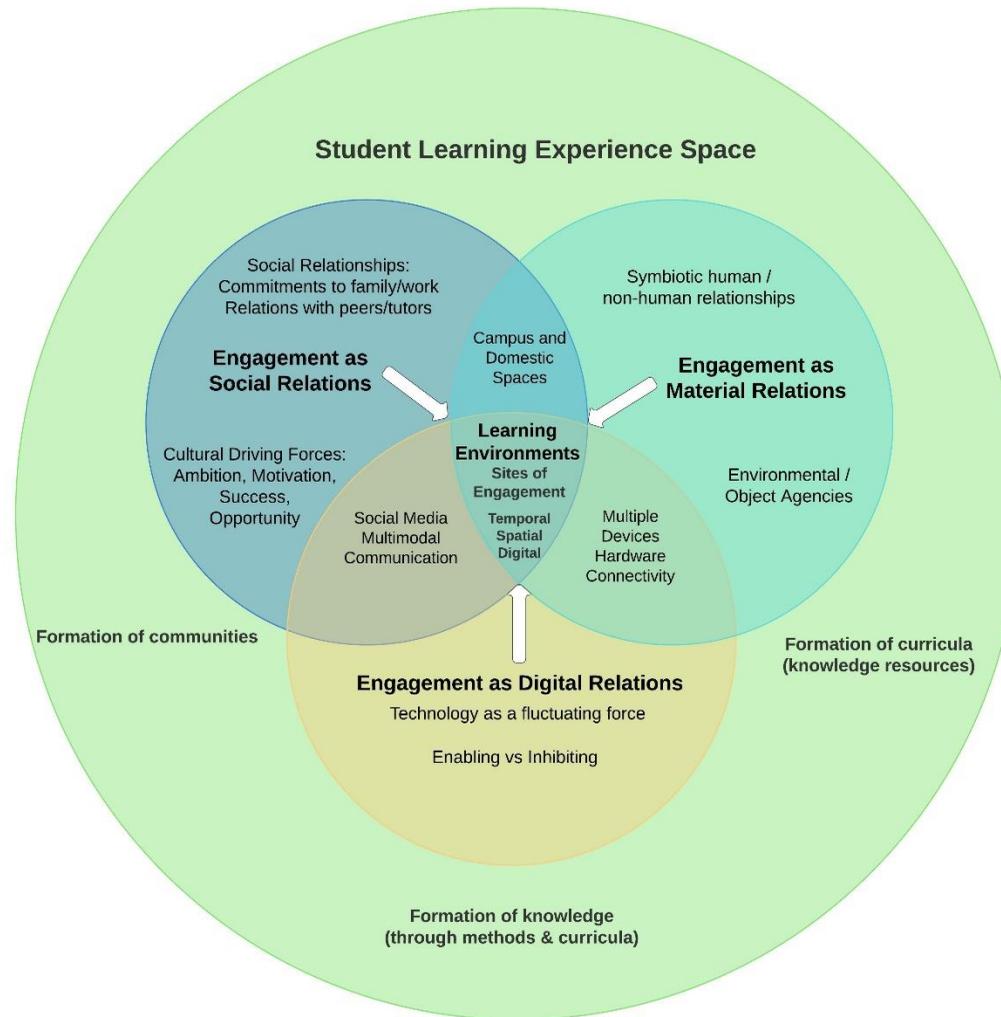
Figure 6.2:Student Engagement with Learning: A Sociomaterial Conceptualisation

influential forces and show how they assimilate them as part of their student learning experience.

The sociomaterial conceptualisation of engagement (Figure 6.2) represents a unification of ideas that originated in a consideration of Ashwin & McVitty's (2015) hierarchy of student engagement and the formation of knowledge (learning) as the focus of inquiry. The iterative process shows how, through a relational lens and the application of the IGA framework, ideas regarding the concept of engagement with learning are merged into one model (Figure 6.2). Ashwin & McVitty's (2015) work is a complex consideration of engagement and student agency suggesting that the crucial factor is the extent to which engagement (with learning, curricula, or communities) is about consultation, partnership or leadership. However, these degrees of engagement align with structural or institutional notions of agency and do not acknowledge or account for action and agency from sociomaterial perspectives. The new model (6.2) retains the engagement foci identified by Ashwin & McVitty, but these are now viewed through a sociomaterial lens and relational layers that acknowledge the agency of social, material and digital entities.

Conceptually, the model situates individuals not just as students in a university space but as individuals whose status as students and capacity to engage must be appreciated in relation to their other selves. In that sense, the *student learning experience space* is embedded in lifeworlds that extend beyond the physical bounds of university and reaches for the kind of holistic perspectives on engagement advocated by Ashwin & McVitty (2015), Tight (2020) and Zepke (2015 & 2018).

Essentially, the model creates possibilities for thinking about engagement differently, in ways that do not begin with behavioural expectations or a concern for how to capture and utilise the associated data. Without directly implicating the student in the discourse of performativity, these new conversations create the space to rethink engagement as a potential to be realised through relationships that are more complex and vital than the normative student-university dualism.- In the ways described above, this

conceptualisation of student engagement responds to Zepke's (2018) question of "What's missing?" by applying a holistic lens through which to appreciate the importance of complex social, environmental and digital relationships before the priorities of structural agendas. It is a perspective that empowers students in their approaches to learning whilst acknowledging these are always negotiated and often compromised states.

Additionally, it supports the moral purpose to involve students in an inclusive learning focussed dialogue that recognises diversity. I suggest through this work that student engagement as a homogenous construct works against the interests of marginalised groups, creates barriers, and thereby limits access, participation, and success in Higher Education. In this way, the sociomaterial relational perspective underpinning this model challenges the suggestion by Zepke (2018, p.435) that student engagement benefits from being treated as a single construct. Instead, new materialist perspectives have a vital diffractive quality, that expands engagement into constituent dimensions located within and beyond university. These are bound by complex interconnecting and intra-acting relations between human and non-human entities, and it is within this sociomaterial assemblage that engagement with learning is realised.

These ideas reflect sociomaterial (Fenwick, 2015) and posthuman perspectives (Bayne, 2015 & 2018; Gourlay, 2015, 2017, 2021; Taylor, 2018) that argue against conventional notions of students as idealised actors free from the influence of their social, material, or digital context. Aligned with those ideas, this model (Figure 6.2) presents engagement with learning as a phenomenon that is not the privilege of university systems or an inherent human attribute, but one embedded within a student experience space that exists as part of a complex sociomaterial and multimodal assemblage. This vantage point creates possibilities to see how posthumanist perspectives can be critically applied to enhance our understanding of how students assimilate learning into a university experience that "spreads out much further than their course and institution, involving family, friends, social and leisure activities and employment" (Tight, 2020, p.697).

6.5 Considerations, Implication & Applications

This research is driven by an incentive to reimagine student engagement as something other than a function of performativity that relies on proxy measures and assumptions regarding students' capacity to engage in expected and quantifiable ways. These positions disempower students in the discourse of learning and yet assume their *power to engage* is untroubled by other considerations. The sociomaterial concept of student engagement with learning addresses this contradiction by gaining a rich, student-led understanding of their experience to create a foundation on which to build an inclusive and meaningful dialogue.

Sociomateriality and the related perspectives of critical posthumanism and new materialism offer ways to challenge established positions around student engagement and gain access to complex individual scenarios that define the contemporary student experience. The implications of adopting such a position extend to a need to defend the research approach in the face of entrenched positions and other potential alternatives that also claim to have an interest in the lived experiences of individuals.

Atkinson & Hammersley (1994) champion ethnography as a way of exploring the nature of social phenomenon that recognises the value of small sample sizes, unstructured data and relies on the explicit interpretation of meanings of human action. Ethnographic approaches have been extensively applied in sociomaterial research (outlined in Chapter 3.4) and to a lesser extent research specifically on student engagement. This kind of work is reflected in studies such as Suarez (2007), an ethnographic approach exploring student engagement by observing library behaviour; Crawford, Kelly & Brown (2000) examining engagement in classroom science lessons and Irawan's (2023) ethnographic case study and photovoice inquiry into engagement in an online scenario. However, this study brings together sociomateriality and Inquiry Graphics to dislodge the ethnographic foothold on student engagement as a way of foregrounding the agency of complex relationships rather than the perspectives of human participants.

Similarly, Interpretive Phenomenological Analysis (IPA) (Eatough & Smith, 2017; Smith, 2011) is primarily concerned with the detailed examination of personal lived experience of a phenomenon and how participants make sense of those experiences. This approach has previously been applied in research into student engagement with Bryant (2014) and Al-Freih (2021) typifying studies that have focussed on classroom and taught environments. A notable and more recent study by Bradbury & Nieuwerburgh (2023), acknowledged the dominance of quantitative research in this field and employed IPA as an alternative to examine how BAME (Black, Asian and Minority Ethnic) students experienced engagement in a university business school environment. Their findings provide a multi-faceted qualitative view of engagement associated with themes linked to environment, relationships, motivation and belonging. These certainly resonate with the findings of this study and the IPA driven participant reflections give a rich insight into the experiences of their students. However, hidden in the detail of those reflections are references to lecture theatres, the library, laptops, work commitments, prayer rooms, peers and tutors, which are seemingly not afforded any agency in the process. They appear as passive or inert things consigned to the background with little acknowledgement of the important work they do or how they influence engagement. In that respect, the work by Bradbury & Nieuwerburgh suffers from the knowledge gaps identified by the sociomaterial and posthuman critique (Fenwick, 2015; Gourlay, 2015; Monforte, 2018; Taylor, 2022).

In the context of the contemporary student experience, this study addresses such gaps and looks beyond the student to appreciate engagement as something more than easily identifiable behaviours to be monitored and reported on. New materialism, characterised by Monforte (2018, p.379) as an umbrella term used to connect the related theoretical perspectives of posthumanism, sociomateriality and relationality, supports an understanding of engagement as a fluctuating, embodied characteristic of the assemblage of things and relationships that constitute the student experience. Reflecting on this new materialist position, Monforte describes this perspective as 'ontological displacement' where matter and meaning cannot be understood as independent from each other.

> *The notion of matter as passive and inert, requiring external (human) agency to do anything, is firmly abandoned. Instead, non-humans (for instance, a machine or a room) are considered active participants.*
>
> *Overall, action and agency are deemed emergent products: the temporary result of forces that do something to each other simultaneously. As Snaza et al. (2016), xvii) summarise, 'there is no longer a knowing (human) subject who acts and a passive (nonhuman) object that is acted upon: everything is entangled'.*

ibid, p.380

It follows then that student engagement with learning cannot be appreciated in isolation, or disassociated from social, material, or digital circumstance. The entangled relations of dynamic sociomaterial conditions, challenge institutional attempts to capture student engagement and reduce its complexity to consumable data to feed the strategic appetite (Komljenovic, 2022). However, although this kind of research offers an in depth qualitative and interpretive insight rather than one generated through clicks and algorithms, it is unlikely the trend for datafication across the Higher Education sector will diminish (Gourlay, 2022; Selwyn & Gasevic, 2020; Williamson, Bayne & Shay, 2020). In that scenario, the value of sociomaterial perspectives is not lost, on the contrary, it is strengthened by the complimentary and inclusive insight they bring to the discourse around engagement and learning.

Importantly, this research does not offer universal solutions or seek to generalise beyond the immediate institutional context in which it was conducted. It constitutes a considered response to the research questions formulated at the outset of this work which emerged through my genuine interest in pedagogy and the student experience. Moreover, it aims to be a sensitising exercise (Monteforte, 2018) that contributes to the field and begins to explore the potential of emerging critical approaches for revealing new insights and subsequent sites for student engagement research.

Over the course of this research process, I have had the opportunity to share my work (in progress) with colleagues from my own and other institutions. This was always a useful, and occasionally daunting exercise that helped me to reflect on my ideas and

consequently refine them. In the context of those conversations, I was asked about the practical application of this kind of work and specifically, what benefit it would have on the student experience across the department. At the time, I imagine my response lacked clarity and conviction, but my research journey presented several practical scenarios to strengthen my confidence in that respect. I briefly describe two examples here, the first is an Inquiry Graphics inspired activity in an undergraduate Geography session that I taught; the second is a departmental initiative adopting a sociomaterial, participatory approach to learning enhancement.

6.6 Further examples: Inquiry Graphics Pedagogy in Geography (IGP in G)

This was a second year undergraduate Geography workshop for Initial Teacher Education students. There are tensions in this context between the limited resources and time available and the need for students to feel confident with subject and pedagogical knowledge. I was able to draw on my own use of Inquiry Graphics in this research to develop the IPG in G activity as a way of resolving some of that tension. Enquiry-based learning in Geography is a widely accepted approach and this activity was designed to be an effective way of targeting students' subject knowledge and their pedagogical content knowledge. In that sense, I was modelling an approach that could be used and developed in their own teaching. The activity design used to support the initial independent guided phase in this research was adapted to align with the focus of the workshop (Earthquakes - Human-Environmental relations) and formed the basis of a small group activity. Outcomes were recorded using Padlet as a digital and collaborative whiteboard tool, which then contributed to a collective outcome representing all groups in the workshop (Figures 6.3 and 6.4 on the pages following illustrate these). This created a rich resource as the basis for reflection and discussion, supported students' subject and pedagogical knowledge and represented a 'proof of concept' in terms of my own application of Inquiry Graphics to enhance learning and engagement.

The student response to the task was encouraging, and it gave me the confidence to use a similar approach in a Master's module that I was teaching on Curriculum Development. These are small steps, bigger steps follow as opportunities to share this work with colleagues at department events will open up new conversations about engagement and lead to opportunities to collaborate, develop the work and disseminate more widely.

Concept - Image Inquiry : Geography	Inquiry focus: What is the human response to natural disasters? (Earthquakes)

1 First Thoughts

Thinking broadly about the concept, what does it mean to you?

Discuss this with the person you're working with as a starting point for your research.

2 Image Selection

How was it found, where does it come from?

Thinking about the concept via/as an image

What search engine will you use? What key words will you use in your search?
How do you narrow down the results?
What are the reasons for choosing the final image?

Add your image to Padlet

3 Image Observation + Description

What can be seen in the image?   What details?

Identify objects, action, positioning, qualities

Give your image a descriptive title
What objects, scenes can you see in the image.
Add these things to your image in Padlet.

4 Concept-Image Interpretation

How do you interpret what you see?

Describe the picture and how it relates to your current understanding.

How does it relate to the concept?

Create a series of questions to help you interpret what you can see in the image and what the image represents.
How does the image relate to the inquiry focus above?

5 Concept-Image Inference

Based on steps 1 - 4 what conclusions have you reached about human responses to:
Earthquakes?
Natural Disasters?

List the conclusions you have drawn
What are the implications for your learning?
What will be your next line of inquiry?

Figure 6.3:Inquiry Graphics Activity Design - Geography

Figure 6.4:IG Activity Group Response

6.7 A Sociomaterial Enhancement of Learning Framework (SELF)

The second example I share here regards a department level initiative recently launched (RISE – Research Informed Student Engagement), that represents a longer-term project to complement ongoing work focused on learning and pedagogical enhancement. As part of the RISE initiative, SELF introduces a new methodology to this context and through staff/student participatory research groups (Learning Enhancement Groups) as a forum for generative ideas will contribute new perspectives to the departmental discourse on learning and teaching, create new opportunities for research, and further enhance student experiences.

The remit of these groups is for participants to consider the nature of learning from their own relative perspectives (tutor/student) and to draw on these experiences as the basis generating new insights into learning. In this context, the SELF is used as an analytical tool to support a reflection on practice/experience and uses the diffractive capacity of Inquiry Graphics to foreground critical relationships. The example I use here to demonstrate the potential, envisages a conversation during a group session that is focussed on the nature of learning in a Lecture Theatre. An IG Activity approach would involve participants in a search for images that aligned the concept of *lecture theatres* to their own experience. The following image might be typically representative of such a search result and then become the focus of critical analysis using the SELF questions shown in Figure 6.6 (next page).

Figure 6.5:Lecture Theatre Inquiry Graphic

Frames	Relational Considerations
Social	**Students:** Who are they? What are they studying? What experiences of learning do they bring? What are their motivations, goals, and desires? How do they perceive themselves and others? What is the nature of the relationship between the individuals? How do the individuals interact with each other? What are the power dynamics at play? How do relationships change over time? What factors influence the change? What are the consequences of the change? **Who is the tutor?** What is the nature of the relationship between tutor/individuals/group?
Material (Physical/Environmental)	What kind of space is this? How are social – material relations manifested? How does the physical arrangement of objects influence those relations? How does the physical environment (including specific objects) influence engagement in the session?
Digital (Technological presence)	In what ways is technology embedded in the physical environment? What devices are brought into the room by students/tutors? In what ways are devices connected to each other? In what ways are devices connected to external networks/digital spaces?

Figure 6.6:Sociomaterial Enhancement of Learning Framework (Questions)

Applying these kinds of questions to the image of the lecture theatre shifts the point of interest beyond the individual (student/tutor) and begins to understand their experience relative to critical relationships that exist between the social, material, and digital dimensions of this site. Illustrated by the example (Figure 6.7) below, this dialogue will generate more questions, identify key considerations, and support actions with the potential to influence engagement and enhance learning.

Frames	Relational Considerations	Implications	Actions
Social	**Students:** Who are they? What are they studying? What experiences of learning do they bring? What are their motivations, goals, and desires? How do they perceive themselves and others? What is the nature of the relationship between the individuals? How do the individuals interact with each other? What are the power dynamics at play? How do relationships change over time? What factors influence the change? What are the consequences of the change? **Who is the tutor?** What is the nature of the relationship between tutor/individuals/group?	Trust building with/in between students/tutors? Understand session/scenario in relation to students' wider experiences / schedules. Be cognizant of phase specific demands/tensions. Tutor's situational awareness/experience/confidence.	Invite/ask questions. Use first names. Talk for learning. Actively listen. Respond with interest. Observe. Invite challenge. Think – Pair- Share Dynamic grouping/seating
Material **(Physical/Environmental)**	What kind of space is this? How are social – material relations manifested? How does the physical arrangement of objects influence those relations? How does the physical environment (including specific objects) influence engagement in the session?	Social - Material relations influence learning intentions (limiting/enhancing) Material relations may create the baseline for pedagogical decisions. Engagement may be inhibited by entrenched relations/expectations.	Develop space specific pedagogies/engagement strategies. Develop and encourage reflexive/adaptable practices.
Digital **(Technological presence)**	In what ways is technology embedded in the physical environment? What devices are brought into the room by students/tutors? In what ways are devices connected to each other? In what ways are devices connected to external networks/digital spaces?	Affordances of technology in the context of the session. Technology may obscure/inhibit/disrupt. Assumptions made regarding digital ownership/access/literacy. Safeguarding/acceptable use/code of conduct	Is the technology working? What is 'Plan B'? Who are the experts? Ensure equal access.

Figure 6.7:SELF (example outcome)

6.8 Future Directions

In a field predominantly occupied by quantitative research (Du Vivier et al., 2019; Dyer et al., 2018; Tight, 2020) and service management interests (Cassidy, Sullivan & Radnor, 2021) this study opens the door to new directions in qualitative research that could widen the evidence base on student engagement. The sociomaterial conceptual model (Figure 6.2) provides a means of understanding engagement as a relational phenomenon shaped through the interaction of social, environmental, and technological forces that constitute the contemporary student experience. Furthermore, it has the potential to underpin practical applications to enhance pedagogy and student-tutor relations through the kind of work described in the previous section.

The findings of this study represent participants' understanding of engagement in a particular phase in their experience of being a student, in this case, they were full-time, 2nd and 3rd year undergraduates and full-time/part-time postgraduates. Their understanding evolved out of the guided reflection afforded by the IG process and foregrounds complex relations seen to have a bearing on engagement. There is an indication here that these understandings of engagement change over time and become more refined as they progress through their studies. This is an aspect not fully explored in this research and in that respect, I would argue there is real value in adapting the research design to facilitate a longitudinal view. This could build on the work presented by Gourlay & Oliver (2018) and might involve participants re-engaging with the research activity at points throughout their university experience (Induction, Level 4/5 transition, during work-based placements, assessment cycles). Multimodal diaries and subsequent image analysis might then reveal greater insight into the influence of sociomaterial forces in key phases of student life and how these are assimilated into their experience as they continue to engage and build knowledge throughout their time at university.

The object of inquiry in this research has been engagement *with learning*, a focus that originated in a consideration of the concept of 'engagement as the formation of understanding' by Ashwin & McVitty (2015). Their hierarchical model was a useful

starting point in thinking about engagement and makes clear distinctions between engagement with learning, with curricular and with communities but, as they also acknowledge, the reality is that these boundaries are blurred. The SELF and LEG initiatives, described in the previous section, are indicative of this blurring where the core focus on learning and engagement involves students as active participants in a community of inquiry. The future direction of such work could logically extend to consider how this theoretical and methodological framework might be usefully applied to understanding students' relations with curriculum, policy, and other institutional structures.

Research concerned with the relational dimensions of engagement has the capacity to bring new perspectives able to identify and appreciate harmony or discord between module design or scheduling and student circumstance, phase and lifeworld challenges. Although it would be unfeasible from an institutional perspective to imagine the possibility of highly personalised programme structures, building an understanding of relational conflicts and how the action of inhibiting/enabling forces interface with university demands would support students' capacity to negotiate all aspects of their experience. The benefits of such work might echo and extend the findings of Bradbury & Nieuwerburgh (2023) in the Journal of Happiness & Health that associate positive experiences of engagement with wellbeing and successful outcomes.

The centrality of learning environments is highlighted by the sociomaterial model (Figure 6.2) and identifies them as temporally and spatially mediated sites of engagement. These are the sites that students associate with learning and represent a constellation of spaces including formal on-campus teaching to informal, domestic study environments and everything in between. The materiality of these spaces is further transformed by digital states (blended, remote, online, synchronous and asynchronous) and social states (proximity and involvement of other individuals). This is the territory of learning space design.

> Learning is the central activity of colleges and universities. Sometimes that learning occurs in classrooms (formal learning); other times it results from

serendipitous interactions among individuals (informal learning). Space—whether physical or virtual—can have an impact on learning. It can bring people together; it can encourage exploration, collaboration, and discussion. Or, space can carry an unspoken message of silence and disconnectedness. More and more we see the power of built pedagogy (the ability of space to define how one teaches) in colleges and universities.

(Oblinger, 2006, p.1)

The trends in learning space design identified by Oblinger relate to learner expectations, the principles and activities that facilitate learning, and the role of technology. She brings together a wide range of authoritative opinion to support detailed case studies showcasing the agentic potential of thoughtfully designed spaces to encourage learning. One might question the need to extend the boundaries of such comprehensive work, but my limited exposure to the posthuman and new materialist mindset convinces me there is something to explore here. I would argue that, where flexible, adaptable, and reflexive spaces are found across university campuses, assumptions are also made regarding the impact of these spaces on engagement and learning. In that respect, research to interrogate the vitality of these multi-faceted social, material and digital relations would reveal how engagement and learning were a function of these conditions.

6.9 Limitations and Challenges

This research was borne out of a concern for the disruptive influence of survey driven student engagement data (NSS, UKES) in faculty environments. The metrics associated with this were integral to the Teaching Excellence Framework (TEF), a sector wide quality measure significantly influencing university strategic policy particularly around student success and student journey. However, I felt there was some discord or disconnect between the data, its origin and the reality of teaching and learning at a local level. The methodology seemed flawed and the restricted sample (final year UG cohort) not representative of a diverse student population. It raised questions around student expectations, their experiences of learning and how best to understand that. Student

engagement was part of this lexicon but beyond being a measure of attendance there seemed little appetite or opportunity to understand more.

In that context, the early challenges in this research were associated with managing my own expectations regarding the feasibility of the study. With limited resources to effect change to influence strategic thinking or local practice, this was not going to be a large-scale action-oriented project. Similarly, I had a sense that students suffering from survey fatigue were unlikely to find the prospect of another engagement questionnaire particularly alluring. The idea of a visual participatory approach gradually emerged over the course of my own engagement with the research literature although at that time it was limited to vague notions of photo-elicitation, mapping and diagramming. It became less vague following my introduction to Inquiry Graphics (Lackovic, 2020) or rather, it became an intense challenge as I wrestled with unfamiliar terminology and complex methods. This work is inspired and guided by the ambition of Inquiry Graphics as a theoretical and methodological tool entirely suited to multimodal research and I acknowledge that its potential in that respect is limited by own capacity as a novice in that field.

Relatedly, it is important to acknowledge limitations associated with the images curated by the participants. At this point in the research process, it becomes clear how the nature of the images impacts on their representation as data, how they are subsequently analysed and how this consequently influences interpretation and meaning. In the quest for a sociomaterial understanding, this study has focussed on the experiences of students as they engage with activity associated with learning across diverse scenarios. In trying to capture the detail of those experiences, the initial stage of data collection involved participants in a guided independent reflective task where they were asked to create or find images that represented engagement concepts.

During the analysis of images, it became clear that from a sociomaterial perspective, the most powerful data was associated with photographs taken by the participants themselves rather than those retrieved through online search strategies. This is

particularly well illustrated by Jane (Participant 2) who captured the gritty detail of her study space in two photographs. Applied to these photographs, the diffractive capability of IGA made it possible to fully appreciate how Jane was embedded in this environment and how the affordances and scripts (Jarzabkowski & Pinch, 2013) associated with the objects of technology influenced her engagement. This rich visual data provided the basis for an elaborate guided reflection where she was able to foreground mutually dependent and mutually constitutive relationships (Fenwick et al, 2011).

Some images in the data set lacked this capacity and were primarily more metaphorical. Megan's (Participant 3) image of rope bridge over a river or Beth's (Participant 7) 'feast of options' are examples of those found through online searches that have little apparent connection to the materiality of their day-to-day experiences. In that sense, the image represents a different kind of data to that of an original photograph. However, IGA is a useful tool in this respect and posits that the image itself as an IG object is a representation of a material concept associated with their experience. In this way materiality becomes transformed and the elaborate reflection is focussed not on the affordances of the bridge (for example) but linked to materiality associated with programme design, assessment, and student journey.

Additionally, there are images in the data set that are further compromised in terms of their suitability for sociomaterial analysis. These are stock images found online that include text, known characters or that could be defined as a meme. Sarah's (Participant 5) cartoon associated with the opposite of engagement, and Josh's (Participant 9) 'motivational Buzz' are examples of visual data compromised by the influence of pre-existing meaning. Despite this inherent limitation, IGA still demonstrates some capacity to see beyond the image and render everyday situations and objects visible, which in Sarah's case here led to a consideration of the disruptive influence of technology in the context of her learning.

Being cognisant of such limitations represents the first step in ensuring the integrity of visual data in future research of this kind and from a pragmatic perspective would

influence how tightly controlled or defined the initial data collection (curation of images) process was.

As a small scale, intensely qualitative study there were inherent challenges regarding my own positionality. Some of these are resolved through the clear communication of my rationale, and theoretical standpoint similarly described by Savin-Baden & Major (2013). Other challenges are associated with the nature of 'insider research' similar to the scenarios described by Wellington & Sykes (2006) and Boud et al (2021) where education-based research is often carried out by the 'researching professional' within their own institution. As a Programme Lead at the time, I was conscious not to involve the cohort I was directly responsible for and instead invited participants from across the university. In this sense, although I was an insider researcher (Braun & Clarke, 2013), with a strong understanding of learning and a professional interest in student engagement, beyond my immediate working environment I was able to operate with a degree of anonymity that helped to alleviate questions of power and privilege.

Challenges remain and there are clear points of subjectivity, but as Gough et al (2012) remind us, maintaining transparency and a logical systematic approach can help to mitigate such weaknesses. In that manner, it seems appropriate to respond to the concerns of Macfarlane (2022) regarding strategic deception in some qualitative research and defend the participants' contribution to this study. Theirs was a genuine contribution to the process of analysis, beginning as it did as an integral part of the data collection process and then subsequently in the participatory analysis of image artefacts during the research conversations. There is a real concern for what the student thinks and a methodology that offers a metacognitive, reflective opportunity for the individual to think deeply about their experience and how engagement is framed as part of that. This study represents more than a 'ready-to-wear' (Macfarlane, 2022) approach that reinforces established positions by adopting the dubious practice he identifies. It aims to be an authentic attempt to do things differently, to open up a new thread in the conversation around student engagement that does not being with metrics or resort to

survey tools, but in doing so I also acknowledge that there are aspects of the work that could themselves be done differently.

6.10 Closing Thoughts

Although the study was envisaged in a pre-Covid-19 era, the recruitment, data collection and analysis stages occurred throughout the pandemic which significantly impacted the scheduling of activity and progress over the research timeline. However, I have been conscious not to foreground this in the study because I was reluctant for the work to be defined by it. Importantly, all participants had experience of being students in a pre-pandemic university and whilst there is clearly some currency in examining the impact of Covid-19 on engagement (over 17,000 publications since 2020 linked to *Covid-19 student engagement*, Google Scholar) that was not the intended focus of this research. Fundamentally, this research is an attempt to understand how students conceive of and experience engagement, and work to maintain the conditions for learning in the midst of the complex demands on them. It sees knowledge formation and the transformative experiences of being 'at university' as rooted in the everydayness of individuals who are students. Engagement is a complex phenomenon that lies at the core of this experience. Overall, this study brings together new perspectives on Higher Education as part of a theoretical and methodological framework that invites the closer involvement of students in a search for a more holistic interpretation of their experience. I have not provided a recipe or ultimate, "optimal" approach to sociomaterial student engagement as I do not think there is one, but what I find salient in that respect, building on my data and literature reviewed. There is still work to be done.

> *It's not a process of closing, of being finished. Rather, each new
> engagement generates another vantage point from which to continue the
> process anew.*
> *There are always gaps.*
>
> Sousanis (2015, p.150)

Appendix 1: Phase One IGA Outcomes

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Vocation

What is important to you in order to be actively engaged in your academic study?

Sense of ownership and motivation is important, if someone is in control of their own learning, they're more likely to engage with it. My degree leads towards being a primary school teacher, a lot of my motivation to work is achieving that end goal.

How are you relating this image to the notion of learning?

Much of my learning happens on placement, so considering my engagement with learning, the main focus was my role in school as a trainee teacher.

The significance of the candle in this respect?

The feeling of burnout on placement, but a motivation to keep going. Like pouring ourselves into the work for the benefit of the pupils we're teaching.

How are you interpreting the teacher:pupil relationship in this scenario?

The teacher is a suited stereotype, the relationship with pupils is a formal one. I don't associate myself with this stereotype. This is more about pupils being nurtured by the teacher.

How does this idea relate to being a student at University?

In a university context - seeing myself as one of the smaller people.The big candle isn't an individual in this case, it's representative of the many influences on us that influence who we are as learners.

CI: Engagement with learning is driven by sense of vocation. Choice is aligned to control here and underpins engagement.

Resilience, commitment as foundational elements to the concept of engagement.

Placement based learning is very directed and controlled. P1 accepting of this regime having made this vocational choice.

University as nurturing - facilitates & influences learning. Creating the conditions for engagement.

Guided interrogation of pictorial meaning, and alignment to the concept

RC1_IGA_1

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Vocation as an Engagement Concept

Representamen

Image Elements

Briefcase, Candle, Flame, Figure in suit, small figures in suits, satchels, wall, floor, quotation

Object

Picture Object + Concept Object (PO+CO)

PO: A personified candle dripping wax onto a line up of smaller versions of itself.
CO: A teacher committed to the learning of pupils.

Interrogation Cues.
Guided reflection and elaboration of meaning

bringing together the interpretation of picture + concept

Guided interrogation of pictorial meaning, and alignment to the concept

RC1_IGA_2

How do the tables (including arrangement) relate to the concept of engagement (including career goal)?

Children are looking at him, he's arranged the tables so they're focussed on him. They're engaged that way.

What is important to you in order to be actively engaged in your academic study?

My end goal has always been to have a classroom of my own. I wasn't interested in the people in the image it was that idea of the classroom space. This is important to me, I think my engagement with learning would differ if I didn't have such a concrete idea of where I want to end up. The scenario could be the same for any subject you're studying at University in terms of end goal, you have this picture perfect ending in a sense and that drives a lot of your engagement.

Elaborating on the role/positioning of the adult in this image.

The adult is a teacher by virtue of his position within the image. There's informality in the way in which he's dressed, a more realistic view of a current classroom and the experiences I've had as a student teacher. He looks like he has a good relationship with the pupils, its the kind of approach I assoicate with being a primary teacher.

As a teacher he arranges the environment to support their learning. As a student you have to go with your mentor's arrangement which might not work for you but when you've got your own class you can change things around to match how you teach.

In what ways might this translate to a University scenario?

I've always enjoyed active learning and its those workshop groups which are in a similar set up, a group of you in a room with a lecturer and its generally a more engaging activity than a whole cohort lecture - you're more engaged in more practical activities that you can only achieve in a small group setting. You're sort of excited about what you're going to learn - the sort of wow factor I guess.

How has this kind of experience been affected by events over the last 12 months?

Has been difficult to be sat in front of a screen and be engaged in learning in the same way because the practical hands-on activities or the group talk is very different in an online setting. Being put in breakout rooms is not the same. It takes out some of the engagement and I've found it at times difficult to be as interested. It challenges the end goal motivation because it removes that social aspect that's really important. It changes the way you perceive learning because now when I think of being in a lecture, I think of being in front of a computer listening to someone talking at me for an hour which I guess is a very traditional view of university looks like.

CI: Related to the concept of vocation but this is repesented here by a very specific scene. The ability to visualise this provides clear motivation to engage with learning.

Specific detail. There is a clear visualisation of career goal supported by current learning and experience.

Vocation represented by IGA_1 represents teaching as a noble ambition. It contrasts with the reality signified here. Motivation to engage in learning is enhanced by opportunity experience this real scenario but driven by the noble imperative..

Engagement driven by relationship with lecturer, interaction in a space that is open, welcoming & conducive to learning.

Student experience has consisted of contrasting learning scenarios - placement/campus/remote. Engagement in each is different and highlights the importance of social interaction as an engagement concept.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

PI =
A teacher teaching

CI =
Student Engagement
Career Goal (Vocation)

Representamen

Image Elements

Furniture, tables, chairs, smartboard, storage, poster, window, curtain, seven children, one adult.

Student Engagement

Object

Picture Object + Concept Object
(PO+CO)

PO: A man standing in front of a number of children who are sat at desks.
CO: Student Engagement - Career Goal - Teaching - Learning

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Success

What is important to you in order to be actively engaged in your academic study?

The idea of success drives my engagement here. You get this token (recognition) in terms of graduation but you get those really important parts along the way where you get an assignment grade or receive feedback about something - that sense of feeling fulfilled as a person in that you have managed to achieve that.
There's an intrinsic worth you attribute to this kind of success because it's down to yourself.

Significance of Mortar Board & Scroll?

Represent academic success as a graduate. On top of the stack of books it shows that you're building towards higher achievement.

Elaboration on the meaning assoicated with books.

Representing the assignments and feedback and the work associated with this. The structure of this and the grades you get motivate you to learn.

Are the books physical books?

Sometimes, but I guess not always because we don't have to actually visit the library, you can work online. I guess its a bit easier like that, I can be at home rather than in the library until late, but sometimes you do just want to share how you're feeling about work, the library is better for that.

CI: Engagement with learning scaffolded through assessment opportunities.
Success built on Support.

Engagement with learning is a long term project. Understanding this is key to engagement in the short term.

Feedback + Support sustains Motivation to engage

Engagement: Learning & location options to align with individual circumstance.

Guided interrogation of pictorial meaning, and alignment to the concept

RC1_IGA_3

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Success as an Engagement Concept

Representamen

Image Elements

Books
Scroll with ribbon
Mortar board

Object

Picture Object + Concept Object
(PO+CO)

PO: Two stacks of books with a paper scroll and a mortar board.
CO: Academic study leading to graduate success.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Belonging

What is important to you in order to be actively engaged in your academic study?

It represents the social aspect of learning being the driving force for engagement. Being part of something bigger, with others that are engaged in the same sort of thing.

CI: Engagement with learning mediated by social interaction: a sense of belonging.

Significance of the figures?

Figures represent students and a kind of team effort.
I wasn't seeing the orange figure as being excluded, but joining the circle. But it could also be that the orange figure has changed and is ready to leave. Kind of the bit of the journey where we're let free (to use what we've learnt in a productive way), to graduate.

Social dimension of engagement supports learning and successful outcomes.

An alternative representation related to the concept of belonging?

Each of those figures might represent some different aspect of university, like friends you make on the way, lecturers, the buildings etc and all of that has been part of a collective experience that has built us up to the point where we can go onto something different and have the confidence to leave.

Sense of belonging - belonging to something bigger where engagement with learning is mediated through social interaction and physical enviroment.

Guided interrogation of pictorial meaning, and alignment to the concept

RC1_IGA_4

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Belonging as an engagement concept

Representamen

Image Elements

10 Blue Cut out figures
1 Orange figure

Object

Picture Object + Concept Object (PO+CO)

PO: A broken circle of cutout figures.
CO: A group of students.

RC2_IGA_1

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Environment

What is important to you in order to be actively engaged in your academic study?

This environment provides a distraction to study. A break from study where I can think about something else. Something that needs my attention. My environment needs to be something that I can enjoy when I'm learning instead of it being a dull grey room. It's something that I need to keep on top of , so it's productive in itself, and I'm not switching off and then having to re-boot.

CI: Envirnonment beyond the immediate focus of study. It softens the edges of the study environment. An alternative, accessible engagement focus.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Distraction and Interupted Learning emerging as sub concepts for engagement.
There is an agency to the plants and the scene outside the window.

How significant are the plants n this environment?

I've been looking at plants being good for your mental health and wellbeing. Having to look after them sort of balances things out, it makes it nicer to be around my desk when I'm sitting here all day.

An environment that sustains wellbeing and focus

I sort of buy a plant every time I go to the shops. I have them in the kitchen and bathroom. The plant in the little white pot was dying but I took a cutting and replanted it and it worked, it growing now. The roses are different, they were a gift. They're in a glass becasue I don't have vase and they're dying now, but they still look good so I don't want to let them go yet.

An investment of thought - fulfilling the idea of productive distraction.

Environment as an Engagement Concept

Study environments softened by distraction - Implications of this idea?

So, the idea of distraction is key to engagement here?

Yes, I think students should surround learning environments with things that are interesting, things that they enjoy - at a personal level, drawing - sketch pad/ guitar. Universities go on saying that you need to take breaks and stuff and not to binge on doing work - but they don't really give examples or elaborate

The image has 2 layers to it. How significant is the outside layer to the way in which you're thinking about engagment here?

With the metro line being so close, a train comes past every 20 minutes or so. I don't mind it, its kind of like another distraction, another brain break.

Representamen

Image Elements

Object

Picture Object + Concept Object
(PO+CO)

What about the absence of people, is that significant?

Yes, there's pavements and no people, roads but no cars. I don't mind it actually, I'm kind of an introvert! Think its quite nice not having people in the image.

Plants, Background - metro(train)
Blue book, Label, Gucci bag
A number of plants in pots, A bunch of roses
Empty pot at the back, Water bottle
Roof to a building
A tree
A railway line
A building in the distance

PO: A window sill with house plants
CO: A window garden that provides balance in a study space.

Interrogation Cues.
Guided reflection and elaboration of meaning

bringing together the interpretation of picture + concept

RC2_IGA_2

What is the concept associated with this image?

Engagement, Study Space/ Workspace

How do the objects here relate to your engagement?

Access and organisation
It shows how I operate
Laptop tethered to work (call centre)
Desktop is University work (email)
PC/Laptop/ phone - integrated - all Apple - makes it easier.
It's a study space organised for me

Is the paper based diary significant in that it isn't online?

Yes, I use a real one because I can highlight and stuff, the online one takes too long and I have everything colour coded and open all the time and its easy to see and schedule things in - so it's kind of like having 3 screens.

Are '3 screens' vital to your engagement in learning?

Well, the second computer was necessary for me to be able to engage in learning. Having this bigger screen, like a 27" screen means I can have 2 documents side to side as well.
This is easier than what I was doing which is going to the library, taking my laptop for work (remote call centre) so I can use the library one as my second computer. Yeah, everything's going on but all going on in the same chair - like I don't move, but this space makes everything more accessible.

How has this understanding of study space been influenced by previous experiences?

I'm not a crammer, it takes me a while to learn something but in a good way. I'm not a quick learner but I'm a dedicated one. I need to be orgainsed. This is based on trial and error I think I've been influenced by how other people work, observing them and trying out. If I compare myself now with what I was like at the beginning in Year 1, I'm like a different person

What influenced your thinking about this in the transition from Yr 1 to Yr 2?

I've become more engaged in my learning once I realised what I wanted to do with my life and how much work I need to put into it, and how much work I need to put into it compared with everyone else. Some people finds things easy that I find the most difficult thing in the world - like it takes me a while to read an article and make sense of it because I read the same line 5 times in a row.
I want to do a doctorate in clinical psychology and want to work with adolescents with learning disorders, I'm quite motivated.

CI: A personalised study space that provides access to learning supports engagement.

Concurrent foci of engagement (multiplicity)
Engagement with learning doesn't happen in isolation - it happens at the same time as being engaged in other things? Remote working and learning happens at the same time.

Access to Learning/Opportunity
An enabling space designed to overcome a challenging student scenario.

Self awareness (metacognitive aspect) - importance of understanding oneself as a learner. How well established is this in student cohorts?

Implications for retention and student success?
Targetted interventions at transition.
Early career conversations

Career Goal/Success driving engagement with learning.

Guided interrogation of pictorial meaning, and alignment to the concept

PI = A student deskspace

CI = Student Engagement Study Space

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Representamen

Image Elements

Bookshelf, books, a diary
Coffee machine
Reading Glasses, post it notes, a mug
water bottle
Computer (desktop) sketch book
A laptop, a desk lamp, smart speaker, notepad
window sill (Image 1)
cables, plants, window

Student Engagement

Object

Picture Object + Concept Object (PO+CO)

PO: A desk with a laptop, a PC and other devices
CO: Student Engagement - Studying, Study space, learning

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RC2_IGA_3

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Alternative Study Focus

What is important to you in order to be actively engaged in your academic study?

CI: Engagement with learning can be non-situated, mobile, informal.
Not bounded by physical space in this case.

Having other options available. This isn't really linked to university but it sort of keeps my brain engaged when I'm out an about, like shopping or for a walk.

Engagement with learning is part of a complex understanding of what 'learning' and 'engagement' is.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

How significant is the focus of this audio book to the ideas of engagement and learning?

Being dyspraxic and having working memory issues - reading a book means I concentrate on trying the read the words rather than on what the word are saying.
I listen to self help/productivity books- influence my productivity

Concept of Engagement with learning and nature of support needs to be differentiated.

Alternative study as an Engagement Concept

Representamen

Image Elements

Phone screen image
Control buttons/icons

Object

Picture Object + Concept Object
(PO+CO)

PO: A phone screen showing an Audio Book app.
CO: An alternative study focus.

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Interrogation Cues.
Guided reflection and elaboration of meaning

bringing together the interpretation of picture + concept

Guided interrogation of pictorial meaning, and alignment to the concept

RC3_IGA_1

What is the concept associated with this image?

A study environment, engaging in learning

What is important to you in order to be actively engaged in your academic study?

An environment that is comfortable, tidy, safe and peaceful. Natural light, sounds & plants.

An environment that sustains learning

Sitting in this kind of environment gets me into the right zone to be motivated.

How do the things in this image relate to the concept of engagement and your experience?

They all work together, gives it a natural feel, the sunlight and breeze that lifts the mood. Feels like you're not trapped inside, there's a connection to the outside. At home there is a lane that goes down to the sea, people walk by occasionally but its not busy.

How does the laptop relate to engagement?

Most of my work is done via the laptop: accessing lectures, writing, researching. It connects this space to university.

The water bottle?

It represents for me that you got everything you need right there, you're going to be in this mode for quite a little while, you need a drink to hand. Everything you need altogether in one space. If it wasn't here I'd have to move and interrupt what I'm doing.

Mobile Phone?

Connection to the outside. This is not an isolated space. I control the level of interaction and block incoming messages.

In what way does this represent your idea of the student experience at University?

It's what I expected, what I had in my head when I tought about studying at home. The simple desk, natural light and greenery outside resemble the feel of the campus experience

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

PI = A deskspace at home

CI = Student engagement
Study environment

CI: Engagement with learning is not an isolated experience in this environment. Supports motivation, calm & wellbeing

Environment as a sanctuary: A reinforcement of the student status within the home environment. This environment communicates a message and supports engagement with University learning.

Representamen

Image Elements | Student Engagement

Chair, Desk, Mobile Phone, Water Bottle, House Plant, Window, Sunlight, Curtain, Buildings, Trees

Object

Picture Object + Concept Object (PO+CO)

PO: A desk with a laptop in front of a window
CO: Engagement, studying, learning

RC3_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Creativity

What is important to you in order to be actively engaged in your academic study?

Creative choice grabs my attention, connects me to learning.

How does this reflect the nature of learning?

It's a sort of transition from gathering information/inspiration to creating something tangible/physical. It's a work in progress, creative and messy.

What is the significance of the pencil shavings?

It shows activity, trial and error, not being afraid to get something wrong and try again.

Is this the sort of activity that happens on campus?

Pre-Covid poster task was like this but now it happens at home.

This is messy rather than tidy. Does that conflict with the idea of a tidy workspace in IGA_1

It's a messy scene but there's order here. The pencils are ordered in colour sequence. I have a plan, everything is where I need it to be at hand.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

CI: Creative choice supports motivation to engage with learning.

An adaptable study space. Engaged in a different kind of activity than in IGA_1.
Remote learning strategies should be varied, active and include non screen time.

Engagement in Remote Learning

Opportunity for Creative Expression as an Engagement Concept

Representamen

Image Elements

Open laptop, reading glasses, cup, saucer, coloured pencils, scissors, pencil shavings, pencil sharpener.

Object

Picture Object + Concept Object
(PO+CO)

PO: A desk with a laptop surrounded by coloured pencils.
CO: A creative workspace.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Engagement leads to success

What is important to you in order to be actively engaged in your academic study?

Relevance of learning to progress and longer term goals.

How is the bridge related to the engagement and your experience?

The bridge represents a path to a destination (career goal). I'm most engaged when the learning is something that I know is important to this journey. I know where I'm going but I can't see the end yet.

The nature of the bridge?

It looks rickety, a bit unstable but passable. The slats are quite far apart and you could fall. You need commitment, care and effort.
There is challenge and jeopardy but this is part of the journey I need to go on.

What is the relationship between learning and the bridge?

The bridge is built on current knowledge and understanding - its fairly secure - it can get me to where I want to be, but I know that my path could be less stressful, more enjoyable if I could strengthen that bridge.

The River?

Adds to the jeopardy, but there isn't far to fall and the bridge provides support. There is security, you can engage safely.

Is the absence of people significant?

Its about myself strengthening my knowledge, strengthening the bridge, getting myself to where I need to be. I prefer learning on my own rather than in collaborative situations.

bringing together the interpretation of picture + concept

Guided interrogation of pictorial meaning, and alignment to the concept

RC3_IGA_3

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

PI = A rope bridge over a river

CI = Student Engagement Success/Goal/Outcomes

CI: A learning journey with challenge, support and an end goal.

Engagement with learning is driven by the need the need to strengthen knowledge & understanding at a discipline level

Support structures facilitate engagement, motivation and success.

RC3_IGA_1 and IGA_2 are situated in this concept of learning journey.

Engagement with learning is not socially motivated.

Representamen

Image Elements	Student Engagement

Rope, Bridge, Wooden slats, water, rock face, mountains, sunlight, sky.

Object

Picture Object + Concept Object (PO+CO)

PO: A rope bridge spanning a river.
CO: A journey, experience, student engagement, achievements, goals, success

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Appendix 2: Phase Two Multimodal Diaries (Padlet)

Appendix 3: Phase Two IGA Outcomes

RC4_IGA_1

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Study Environment

In what way is the reality of your experience represented by this image?

CI: An aspirational study space. Tidy, calm, organised.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

My house is my study environment. I have different spaces for different types of studying (reading, writing, planning). This is my ideal, it's how I envision it in my head. I'd like to be that tidy, I'm organised but the reality isn't that tidy.

Ideal vs reality. Study Environment is a highly negotiated space. "whole house became a study space"
Influences the kind of engagement with learning

Significance of the person sitting?

..sitting on the floor I've always found it more comfortable to learn and I like being able to lay things around me so I can put things into place, categorise stuff together, but all interlinked and I can move things around and think that's gonna go with that right now and sort of change things around and I can't do that at a desk.

Flexible spaces to support engagement: Design for learning in campus environments

Is this a stereotypical image of engagement with learning?

I think it might be common, but not the kind of stereotype, I think most people assume people study at a desk and are quite confined and discrete whereas this is far more messy and spread out.

Study environments beyond the deskspace.
Confinement is not a feature.
Connectedness and flexibility is a feature

Study Environment

What is the significance of the plant? You mentioned it was important.

I love plants, I like having them in my house, its nice to have something that's both beneficial to you for your health for clean air and visually I think they're quite nice to look at. You give to them, they give to you - it's a reciprocal relationship.
Having an environment that you enjoy being in makes you feel calm, maybe not calm but comfortable in your workspace and plants are an important part of this so I'm more engaged, more comfortable in the environment and more immersed in my learning.

Wellbeing.
Contrasting elements within the study environment. Natural elements have some agency, provide a connection to outdoors and work against confinement.
Support engagement in this kind of scenario.

What is happening on the laptop in this image?

Writing (engagement with learning/development and application of knowledge) is the product of the conditions, is facilitated by the conditions represented by this image.

If I was at that stage, that's me, so when I'm planning essays I have A3 pieces of paper, open books, I'm writing down points from those books and research papers. Then I'll close those books and put the mindmap in front of me to then plan, do a thorough detailed plan of my essay. So to me, that's me at that stage where I've got all the ideas together from sources and I'm beginning to write.

Representamen

Image Elements

Bookshelf with books
Books piled on the floor
Green rug
Laptop
A person sitting cross legged Large sketch book
A window
A plant

Object

Picture Object + Concept Object
(PO+CO)

PO: A person sitting on the floor
CO: A student studying

RC4_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

This is the alternative view of the ideal study environment. Organised chaos really I think.

How does the image as a whole relate to your ideas around engagement and learning?

So this person is getting an overview, a broader idea. I'd say this person is thinking about writing. Looking at it and thinking I need that that and that's what I'm going to bring together. Trying to stand back and make sense of it all because sometimes you need a bit of perspective.

What is the significance of the objects on the floor in relation to the concept?

Well, I'm prone to getting overly engrossed in my learning as some would argue, and I used to do a silly amount of studying. I loved it and it worked out really well so I'd spend hours sat there, I'd have multiple mugs, multiple glasses around me, plates, food, balled up bits of paper where I'd been writing lists of what I'm doing, I've finished that list, I'm writing a new list…. And having loads of different books open and having all my different notebooks cos I would write different stuff in different ones. I used to print off the most useful research papers cos I found it easier to read them on paper than on the screen and I like to be able to put them next to each other to compare rather than on a screen. So I'd have my laptop in there with some sources, have others printed out, notes from lectures and elsewhere and in the middle I'd have what I'm creating. So I guess the significance is that all the things here are here for a purpose, they are all important.

The marshmallows and the skateboard?

The marshmallows, they're kind of comforting, sweet, easy to snack on. I sort of snack on things as I'm going when I'm working rather than stopping and having proper meals.
The skateboard: I think its about studying but not in the most conventional way. You can only just see it, but it represents and alternative maybe. Or it might be about getting somewhere else, about going to the library if you were on campus.

The reality of engagement with learning.
Messy, chaotic.
Different to the ideal often portrayed

There is strategy at work here. Knowing - a metacognitive understanding of 'this is how I work' and the importance of stepping back

An assemblage: meaningful, purposeful, each element has agency and supports successful engagement with learning.

Technology is absent in the image

Metacognitive perspective - the chaos, the mess is part of the process, it isn't a barrier or a problem.

Not all environments would support this (library, formal teaching spaces)

Engagement over time requires sustainance (P2 also)

Recognition of the norm/accepted views on engagement - that there are alternative scenarios.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Alternative
(to the ideal?)
(the reality?)
alternative ways

Representamen

Image Elements

Open books, closed books, pen, paper, notebooks, cup, glass, bottle of water, bowl of marshmallows, skateboard, legs, shoes, feet, floorspace.

Object

Picture Object + Concept Object
(PO+CO)

PO: A person standing over a collection of things on the floor
CO: A student getting an overview of their work, making sense of it.

RC4_IGA_3

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

I was thinking about how technology links with my engagement.

How did you choose this image as a representation of the concept?

I was searching on Google for technology and learning images, its a bit overwhelming actually, I mean where do you start, faced with so many images?
So I think this image was the first one that had all the things I was thinking about.

Concept of technology associated with learning and engagement in a specific manner and informred image choice.
Not led by the multitude of images

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Image description

Its kind of a little picture of my day. You know, the round shape of it is like a clock I suppose, although I only just thought about that.

Can you elaborate on your interpretation of this image in relation to the concept?

Going back to the clock idea I just thought about, and the 24/7 symboll, technology helps me to engage because it keeps me connected. Not everything happens in a lecture, I can sit at homewith a cuppa and access resources using my laptop and broadband connection. That way I get to Blackboard, Google, the library, without technology not of that would be possible. Well, I mean I'd actually have to physically go to the library, but yeah, I think this is about accessibility.

Technology as an engagement facilitator - providing access and opportunity around the clock.

Technology in this manner helps to embed learning into the fabric of the day. Students use technology in the negotiation of creating time and space for learning.
Increased access and participation.
Engagement if fluid, distributed and mediated by the agency of other factors in individual student experience.
Technology has agency in the hardware/software/connections and networks.

How technology influences engagement with learning

Any thoughts on the tick boxes in the image?

I did think when I was choosing this image that its sort of what I do, in terms of having a list. I think lots of people do the same, sit down at their desk with a list and tick things off as they go.

So in the context of learning, this would be what sort of list?

So, currently we've got a portfolio submission coming up. Its an electronic one in Pebblepad, I've got a huge list of things there to tick off but I think I'm quite organised with that its not hard stuff, but it can be really time consuming. Then there's a list of things I've got to read for an assignment, not very exciting, and then random stuff like booking the cat in at the vets and sorting out train tickets!

Technology as a tool, an organiser, creating the conditions in which a student might then engage with learning.
Learning exists/takes place as part of a spectrum of acitivity

Representamen

Image Elements

Icons, 24/7, a mug, a PC with an arrow, a cap, tick boxes, symbol of a person at a desk. a dashed circle, a blue solid inner circle

Object

Picture Object + Concept Object
(PO+CO)

PO: symbols/icons placed around circle
CO: A study schedule connected by technology

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RC4_IGA_4

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

This was very much about a barrier to engagement, my own barrier certainly.

How did you choose this image as a representation of the concept?

I wanted an image that represented how I feel when I'm overwhelmed with work. I could have actually chosen loads when I was searching, but this one had a heart in the image which made me think about the panic.

Image description

It's an image of a very tired looking brain with so many things being forced into it. I mean things like subjects, its obviously about learning and then there's a heart that is standing looking at whats going on and its abviously anxious.

Can you elaborate on your interpretation of this image in relation to the concept?

My barrier is very much self care. I'm very much a flitter between tasks, so I'd do a little bit of that, a little bit of that, a little bit of that. So today, great example, what have I got? I've got a lesson plan to do, create a lesson, and do an essay plan. I've been spending like half an hour going between the 3 all day and sometimes it works really well because its having that break, sometimes its like cognitive overload and I end up getting myself in a tizz and getting overwhelmed and getting heightened and I just cannot focus on anything and it just gets too much and the mess becomes huge. It feels like I'm being surrounded and drowning in it.
Yeah, I like to throw myself into something 100% and when I've multiple things to throw myself into 100%, issues arise.
So this is image is very much a good example of all of that.

How do you get past those kinds of barriers?

Well, that's when I would clear up my mess, put it to the side and often change my study space, I would move to somewhere else and recreate a more orgaised mess, I'd start like that first picture we saw and then it would slowly turn into the reality version

Going back to that comment you made about self care, can you elaborate on that a little?

I think learning creates barriers to relationships - I'm great at getting myself too engrossed in my learning and I work at dealing with barriers to learning but not the other stuff, and that's not great for anyone. It's self care because that's the issue, the biggest barrier being myself.

A metaphor for a barrier to engagement with learning.
Barriers relating to conflicting or too numerous demands.

This is not a student NOT engaging - this is hyper engagement. Driven by motivation - threat to wellbeing.
Do highly motivated students create self inflicted barriers related to expectations?
Needs a filter - implications for module programming - understanding of workload issues and scheduling to avoid creating these kinds of barriers.

Implications for Student Support Teams/ Guidance Tutors.

Engagement metrics would capture this as a student fully engaged - the issue would be hidden at the same time as wellbeing is threatened and potential long term impact.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

A barrier to engagement

Representamen

Image Elements

Cartoon type images, brain, funnel, heart with a face, plasters, pens, books, arrows, clock, discs, laptop, numbers, symbols

Object

Picture Object + Concept Object
(PO+CO)

PO: A heart staring at a brain with lots of learning icons being poured into it via a funnel.
CO: A person being overloaded, reaching their limit.

RC4_IGA_5

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Motivation for my engagement

How did you choose this image as a representation of the concept?

I was thinking about that movie, 'Pay it Forward' and about having a job where you can do that and make an impact. I searched for 'ripple effect' and came up with this.

Image description

Its an image of a couple of drops of water dropping into the surface of a bowl of water or I guess it could be a lake but it looks too still. Well apart from the ripples that the drop are making, and the colour of the water I really liked, its sort of dark blue with orange highlights

Can you elaborate on your interpretation of this image in relation to the concept?

Well, like I was saying before, what motivates me is the idea of having a job where I can make a positive impact. The impact on this water and the ripples heading out is like me having an effect as a teacher. I'm pretty self-motivated by that idea, you know that sense of doing good for others. I'm a part time youth worker as well.

So, motivation as you describe it here supports your engagement?

Absolutely, it's what motivates me throughout. When I have those moments of 'this degree is really hard', I know that in 2 years time I'll be on the right track, teaching. Its why I started all of this, and longer term I want to use my teaching experience to do other things too.

Guided interrogation of pictorial meaning, and alignment to the concept

Motivation as a driving force to sustain engagement.
Linked to career goal, vocation.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Idealistic perspective linked to the reality of the learning experience supports engagement.

We could expect this on a professionally oriented degree route - but what about career ambition in other subject / disciplines

Self - motivation, a concept that the individual student brings to the situation. Carries engagement potential, acts against non-engagement. There is a purpose here that positions the university experience as part of a broader picture.
Connected to employability, career ambition - not an isolated educational experience.

Motivation

Representamen

Image Elements

water surface, water drops, ripples

Object

Picture Object + Concept Object
(PO+CO)

PO: Water droplets making ripples in a body of water.
CO: Motivation being related to being able to make an impact.

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RC4_IGA_6

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The opposite of engaging with learning

How did you choose this image as a representation of the concept?

I searched for an image of a guitar. I was going to take a photograph of mine, but it'd be just in the corner of a room and I wanted to get the feeling of going somehwere else to play the guitar and I like being outdoors too, so this kind of captured both things.

Image description

An acoustic guitar thats leaning against a fence made of barbed wire. That sounds worse than it looks. This is in the countryside, its green and open and looks like a nice place to sit and play.

Can you elaborate on your interpretation of this image in relation to the concept?

I thought that opposite to engagement with learning was about going to do something different. Not engaged in learning but maybe being engaged in something else. So, one of the things I like to do is play the guitar, not that I'm amazing at it, but its something that I like to practice at. I feel like its creative, a break from studying and I can do it on my own, there's no pressure to perform.

...and the way it is positioned in a field?

Like I said, this would tend ot be in the corner of the room, but a different room to where I'm working at home. I'd rather be outside though which is why this looks kind of perfect.

So, going back to a couple of your other images, is this linking with your ideas around barriers and motivation?

Totally, this feels like a reset when I'm feeling overwhelmed. If I spent ages doing this it wouldn't help, I'd feel guilty for wasting my time, but picking up the guitar for ten minutes keeps you going. I mean it helps you to stay motivated with a task when you go back to it. I don't know if I'm explaining that well?

Being oppositely engaged.
Taking a break from learning
Interruption - might be good to manage wellbeing

Linked to being 'alternatively engaged'
Opportunities to step back, step away and gain perspective support engagement with learning.

Short term, short time, individualised strategies support engagement with learning over the longer term and support well being.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

An opposite to engagement

Representamen

Image Elements

Guitar, fields, wire fence, lake, hills, sky, clouds

Object

Picture Object + Concept Object (PO+CO)

PO: A guitar propped up against a fence in a field.
CO: Engaging in something other than learning.

RC4_IGA_7

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The ultimate outcome of my engagement with learning

How did you choose this image as a representation of the concept?

Its an image I'm familiar with, I didn't have to search for it, I knew where to find it.

Image description

UNHCR logo - white text and icon on a blue back ground

Can you elaborate on your interpretation of this image in relation to the concept?

That's my dream. Obviously I want to spend lots of time teaching, but my ultimate aim is to become someone involved in legislation/ legislative work within the UNHCR specifically with Education of refugees. A lot of my degree is focussing on the education of refugees and ethnic minorities across the world and that's what I focussed on for my dissertation. Its something I'm really passionate about. So the essay we're doing at the moment, I'm having to focus on pulling myself away from making it too much about this, but its really driving my thoughts in a good way.

This seems to be linked to your ideas around motivation?

I know, they are really interlinked and if I'm thinking about why I engage with Uni work and being at Uni, these are the things that I'm about. I'm motivated in the shorter term by where I want to be and what I want to do in the longer term.

Strong association with the image/concept

Outcome - linked to motivation - career goals positioned as an outcome of engagement over the long term.

Graduate Futures and Employability strategies in HEIs - linked to student engagement agenda - lots of metrics around this but what detail at the individual level? Engagement - not just about the individual engaged in a learning scenario/activity - how is that linked to the longer term goal, the bigger picture?

PH/ SM perspective?

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

The outcome of Engagement

Representamen

Image Elements

Logo of a NGO

Object

Picture Object + Concept Object
(PO+CO)

PO: UNHCR Logo.
CO: A long term ambition underpinning engagement.

RC5_IGA_1

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

How does this image represent your idea of a study enviroment?

I have different study environments. At home I don't really have an office space, my home is a home and its always a challenge. When I do work at home, I sit on my squishy seat and pile things around me. It looks massively hectic. So I think I learn when I'm more directed like at University. This is a photo taken on a fieldtrip, it represents a kind of social, collaborative atmostphere, softening the edges between staff and students.

Engagement with learning as an active, immersive and social experience. Contrasts to deskspace, hints at RC4_IGA_2 - learning is messy. A subject/discipline perspective here and a suggestion that 'home scenario' might be a barrier.

Can you elaborate on how this image represents engagement with learning?

That's 3 of our lecturers, we were on the Cheviots. We were fully engaged here, it was uphill and windy, couldn't help but be engaged.
They were bringing the subject to life, dressed as historical invaders showing how they impacted the landscape.
It brings us together as a group doing something that we wouldn't have done.

Immersive, engaged, fully present in the moment

Interrelationships and interaction between staff and students is key.

A contrast to the usual scenario?

Massive contrast, usually we're in a lecture theatre or similar where we all just sat still in one place just listening to lecturers talking. Not that that's necesssarliy disengaging because some lecturers are more interactive. You know, using kahoot or jamboard or stuff it can be really engaging.

HE pedagogy, technology enhanced learning supports engagement in day to day scenarios.

Study environments beyond the deskspace.

Contrasting study environment. Natural elements have some agency, provide a connection to outdoors.

Sometimes we come together in lectures as part of bigger groups - you know Env Studies/Geographers/Human Geogs etc but we still stick together in our groups and don't mix.

Opportunities to broaden connections could support engagement. Links to RC5_Alternative Image and social relationships.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Study Environment

Representamen

Image Elements

3 People
Costumes
Rucksacks
Grass, ferns, hills, open sky, clouds

Object

Picture Object + Concept Object
(PO+CO)

PO: Three people standing on a hilltop
CO: An engaging outdoor learning environment

RC5_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

This is really about different ways of encouraging engagement, like an alternative to a lecture situation.

How does the image as a whole relate to your ideas around engagement and learning?

Engagement needs some encouragement in formal teaching sessions

So, we sometimes come together in lectures as part of bigger groups - you know Env Studies/Geographers/Human Geogs etc but we still stick together in our groups and don't mix. Maybe more social events on this scale would encourage relationships and engagement in the teaching sessions. Sort of forcing people out of their comfort zone a little. To do something different.

Collaboration across subjects, multi-disciplinary approaches - strong rationale but how does this work in practice? Does it work at scale? Multi-disciplinary working study groups and common assessment tasks might provide opportunities and support/sustain engagement.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

What is the significance of the objects on the floor in relation to that idea?

Its a garden party type thing.
Like a grass table with afternoon tea plates on it with sandwiches and fruit
You know, maybe outdoor, a social focus, civilised with some formality to it and enough opportunity for people to mix and socialise.

Image is envisaged as a whole. Individual elements represent the concept collectively rather than having individual agency.

Social perspective of engagement - presented as an alternative to formal teaching environments that are seen to limit this and perhaps the way that students engage.

Trying to mix in a lecture theatre is difficult because you're all seated, there's not much room or moving around there's generally not much interaction between the students.

Alternative ways of engaging

Implications for HE pedagogy, Learning & Teaching Strategies

Representamen

Image Elements

Object

Picture Object + Concept Object
(PO+CO)

Plates, cups, saucers, knives, forks, napkins, flowers, a mirror, assorted sandwiches, a table with imitation grass, a backdrop of plants.

PO: A table outside with food, plates and cutlery.
CO: A social event to encourage engagement.

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RC5_IGA_3

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Technology and learning is what I thought about here.

How did you choose this image as a representation of the concept?

I was thinking about how frsutrating it is when you've got an online session or something and you sit down to start and then it doesn't work and you can't actually believe it. So when I was searching on Google with that in my head I came across this. I had keywords like technoogy, learning, frustration.

Image description

Well there's lots of tech here, work related things. It's a kind of cartoon drawing, the woman isdressed in work clothes, standing up holding a keyboard by the sides and looking like she's using it to hit the screen on the desk and smash it. She has an angry or frustrated look on her face, the screen is broken and the desk and chair and things are going flying.

Can you elaborate on your interpretation of this image in relation to the concept?

When we're at home using lots of different technology, it seems to be taken for granted, but when the slightest problem occurs its anarchy.
Its everywhere, its just part of being a student now and in a way you don't think about it you just use it. Before when I was younger, you couldn't text or have mobiles and stuff, but now everything is instant and everyone has expectations for instant replies.
So in terms of learning and engagement with that, there are times when you need to or want to get on with stuff and it just doesn't work. Its like the end of the world, your temper rises, you've got an hour block, you can't stay there all day. You begin to think what's the point in turning up online or in class if there's going to take so long to sort out.

Is technology supporting engagement and learning in this image? How does that relate to the reality of your experience?

Its definitely not helping here by the looks of it. When the tech doesn't work, learning doesn't work. I mean I'm on a schedule, I've got kids and all the domestic things being a single parent. I couldn't do my course without all the tech and online learning but it has to work, I can't sit around waiting for it to get sorted.

Other things I thought were like its not just in the moment, its something that's held onto. You know, you hear students talking and saying stuff like 'oh not not this again'. The frustration of last time is still going and you might not engage because you don't think its going to work again this time.

Concept of technology associated with engagement and learning primarily in a negative way.
The frustration of it not working is leading the response here, rather than leading with the enabler view.

Image is a metaphor for the frustration casued when technology doesn't work.

The agency that technology has here is negative in terms of engagement and learning.

Recognition here of technology as part of the fabric of modern life and the impact that has in terms of expectations.
The frustration that occurs when those expectations aren't met.
The impact of this felt at home when working online and fit learning in and around other responsibilites but also on campus when classroom technology doesn't work.

Technology enables access and provides opportunity - essential consideration in some cases.

Being a student is one part of a complex existence. Mulitple roles and responsibilites influence engagement with learning. Time and space has to be negotiated, preserved. The pay off needs to be worth it.

Technology - issues erode confidence and impedes engagement with learning.
Has a de-motivating effect - possibly over the longer term.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

How technology influences engagement with learning

Representamen

Image Elements

A woman, chair, desk, keyboard, book,lamp, cable, screen, screen, broken glass

Object

Picture Object + Concept Object
(PO+CO)

PO: A woman standing up from her chair and knocking over the desk.
CO: A student frustrated with technology

RC5_IGA_4

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Barriers, things that get in the way and make it difficult to engage.

Difficult to engage rather than not engage. Strong motivation and commitment underpins this.

Gender perspective on barriers to engagement for mature female students

How did you choose this image as a representation of the concept?

I wanted an image with lots of things going on in it. One with a house actually, becasue there's a lot going on in the house. This kind of captures all the things that I have to deal with on top of being a student. So I was searching for things like household responsibilites, looking at it now, I think its interesting that this is a woman rather than a man. I think there's a gender thing there that I didn't pick up on when I was choosing it.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Image description

This is an image of a woman, she's happy, well dressed, juggling commitments, multi-tasking household things. What it doesn't show are traffic jams, they're everyday things!

A metaphor representing the complex challenges that need to be negotiated in order to engage with learning.
Engagement is embedded deep in the fabric of everyday life.
Agency of commitments and responsibilities

Can you elaborate on your interpretation of this image in relation to the concept?

Well, even though there are barriers here, she's still smiling. I looked at a lot of images and there were people pulling their hair out with frustration and angerbut that's not what I wanted to convey at all. The person here wants to learn, she's happy to do it, it was her choice but it doesn't mean she hasn't got all of these ther things going on.

The challenge of negotiating barriers mitigated by motivation and commitment.

So, the barrier concept is significant in terms of the impact on your engagement with learning?

Totally, I mean they don't stop me from engaging but they really impact because I have to get past them before I can engage. So, when there's one lecture on this day and another on another day, I have to travel miles, it costs money in fuel, time stuck in traffic. I can get the train but that costs even more than parking does. Somebody on the course travels from Carlisle for an hour lecture.
It doesn't seem worth it and the feedback from staff is that well its not just about that one hour lecture you're supposed to be doing other things while you're here, make most of your opportunities. But its difficult to see that from a learning perspective a lot of the time because that's whats on your timetable and you look at it an think wow just look at that tiny little sliver of a lecture during that entire day and its gonna take me a 2 hour round trip. It makes fitting in other commitments a challenge.

Being a student is one part of a complex existence. Mulitple roles and responsibilites influence engagement with learning. Time and space has to be negotiated, preserved. The pay off needs to be worth it.
Implications - timetabling
Expectations regarding engagement/attendance - how far do institutions recognise, appreciate and support students who face these kinds of challenges?
Where is that positioned in the SE discourse?

Barrier to engagement

Can we go back to the comment you made earlier about the woman in the image looking happy despite the challenge, how does that relate to your own experience?

Yeah of course. I'm happy I made the choice, I stopped a full time job, I remortgaged and although for all that the student bit should be my main focus, home has to be the main focus instead. I mean I've got 2 children, 18 and 19, the younger one lives at home the older one doesn't live at home but may as well. I've got two dogs, I've got a partner who doesn't live with me so I have to make time for him. I've got the travelling issue. I mean I could get the Metro, but then I have to think that I have to get the shopping in as well, I might have to take my nephew for a driving lesson, you know I'm not just a student.

Student lives are complex and diverse.
Student engagement policy may not be nuanced enough to recognise this depth of diversity and the impact this may have on learning.
To what extent can metrics measure this?/Reflect this?

"I'm not just a student"

Representamen

Image Elements

A woman, piggy bank, car, bag of groceries, house

Object

Picture Object + Concept Object
(PO+CO)

Would you say that the barriers shown in the image are common to other students?

Certainly the ones that are mature students. I mean for some people they're still the child in the house, I mean they live with their parents so they might not have a care in the world, money might not be an issue, but if you're the parent that's the student you might have to think about childcare, about pet care, I mean whose gonna put the bin out when I'm not there? Things like this, even if you've got grown up children it can be really difficult to get them to do those simple things and if they don't put the bin out, you're thinking well I've got another 2 weeks to wait and where am I gonna put all the rubbish. It seems like such a simple thing but for some students it isn't even a thing and they don't have to think about it.
Its all about time and having to plan and prepare ahead to do university things.
We need communication and plenty of time from the university to help us, they need to appreciate how different people live and they're not all students who can do things last minute.

PO: A woman standing, open hands, looking up at a house, car, bag of shopping and a piggy bank.
CO: A student juggling responsibilities and multi-tasking

Engagement as a fluid and highly negotiated concept
The nature of it at a specific point is directly influenced by the agency of others, things, situations, policy - some of which can be controlled and managed by the student, others less so.

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RC5_IGA_5

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The motivation to learn, to engage.

How did you choose this image as a representation of the concept?

I found this image of the road with the text online in Google. I looked for such a long time to find an image that fitted what I was trying to convey in this because it might be a long road ahead but the reason you've gone into it in the beginning is because it'll be worth it in the end.

Image description

Its an image of a straight road going off into the distance and going up into the sky. Grey with markings, grass either side. The road has better future written in massive letters on it and Financial Stability. The sun ahead is like the light at the end of the tunnel but I didn't want the tunnel because its not a doom and gloom situation. I didn't want the road to off into the distance so you couldn't see the end, I wanted to see it, its got to be achievable

Can you elaborate on your interpretation of this image in relation to the concept?

Financial stability is what I've always aimed for and I'm not a massive gambler, but I've taken a massive gamble on me. Like I've remortgaged the house because I don't want to be in any student debt. Full time employment was safe and secure and stable but if I wanted to progress, which I did, then I had to gamble to reach the end goal. The road goes up its challenging, you do still have to work for these things, there's a road to travel.

So, this image as a metaphor for the journey ahead underpins your engagement?

Without doubt all this drives my motivation to learn especially when its difficult. You know there was a Jamboard that one of the lecturers used and she was asking us why we wanted to do this and of course there were people who were saying 'because I want to save the planet', 'we need a greener envronment' and things like that and one of the comments that I'd put on was 'salary' and she was like 'I don't know whose put salary on there, but if you think you're going to get a big wage at the end of this then you're very much mistaken - you do this for the love and the joy of it not for the salary. I was like OK, alright, but I said it was me and I expliained that I needed a degree to do what I wanted and that would mean more money. I don't want to lie about that, I know I'm a bit older than most of the students here and maybe a lot of them are there because they just don't know what else to do. That wasn't the case for me.

Difficult to engage rather than not engage. Strong motivation and commitment underpins this.

Gender perspective on barriers to engagement for mature female students

Student journey conceptualised as the road ahead.
Uphill, a challenge, but the destination, the Graduate Future provides the central motivation to engage with learning.
The outlook here is positive, there is career ambition.
'It needs to be achievable'
High stakes, but worth it.

some discord between academic views of motivation and how they relate to engagement with learning and the reality of why some students choose to enter HE Issues here to explore
What might be the impact of this kind of dialogue between staff and students on motivation over the long term?
How does this align with Graduate Futures and employability policy and messaging?

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation

Representamen

Image Elements

A road, text markings on the road, green fields

Object

Picture Object + Concept Object
(PO+CO)

PO: A long straight road going off into the distance towards a 'Better Future'
CO: The prospect of a graduate future as a motivation to engage with learning.

RC5_IGA_6

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The opposite of engagement with learning.

How did you choose this image as a representation of the concept?

I found it by accident really, I mean I wasn't looking for this one but you know memes are quite catchy aren't they and when you see one that fits you've just got to have it. I was looking for images about studying and distractions mostly because I was thinking about procrastination which is always something that is there for me.

Image description

This is the cartoon character Dory who has a very short attention span. Its a meme around the topic of studying.

Can you elaborate on your interpretation of this image in relation to the concept?

This isn't about a barrier because this is something you're choosing to do. You know, with best intentions, you go on some type of tech, your laptop, your phone or whatever, with Env Sci you might search for David Attenborough and then you'll notice something interesting but only slightly related, and you think I'll quickly have a look at that but then before you know it that leads you somewhere else and you go down a wormhole and you get lost in everything and before you know it, your assignment that you left until the last minute to finish off, you've suddenly now got no time left.
That's where worry and anxiety comes in because you've procrastinated.

On tech you can't ignore stuff, you get notifications saying 'have you watched this?' or put this on your watchlist and you think OK I'll just watch one and then before you know it you've watched them all because you don't even have to press anything, they just play one after another.

Distraction is the opposite of engagement.
Are there benefits to distraction - being purposefully distracted and alternatively engaged in a contrasting activity?
Interrupted learning?
Could this be reframed as a break in study that is ultimately helpful as part of a concious strategy?
Institutional perspective would view this as non engaged.

Is a meme a limiting image in the context of this work?
Methodological considerations

What opportunities exist for serendipitous learning?
Engagement that is alternative, non directed - is there value to this?
How are these instances conceptualised by students - is there scope to reframe these?

Binge watching - Is it possible to 'binge learn' - how might a strategy like this be embedded as part of the sociomaterial assemblage of individual student experiences?

Accidental learning/entangled

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Opposite of Engagement

AFTER THIS EPISODE I WILL CONTINUE STUDYING
OOH LOOK! ANOTHER EPISODE IN 5...4...3...

Representamen

Image Elements

Cartoon fish, coral reef, text

Object

Picture Object + Concept Object
(PO+CO)

PO: A cartoon character meme - staring out from the screen
CO: Distraction, the opposite of engagement with learning

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RC5_IGA_7

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The outcome of engaging with learning

How did you choose this image as a representation of the concept?

I was searching for images of achievement and I really liked this one as soon as I saw it. It matched how I feel about doing well.

Image description

Silhouette of a person jumping across a gap from one rock to another - sun is setting behind them.

Can you elaborate on your interpretation of this image in relation to the concept?

I really liked the lighting, it felt mellow (yellow) - all the hard work done and out of the way - and look at the achievement - with the arms in the air - feels like there's so much energy there and a sense of achievement and pride. The outcome of engagement can be of amazing achievement. Take all the small wins, they add up to amazing!

Little wins? So there's not just one gap to jump across or one outcome of engagement? Is there a big win, what does this look like?

Little wins - getting things right - doing well in assessments - getting decent marks.
The big win from this degree is graduating and being so proud of myself that I've managed to get to the end of this journey.
There so many challenges along the way and when you go into your very first lecture when it sounds like they're talking a different language because you only understand 2 words that were said there, you feel so out of your depth, even going from there to your next lecture is a win.
Originally, I wanted to go into Environmental Health in some type of food based industry and I've seen a lot of what goes on. However, since I've been at university I can see opportunities opening up and its so broad and I'm starting to develop a really strong interest in water quality which I didn't think I would but its outdoors and I like being outdoors. Career wise I'm surprised in myself that I'm thinking that way but what I don't want is a closed mind, I want to try everything that I can.

Achievement (success) as the outcome of engagement with learning.

Achievement - something to be celebrated

Are HEIs primarily concerned with measuring rather than celebrating? How does this influence policy on engagement and learning?
Scope for interim celebration at year transitions - impact on engagement, progression and journey.

Celebrating the challenge, recognising achievement along the way.

Outcomes: subbject knowledge, graduate skills attributes, career knowledge, transferability, values.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Outcome of Engagement

Representamen

Image Elements

sillouette person, sky, sunset, rocks, gap

Object

Picture Object + Concept Object
(PO+CO)

PO: A sillouetted person jumping across a gap between two rocks.
CO: A student celebrating achievement

RC6_IGA_1

Interrogation Cues.
Guided reflection and elaboration of meaning

How does this image represent your idea of a study environment?

Study environment is really important. A major part of learning is studying and if there is no environment conducive to studying then that affects learning.
I need somewhere conducive to studying so I could actually learn, becasue for me its sort of more an independent thing. You can't just reply on lecture or seminars. A big part of it is your personal study, and environment supports motivation. I just like to go to the library where I have a range of places I like studying in the same environment. I do read in my own space, in my accomoation but I find I'm most productive when I go to the library.

How did you find this image?

Searched for the image, it took quite some time because I was looking for something specific to portray the image I had in my head. I used 'private, collaborative spaces in the library'

Can you elaborate on what is happening in the image? How are all the different elements interacting?

I'm in the library, there's a private booth and its just me with my laptop and books But of course its not just me in the library, there are also other booths. The occupants of the booths, we can't really see each other, so it sort of like a private space (in a public space), but the book shelves and things are behind the booths so you have people coming in, checking out books, to have conversations but its not really noisy, you get the feeling that you're in your private space but you're not isolated. So you have this mental picture while you're studying that there's people here, over there but you can't actually make out who is who - this picture was perfect - it showed what I have in my head.

The booths aren't behind closed doors, they're open but still private

So, an environment like this supports engagement with learning?

Yes, but universities should know this about studying and know that to cater for the majority of people, that everyone is not the same and that everyone has their own definition of what is conducive to studying. My definition is like the image, but for others, it might be a closed space. A library should have lots of different spaces but these spaces might not be in the library. Sometimes you might prefer a more collaborative space with multiple seats where you can talk about group assignments.

So, one type of space doesn't work, if I have options then that works better and helps me to engage.

Studying - a distinct concept but highly associated with learning.
Studying = Independent learning, highly situated in environments that are in some way support engagement with learning

Diverse environments support engagement with learning

Clear sense of the concept guiding the image search

Social connectedness
Collective engagement but not collaboration

The perspective offered here situates the participant in the environment depcited by the image. The image is strongly associated with the reality of experience.

Contrasting study environments.

There is agency in study space design

Recognise and plan for diversity of engagement

Implications for campus design. What assumptions do HEIs make in relation to this?

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Study Environment

Representamen

Image Elements

People (some seated, some walking)
Desks
Laptop, shelves, books
Glass windows / partitions
strip lighting
curved wooden partitions

Object

Picture Object + Concept Object
(PO+CO)

PO: People in a large room with desks and books.
CO: A library where students are studying.

RC6_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

An alternative to the active state of engagement. Depends how engagement is being defined.

Can you define what you mean by 'active'?

Where you're engaged in a particular task like writing an assignment or being in a lecture.

How does the image as a whole relate to your ideas around engagement and learning?

I think of engagement with learning firstly, as studying so I was thinking of what is an alternative to 'studying', but sort of still learning. I think lots of people have alternatives, we're all different and we do things in different ways. Sometimes your brain gets tired, you may want to do something else or do it in a different way just to not get bored with the process.

What is the significance of the objects on the floor in relation to that idea?

Young boy, head open has a lot of thoughts in his head, it's a whole bubble of imagination - so many things are in there, books, stars, space everything is inside his head coming out. He has a big smile he's happy, he's opening up and sharing what he knows. Sharing ideas with others rather than just studying on his own. You know, maybe collaborating with others

What are the implications here in terms of engagement?

Ok, so when students realise there's lots of different ways to engage, they may choose not to engage with something that the university is proposing or in the way that the university is proposing. Or what the University is offering.
But then again the Uni should not just focus on what . I mean the main focus should be the students and what they're learning from this. If the student thinks OK I've discovered this alternative way that I can engage and that I get more from, the university can actually help us by tapping into this and acknowledging the alternatives. Goes back to what we were saying. Just because you log onto something that the Uni expects you to doesn't mean that you are engaged in learning - they're sort of not acknowledging the alternatives - it has to be much more than that.

Acknowledgement that engagement can mean different things.
Modes of engagement.
Is this recognised in the university?
Do HE systems focus on capturing engagement only where it manifests as particular behaviour?

Studying - engagement on an individual level
Learning - more active, collaborative, cooperative.
Engagement with learning encapsulates both.
What conditions influence both of these states?

Alternative concept - different ways of engaging supports learning. HE Learning and Teaching strategies influence the conditions and opportunities.
How are alternative situations facilitated?
PH perspective - The impetus for engagement doesn't just rest with the individual.

Implications for HE pedagogy, Learning & Teaching Strategies

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Alternative ways of engaging

Representamen

Image Elements

cartoon of a boy, symbols and icons representing planets, maths, knowledge.

Object

Picture Object + Concept Object
(PO+CO)

PO: A boy with things rising out of his head.
CO: A young student full of ideas and possibilities

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RC6_IGA_3

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with these images?

Engaging with technology

How did you choose these images as a representation of the concept?

I wasn't searching for anything specific with the first one, I just Googled technology and learning and came up with someting that made sense. The second one I searched specifically for because I have this sort of love/hate relationship with technology, mixed feelings.

Image description

The first one is a bunch of hands reaching upwards, they're all holding gadgets, mobile devices with a network over it connected by social media icons.
The second one, a green Love key and a red Hate key on a keyboard.

Can you elaborate on your interpretation of the images in relation to the concept?

Well I do feel the tension around technology, the fact I had to choose two images here kind of illustrates that. The zoomed in image of the keyboard with the Love and Hate keys next to each other, its like they have to be next to each other because you switch between the two feelings so quickly. Sometimes I think it really gets in the way of learning and all you're engaged in is trying to solve a problem with technology and sometimes it works perfectly and you don't even think about it.

I've long struggled to determine if technology has made my life simpler or considerably more difficult. Of course, the benefits are unrivalled, but the drawbacks may be overpowering at times, especially when it comes to the desire to actively engage in virtual learning techniques and meeting assessment deadlines.

Does the other image represent when it does work?

Yes, I do have a great sense of power with the technology because I feel responsible for a great part of my own learning. It means you don't have to rely on the teacher or lecturer to tell you which books or where to go. Where I'm from (Nigeria) it wasn't easy to get books - you had to travel miles. Technology gives me power to bring all those things to me and I could decide what I'm going to achieve today and do that with technology. So the image of the hands I think is powerful, everyone is engaged with learning and everyone is connected . That's a really powerful thing.

It's a wonderful sensation to feel linked to the rest of the world. It's also a comfort to be able to sit at home and read books, articles, films, and photos from all over the world, as well as communicate with friends and family. Knowing that those materials are available enriches my 'CONCEPT/IDEA' of learning.

Is the reality represented more by the image of hands or by the keyboard?

That's a good question! I think it would certainly depend on when you asked it. No, but for me, the positive benefits of technology outweigh the frustrations.
I think as a student, having access to so much and having technology there its sort of taken for granted but it is so powerful.

Technology - facilitates engagement but not always.

'relationships with technology' are complex

Technology is embedded, social, connected
a taken for grantedness associated with periodic frustration works against engagement and learning, erodes confidence and the relationships with technology as a feature of learning. Technology manifests as physical hardware, software, connections, digital presence and exerts agency that can both enhance and hinder engagement.
PH perspective - shifts the locus of control from the individual student to the student as one part of a networked system.

Technology - the power to engage, liberating, providing access.
The power to transform.
Embedded, connected, can work against isolation, interconnectedness
Changes the ways in which students engage with knowledge.
Connectivism (Siemens) a learning theory for the digital age.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Technology

Representamen

Image Elements

hands, arms, handheld devices, technology icons, arrows

Object

Picture Object + Concept Object
(PO+CO)

PO: A group of hands reaching upwards, each holding a mobile device against a backdrop of technology icons.
CO: Students engaged in learning through technology

keys on a keyboard, one red, one green, with word labels

PO: A section of a keyboard with Love and Hate keys
CO: Student relationships with technology

RC6_IGA_4

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with these images?

A barrier to learning, to engagement.

How did you choose these images as a representation of the concept?

I was searching specifically for ADHD, I was certain about what I was looking for.

Image description

An image of 4 hands, from 4 different people, each holding up a letter so they spell out ADHD togethter. The hands are from different ethnic backgrounds, that's significant because its not person specific, there's a lot of diversity here.

Can you elaborate on your interpretation of the images in relation to the concept?

This image is like an awareness thing - for me I've had it since I was a child and it wasn't diagnosed until later but its been a really big barrier and it meant that I had to come up with alternative ways to engage as well - so it kind of links to those ideas. I'm aware there's a lot of people like me even if its not ADHD, theres a lot of people with anxiety and who find it difficult to engage.

So the image represents awareness. Since becoming aware, since your diagnosis has it become less of a barrier?

No, not less of a barrier because its always going to be there, but I know what you mean. Knowing that this is what I'm like and that there is a reason for it, has helped me to manage myself. I guess I'm older too, so that helps, but being able to talk it through with tutors, mentors has helped my confidence. Its a barrier that I expect and I know how to get around it to keep me on track.

Personal/Individual barrier
A known diagnosis
What are the assumptions around this?

Image is being directly associated with the concept at a very personal level - based on experience

Awareness break down the barrier, makes it manageable, leads to strategies that can support engagement and guard against anxieties that may prevent learning and lead to dis-engagement.
Also need to recognise the notion of 'alternative'
What expectations are there around engagement -
Conceptualisations of engagement need to be holistic interpretations and allow for diversity of all kinds.

Assumptions around ADHD and engagement/learning should not be generalised.
Generalisation here may obscure the individual nature of the condition as a barrier.
Mentor support is key here.
Implications for Student Support interventions in HEIs and to guard against blanket application of 'engagement monitoring policies'

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Barriers to Engagement

Representamen

Image Elements

hands, letters, whitebackground, coloured letters.

Object

Picture Object + Concept Object
(PO+CO)

PO: 4 hands, each holding up a letter
CO: Barriers to engagement may be diagnosed and impact significantly

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RC6_IGA_5

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation conceptualised in diffferent ways here. Interlinked.
Innate motivation driving choices to enter HE but this needs to be sustained through ongoing support - socially and academically

Associated with discourse on Belonging/Wellbeing

PH perspective - motivation is not conceptualised as an entirely individualised phenomenon.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with these images?

The motivation to engage

How did you choose these images as a representation of the concept?

Motivation is a big thing for me and it means more than one thing, so I had to have two images again.
The first one with the girl I choose because of the feelings I had when I came to university and I was searching for 'leaving home for University', the second one, I litrerally searched for 'support'.

Image description

In the first image the girl iis walking along a lonely road. She's carrying luggage. The road and buildings are silhouetted and it looks a bit dark and forboding, you can't see the destination. She has her back to us and I wouldn't say she looks excited. She's just on a journey alone.
The other image is like a Scrabble word that spells out 'Support', there's lots of blank wooden blocks as the background to the word.

Can you elaborate on your interpretation of the images in relation to the concept?

So, to further my studies, I had to leave my home country and family. It necessitated a significant amount of sacrifice. This is what inspires me to keep going because I want to make them and myself proud. It's my main motivation when I think about engagement.

But there's different levels of motivation too. You know, the student has a major role to play, I have a major role to play in my learning, I'll decide if I want to engage, nobody is gonna force anything into my head, so it comes down to a really important thing - which is motivation. If I'm not motivated to engage, I won't learn, no matter how much the other persontries. That's why the focus needs to be on those motivating factors, knowing what they are makes engagement happen.

There's motivation linked to different times.
Like when I first walked through the doors of campus - that was like more motivation than I could imagine.
On a smaller scale, like when I have an assessment due, that really brings a whole lot of motivation for me!
Also, when I get engagement from my lecturers, my tutors, that's where the link to support comes in.

Can we explore how the two images are interlinked and relate to the concept?

Feeling supported by tutors is really key for me, it's motivating to feel like we're in this together.
There was a tutor that actually went out of her way to give me feedback in a seminar about work I was doing , she said she really liked my ideas, gave me ideas on how to refine it and said send me an email and we can work on something like this together.
I felt so good, if I hadn't had that feedback I would have gone home and done something else but as soon as I got home this time I just decided I gonna do this because I felt like there was someone out there, to support my ideas, I didn't feel like I was alone to figure it out for myself - it gave me confidence and really motivated me.

Without the support I would have felt alone.
This is not just significant in terms of international students like me because some home students may feel this way. Universities should put in mind that they have lots of students that have left home, given up a lot to come here, to come and engage with the learning. If they weren't motivated they wouldn't come. But this is different and unknown, they don't really know what they're coming to be, so feeling like you're part of a community actually helps to motivate you.
When you feel like the tutors know you and understand something about how you got to university, what your history is, what you're used to in terms of learning, all of this keeps the motivation there.

The emotional journey is underpinned by innate/intrinsic motivation.
Motivation extends/impacts to family/home environment.
Motivation linked to commitment

Intrinsic motivation a powerful force that can also lead to non engagement.
Being motivated to not engage

Levels of motivation - spectrum of motivation extends over time/space, influenced by the agency of others/things

Support is one of the influencing factors. Relationships with tutors sustain motivation and lead to successful learning.

I mean when I look at that first image, I don't get happiness, I get sad when I think about the feeling in the image and that motivates me - you know like, I've given enough to get here, I was willing to do it and so you know I need to make sure I get what I came for.
I'm motivated because its a big deal.

Motivation

S U P P O R T

wooden cubes, cubes with letters and number scores

PO: A word spelt out in a way like Scrabble
CO: Motivation needs support

Representamen

Image Elements

girl, luggage, silhouettes of buildings, sky, clouds, road, windows with lights, telegraph poles

Object

Picture Object + Concept Object
(PO+CO)

PO: A girl with luggage walking along a lonely road.
CO: A student leaving their home and travelling to university alone

Welcoming/Belonging/Nurturing as the substance to sustain motivation over the longer term.
Engagement with learning is an emotional state and needs to be sustained in this way - not a mechanistic/didactic process that can be delivered with outcomes that are easily measured.

What assumptions are made around this by institutions?

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Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC6_IGA_6

What is the concept associated with these images?

The opposite of engagement

How did you choose these images as a representation of the concept?

Two images again, I'm sorry but again, they're so interlinked for me and one image didn't seem to capture everything I was thinking. I searched for 'study fatigue' for the first image and for the second I was using words like 'unclear' and 'blurred'.

Image description

The first image with the books, its a girl, a student, lying with her head on a pile of books with an open book on her head like hat. It look like she's tired.
The other image is a blurred view of people, students for sure who are walking or standing in a corridor or a big shared space.

Can you elaborate on your interpretation of the images in relation to the concept?

When I first thought about this concept I thought yes, if I'm not engaged with learning, what else is happening, what am I doing? I thought I might be tired or procrastinating or just a bit unclear about what I had to do.
I certainly associate with that image of fatigue, of being tired and actually being OK about closing my eyes at my desk. I think sometimes that I'm taking a power nap or something but I'm not really sure about that if I'm honest. I mean sometimes I just get tired especially when its late and its quiet in the library and I just want to go to sleep, and then don't and just then my mind starts wandering.
I guess that's me getting distracted, if I was at home in that situation I'd start watching Netflix or something and then I'd be like OMG that's 3 hours gone.

The blurred image, I tried to get the perspective right. Its important. The people aren't on the same level, they're eihther far away or you're sort of sitting. You can sort of make out face but its all a bit blurred and you're a bit lost. This is me disengaging because you're not clear on what you're supposed to be doing.

Can we explore how the two images are interlinked and relate to the concept?

Both of these things definitely happen at some point for me but having contingencies is important - so we're back to the alternatives and recognising that about yourself and also the support to get some clarity. When I was in medical school I had a cartoon medical book and I used it to take a break from the harder work, I wasn't learning as I was supposed to do but I was still learning. You know, finding a way to get past the fatigue, the hard bits, to do something differently, it's just all intertwined really.

So, the opposite of engagement with learning is not engaging because you're tired or you're unclear about the task?

Well kind of but that's putting everything on the students and I don't think its as simple as that. I mean, do students know about themselves as learners as they begin university? Being at school is really different. When you start university you just don't know about the diversity of spaces and environments or ways of learning. I don't think students know this about themselves, all they know is that they want to go to university. The point is that universities should know this and help students understand.

This work with images has been a real eyeopener to be honest, trust me, it really helped me know myself - so if there's a way for students to participate in activities that would help them know themselves better it would really help with how they engage.You can't just wake up in the morning and think about the day ahead and choose which way you want to engage, but you need to know theres alternatives.

Study fatigue
Lack of clarity
Disengagement as the opposite of engagement with learning.
Concept of opposite being associated with 'not' doing something rather than 'choosing' to do something else.

Fatigue & lack of clarity - not engaged
Not learning is the opposite of learning

Study fatigue - the need to take a break, gain perspective.
Can be framed positively - interrupted learning - a proactive break, an alternative - there are different views on this across the research participants.
Implications for study support in faculty,

Lack of clarity of messaging leads to uncertainty and disengagement.
Interpretation may be hindered by processing issues at individual level.

Implications here for the organisation of teaching and learning within faculty.

Institutional measures of engagement position disengaged status as negative, not interacting with systems, not attending. It is more complex than this.
Relates to defintions of engagement

Alternatives - alternatively engaged
Alternative modes of learning/teaching

Implications for transition to HE
Learning Skills interventions, walk arounds, familiarisation
study space design

disengagement framed not as an individual choice but as one possible outcome of a complex interaction of social / material actors in a distinct culturally charged environment.

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Opposite of engagement

people, white floor, walls, colourful clothing, blurring

PO: A group of people blurred by their own movement.
CO: A lack of clarity leads to dis engagement.

Representamen

Image Elements

girl, books, hands, head, arms, shoulders

Object

Picture Object + Concept Object (PO+CO)

PO: A girl resting her head on a pile of books with her eyes closed.
CO: A tired student sleeping and not engaged.

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC6_IGA_7

What is the concept associated with this image?

The outcome of engagement is success

Engagement: Outcome = Success

How did you choose this image as a representation of the concept?

I thought about what would happen if you engaged with learning and searched for 'happy', 'success' and eventually decided on this.

Image description

This is a meter or a dial with a sad face to happy face scale on it A pointer pointing to a green happy face with a hand controlling it.

Can you elaborate on your interpretation of the image in relation to the concept?

Well, I thought about the product of my engagement as a start. You come to university to get something out of it, you want to be successful an I thought this image and the dial being at happy would be how you would feel if you succeeded and you have to engage with the process to do that. The meter in the image is controlled by me when it comes to engagement with learning, I choose.
I think the university understands though that its more than just grades, like yes you've got to get something out of this - but there might not be a defined something? But they have an idea of what engagement means to them and its all part of it.

Apart from feeling happy, what will the tangible outcome be?

A Masters in Public Health, I can go back home with that, or I can stay here. That makes me happy, it gives me a choice but I don't know actually what will happen.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Success beyond grades
Graduate futures/attributes
Career choice

Choice as an outcome of engagement with learning.
Long term motivation

Graduate outcomes - metrics/institutional focus/imperative

Outcome of Engagement

Representamen

Image Elements

Dial, Pointer, Hand, Arm, Red Amber Green sections, face icons white background

Object

Picture Object + Concept Object
(PO+CO)

PO: A dial turned round to green for happy
CO: Success, the outcome of engagement with learning

Interrogation Cues.
Guided reflection and elaboration of meaning

How does this image represent your idea of a study environment?

It represents stillness to me, which is what I believe to be most important in a study environment. It represents a place to be as productive as possible. The first thing I think of is the library, but the reality of distance learning now is just a quiet space with little to no distractions and funnily enough not having that much technology around to be honest, just the laptop or whatever.

How did you find this image?

When I think about quiet and stillness its always this painting in particular that comes to mind. It also reflects something about my study environment at home - obviously this is a diner in the middle of the night, but I study mainly at night when its quiet and still so for me it reflects where and when I do most of my learning.

Can you elaborate on what is happening in the image? How are all the different elements interacting?

There's four people inside, not many but there isn't much going on. Two people are talking to each other.
One person sat by themselves.
Not all talking to each other. A man looks like he's the barman, serving customers
The windows mean it's very transparent, it's not claustrophobic when you're inside, there's a lot of outside inside.It's really bright inside, clean, tidy and there's nothing happening outside but its all kind of open.

How does this associate with the reality of your study environment?

Well, being able to look up from your work and see something else, maybe through a window and not feeling hemmed in.
The set up in my actual house is like this, my desk in the bay window, I can look outside, that same stillness in the image is in my house. Not in exactly the same way as there's not people around, but I do have that 'breathing room'
 When you go to university for the first time, I don't think I knew what the ideal space was for me. I thought it was the library, but it didn't turn out to be. I found it an overwhelming, big space. Maybe the library might not be the best place for everyone to do their work.

Studying - a distinct concept but highly associated with learning.
Studying = Independent learning, highly situated
in environments that are in some way support engagement with learning.
Quiet, focussed - difficult to quantify/measure/monitor

Studying - not a collaborative activity.

Engagement with learning (studying) at an individual level is determined by the influence of other commitments and priorities

Social connectedness
Collective engagement but not collaboration

Study environment - engagement supported by calm, quiet but not isolated, not closed.
A sense of outside/inside - blurred boundaries, soft edges

'Knowing' as a concept

Self, familiarity
Linked to belonging
Linked to nature of relationships between students/ between students and university

Diversity of spaces supports collective engagement.

Implications for students beginning University.

Safe, secure environments underpin engagement with learning.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Study Environment

Representamen

Image Elements

4 People sitting in a room
Bench/Bar/Stools
Drinks, bottles
Large windows
Street, pavement
Shop sign
Other shops/building

Object

Picture Object + Concept Object
(PO+CO)

PO: People in a quiet bar/cafe late at night.
CO: A quiet, calm place to think, to study

RC7_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

Alternative learning pathways

How did you choose this image as a representation of the concept?

I Googled it. I was thinking about traditional ways as more linear and structured and I thought this was more unstructured in terms of seeing where it takes you. Just letting things evolve. I used 'unstructured' as a keyword, but also circuitry and circuit boards, and then I came across this.

Still structured but there are options within that structure.
HE pedagogy - options within structure encourage engagement with learning.
Image here doesn't quite match the interpretation?

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Image description

16 black dots arranged in 4 x 4 grid on a white background. Some of the dots are joined by straight black lines and there are 3 distinct pathways but they don't form any particular pattern.

Alternative learning pathways support engagement with learning?

Networked, distributed learning.
Multiple pathways

Some of them not being connected means that its down to the individual, its up to each person. So in this image, there are 3 peopple and they're each following their own learning pathways.

Can you elaborate on your interpretation of this image in relation to the concept?

The idea of alternative ways means to me an alternative to a classroom setting where there's a structured presentation or a seminar or lecture or whatever, that you go there to learn, you write notes, you come home, you know a kind of traditional way of learning I guess.
unstructured for me meant that you went into a kind of classroom or you started a classroom online or you were working online in a workshop where it is completely unstructured so to speak - so you go there, you've got a point of conversation or topic or subject matter that you're wanting to explore and then you can just take a deep dive and just see where it goes and it might completely move away from your original subject or topic to something completely different - it just gives you the luxury of seeing where it goes.

Serendipitous learning, inquiry driven pedagogy, less instructional.
Implications for HE pedagogy - ambitious content & critical thinking

Setting the conditions for engagement at a pedagogical level - an engagement led approach to learning design.

Alternative ways of engaging

One thing that I wanted to say about it was the kind of openness of it - so if you've already got planned in your mind that you're going to go from A to B or whatever, you don't have to go straight there, you can diverge.

Representamen

Image Elements

What are the challenges of this in reality?

Object

Picture Object + Concept Object
(PO+CO)

I think the challenges are around like if everyone is off doing their own thing, its going to be difficult to bring back together and reconnect it with the original subject matter. I think that's a bit of a challenge when it comes to assessing things because there needs to be standardised assessments
It could be quite useful as a tool where there is heavy subject matter or tradidtionally a module that's been tough to get students to engage with. So you might start with a specific topic and then let people follow their own interests a bit.

16 Black dots
White background
Straight black lines connecting some of the dots

PO: A 4 x 4 grid with connections.
CO: Alternative learning pathways

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC7_IGA_3

What is the concept associated with this image?

Technology influencing Engagement

How did you choose this image as a representation of the concept?

This image came from Google when I was looking for clock faces. Time is extremely important to me because I don't have a lot of it.

Image description

It looks like a digital clock when you glance at it, but then you realise it's a sort of representation of a digital clock. When you looks closer, the numbers look like they're propped against a wall and there's a sort of door in between the 2 and the 3.

Can you elaborate on your interpretation of the image in relation to the concept?

I didn't realise the door thing was there when I chose it, but I think it is significant, I think it does mean something.
Personally for me I couldn't do my course without technology, even if you were classroom learning, you can't do your course without being able to access the internet, a computer, it's got to be there.
For me it's like if I need to I can pick up my phone and access the library and something when I'm getting a bus or whatever and primarily it really influences how I manage my time and engage in lots of ways. So when I think about it the door in this image is giving me access to learning, I couldn't engage without it.

Can you elaborate a little more on the relation between time, technology and engagement.

The actual time iin the image is significant because I usually do my studying at night and the fact that I can study at that time if I need to is just great. I don't look at 22:36 in the same way as I would have done before. Technology and time mean that you can do your own personal learning when you can, so engaging in a classroom or lecture is only part of it. Yeah, the university might not be aware of this about me but it doesn't bother me unless my actual engagement was part of the mark for the course and then it would really matter.

Time a scarce commodity, technology facilitates engagement in these conditions.

Technology = access
Flexibility of time.
Engagement is facilitated through digital networks/connectivity.
University has the infrastructure for this BUT ae engagement metrics still focussed on engagement at certain times/ in certain ways?

Engagement that is distributed over time/space is challenging to monitor from a University perspective.
What assumptions are being made?
How much does the university understand about patterns of engagment and how these reflect the way in which students negotiate this time in the context of the socio-material assemblage? Engagement is a student choice, but it is not a 'free' / unhindered choice.

Is policy made on the basis of assumption and the known capcity of technology? How much does it account for the individuality of student experiences?

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Technology

Representamen

Image Elements

Digital numbers. White on a dark grey background

Object

Picture Object + Concept Object
(PO+CO)

PO: An image of a digital clock
CO: Opportunities to engage are influenced and facilitated by technology.

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC7_IGA_4

What is the concept associated with this image?

Mental health can be a barrier to engagement

Image/concept closely aligned - proactively searched for an image to represent established ideas.

How did you choose these image as a representation of the concept?

This image came from the Mental Health Day website, it summed it all up for me quite simplistically with the idea of a good or bad head day.

Image description

Its a white silhouette of a head on an orange background. In the white headspace there are two hearts, one with a smiley face, the other one is flipped with an unhappy face.

Can you elaborate on your interpretation of the image in relation to the concept?

Well, the good or bad head day thing is about positive or negative, about black or white. This has been the biggest barrier for me through all my education from GCSE. Sometimes things just get in the way and you can't really stop them, but I understand them better now. I guess it's not really about being happy or sad which is what the hearts in the image seem to show, it's like there are feelings in your head that take up the space and then there's no space to engage with what you're supposed to be doing.

In the reality of that situation, how do you then find a way to engage?

Depends on what kind of support you get, that support can be the difference between dropping out or continuing, it's as cut and dry as that. Having those kinds of facitlites means an open door to access help, its incredibly important because if you drop out of university at like 21 it can have a massive knock on effect with your confidence and your ability to deal things and do or complete anything.
I think its really difficult , I think having mental health teams, I mean I just saw recently the uni sending an email around about accessing mental health help and an online form to get the ball rolling which I thought was really important in the context of the pandemic. I think there needs to be somekind of peer support because its one thing speaking to a counslleor or a tutor but peer support is incredibly important when it comes down to finding ways around the barriers.

Engagement is an emotional state/linked to emotional state.

Support can sustain engagement where mental health barriers exist.
Proactive support may support /sustain engagement and prevent crisis.
Where does this support comes from?
Proactive Peer support networks
Potentially avoiding any conflict of interest.
if the University is part of the problem - can it be the source of the solution?

What are the causes of mental health issues impacting on student engagement - do they arise from pressure related to academic expectations or the tensions these cause as other commitments have to be negotiated alongside being a student.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Barrier

Representamen

Image Elements

White silhouette, orange background, two heart signs

Object

Picture Object + Concept Object
(PO+CO)

PO: A silhouette of a head with two heart icons in the headspace.
CO: Mental health as a barrier to engagement

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The motivation to engage

How did you choose these image as a representation of the concept?

My first thoughts about this when I was thinking about motivation were those posters with one liners like 'hang in there' like motivational statements that are literally everywhere, I'm looking out of the window now and there's one on the car over there. And then I thought about it more personally and what brought me back to studying, and that was my daughter. Having a really personal reason to be motivated. So I took this photograph of my daughter.

Image description

It's a photograph of my daughters feet when she's sat in the pram. Taken from above seeing the ankles and small shoes in a pink pram. It's on a pavement.

Can you elaborate on your interpretation of the image in relation to the concept?

It's what motivates me to engage with learning.

Being a single parent to a small child, my daughter is my motivation, I'm fairly certain without her I wouldn't have returned to education. Personally for me, being a single parent my prospects workwise before weren't great and I want to be able to show my daughter that one way to give yourself options for myself and my daughter was to go back to studying and open a few more doors that way. Motivation for learning was to show resilience - she's a great motivator and I can teach her about resilience by me going back to university.
When I look at that image I think about how dependent she is on me, and that although she's my reason for going back to university I can't let the pressure of being a student get in the way of me being there for her. I've still got to be her mam.

In reality then this is a bit of a balancing act?

Totally, and I don't think some people understand. For example, when I said I was going back to university to do a Psych Masters a lot of people thought I couldn't do it and some though I shouldn't do it and that's kind of not great to have that kind of attitude from people in your life.
University understands on some level becuase theres a personal statement at application, but beyond that I don't know. I don't think the university know about how my daughter motivates me.

Image/ concept aligned at a very personal level. Image choice needed to reflect the strength of this rather than found image.

Motivation is strong/personal
Responsibility and commitment
A clear intention and rationale informing a choice to study.
Awareness of the challenges/threat to the very thing that provides the motivation.
A balancing act
An act of negotiation.
PH perspecitve - this is not just an individual choice - it is influenced and informed by the sense of responibility/ambition/response of others and the situations/contexts therein. Engagement with learning has to be factored in/negotiated/ compromise?

High stakes - strong motivation
Image represents concept and suggests dependency, a reason to see it through, determination.
Long term value translating to engagement with learning.

How far does University understand the diversity of motivating factors? How does this understanding get harnessed to sustain engagement?

Do they understand circumstances of background, lifestyles etc and how this influences engagement.

Guided interrogation of pictorial meaning, and alignment to the concept

RC7_IGA_5

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation

Representamen

Image Elements

Shoes, legs, feet, buggy seat, pavement, wheel, frame

Object

Picture Object + Concept Object
(PO+CO)

PO: A young child sitting in a buggy/pram
CO: A strong personal motivation behind engagement.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The opposite of engagement with learning

How did you choose these image as a representation of the concept?

I still think of this as being synonmymous with getting something wrong or failing. I was searching for the pen that my teachers used at high school when they were marking things wrong.

Image description

This THE red pen, cap off, fibre tip, it's ready to go

Can you elaborate on your interpretation of the image in relation to the concept?

Opposite for me meant not necessarily failure, but kind of getting things wrong by not engaging.
I think its kind of stuck with me because it was always used, I had a couple of teachers that would always tell people they would get their red pen out to mark things wrong.
Maybe its because as a student then I didn't engage really, well not in the way I was supposed to so I got the red pen a lot. So what I was doing was the opposite of engagement and got the red pen.
I guess this is assessment, feedback ,delivering a mark.
There isn't really a red pen on the MSc but you get your mark back and annotations to show you where you went wrong and how you can improve. It's a lot better, because the red pen didn't really give you any feedback it just told you that you'd got something wrong.

So, the opposite of engagement as you're seeing it, is something to avoid?

Yes I guess so because you want to make sure you're on the right track and passing the modules, you need to engage to make sure of that and to do that you need constructive criticism - the feedback you're getting here is giving you direction and supports learning. In reality, I guess if you look at the red pen that way it represents a good thing?

Concept of opposite aligned with negative engagement where learning is hindered through lack of engagement. Not making progress.
Prior experience in school is impacting on the conceptualisation of this.

Behaviours that don't equate to engagement are perceived as or lead to failure/not learning.

Implications here for formative feedback/assessment.

Conceptualisation of opposite seems to be swtiching here - getting the 'red pen' (feedback) improves engagement?

Guided interrogation of pictorial meaning, and alignment to the concept

RC7_IGA_6

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Opposite

Object
Picture Object + Concept Object
(PO+CO)

PO: A red fibretip penwith on a piece of paper.
CO: Getting it wrong is the outcome of not being engaged.

Representamen

Image Elements

red pen, white background

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The outcome of engagement is improved choices.

How did you choose these image as a representation of the concept?

This was on a film that I was watching with my daughter and this image came up and yeah it is a bit scary and stuff but it was just the rewards that were there. Its kind of a feast of choices.
I went online and found the still from the film. (Spirited Away)

Image description

Weird ghostly figure in a pool with a waterfall behind him, he got his arms outstretched with his face looking upwards but he's got no face, it's a mask with no eyes or mouth really. In front of him is a whole table full of food from a huge fish down to little dumplings and what looks like sushi baskets and a choice of meats, but yeah lots of choices of different plates.

Can you elaborate on your interpretation of the image in relation to the concept?

Its a very personal idea, linked to motivation - its about the choices you have if you engage and the doors that open up to you when you complete studying. Gives you so many more choices. I appreciate it a whole lot more in my situation.
Ultimately, its down to you when you engage it's a personal, individual choice but knowing about the choices I might have when I graduate -helps that. Like different options I guess - further ed - research roles, PhD, assistant psychologist, teaching - a lot of options, a feast.
It's really exciting I think and I can make choices that influence what happens in the 20 years. The ghostly figure is a bit unnerving when I think about it, but maybe that's what its like, you know it's all a bit scary isn't it and all you can do is make sure you do what you're supposed to do.

How do you keep informed about these choices and how does that relate to engagement?

University does keep you well updated about opportunities for graduates - by email - but its up to you if you engage with these things, so its not just about engagement with learning in terms of assignments, you need to learn about your options going forward.

Outcome/Choice linked to concept of motivation - all underpinning engagement.

'A feast of choices'

Outcome - a little daunting/unusual/ not known/familiar - BUT choice as an outcome of continued engagement is key.
The influence of other factors/responsibilities represented here as the context/reason for choices being important.
If the student was an individual in isolation choice might not be such a crucial consideration.
Making choices for others.

Implications for Graduate Futures/Careers teams to support engagement at Faculty/Subject levels.
Broader conceptualisation of 'learning'

Guided interrogation of pictorial meaning, and alignment to the concept

RC7_IGA_7

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Outcome

Representamen

Image Elements

Cartoon, ghostly figure, waterfall, trees, branches, table of food, meat, fish, vegetables, cakes, feast

Object

Picture Object + Concept Object (PO+CO)

PO: A ghostly figure enjoying a feast.
CO: Choice as the outcome of engagement

RC8_IGA_1

Interrogation Cues.
Guided reflection and elaboration of meaning

How does this image represent your idea of a study environment?

Well, its a bit aspirational in a way but its also a stereotypical image of where you might study if your were a student at University. It resembles my room in student accomodation, its where I am when I have work to do, you know assignments and things.

How did you find this image?

I knew I wanted to find an image of a student room with a desk so I searched for that on Google. I was going to take a photograph of my actual room and desk but I just thought the messiness of it might not sned the right message. That's what I mean about this being aspirational, it's tidy!

How do the things in the image relate to the reality of your experience?

Well, there's not much distraction here, so I think that helps. In terms of studying, I think its probably a regular set up, I guess the laptop, desk chair are the things that work together here. The laptop means I can access online resources and get to the library without moving. The books on the windowsill might be course books here but I don't have any. I have novels, stuff that I've read but I use online textbooks really.
The bike, I don't keep mine in my room, there's a lock up downstairs, but it looks like a good idea, not sure it would work for me.

Is the window significant?

I didn't really think about that when I was looking for an image, but when I think what I do when I'm working in my room, I do have a window and I do find myself staring outside. So there's a distraction there, I look at what's going on outside and watch the people and traffic and what the weather is doing. Then I remember I'm supposed to be getting on with stuff.

Studying as engagement with learning.
Physically isolated here - but connected by technology as described by other participants.
No social proximity though as described by P7

Engagement with learning (studying) at an individual level is can be messy (the reality of it is not tidy) - some assoication here with P2, P3 and P4

Minimal distraction
Connectedness, technology
Engagement with learning in this environment is not a collaborative exercise.

Question informed by dialogue with P2, P3, P7

Interrupted learning (Interruption Theory) supports engagement

What are the implications here?

Other participants allude to this.

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Study Environment

Representamen
Image Elements
Chair, Desk, Laptop, Plant, Books, Rug, Shoes, Lamp, calendar, blind, window, notepad, bicycle

Object
Picture Object + Concept Object (PO+CO)
PO: A room with a deskspace.
CO: A study space in student accomodation

RC8_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Alternative ways of enaging in learning

How did you choose this image as a representation of the concept?

I was thinking about how we work in different groups. I mean the different places and groups where we're learning so I searched for images with words like 'collaboration', group work, learning in groups and even networks. Then I was browsing and saw this one and it sort of fitted what I was thinking about.

Image description

Well, there's hundreds of people standing around in a big white space but they're not standing randomly. Some of them are in big circles, some in small circles, some are in lines connecting the circles and a few are standing around the edges, sort of on their own. You can't see the detail of any individual.

Can you elaborate on your interpretation of this image in relation to the concept?

In terms of the alternative idea I thought they were all part of something, but doing different things within that. I guess like a big company but I was thinking more that these were students in a university and that they're in different groups and things becasue they're different courses. You know, they're not all learning the same thing in the same way, at the same time.

Why do you think some circles are full of people and some are empty?

I think the crowded ones are full of students and the others are like groups of tutors, you know like all the tutors on a course before the students come in.

So the lines represent what in that scenario?

Well if those circles were like lecture theatres and rooms, the lies would be people moving between them and the people standing on their own are heading to one of those groups.

How far does this match the reality of your experience?

Pretty well, when I think about what its like on campus, sometimes its really busy and crowded and people are off to different rooms and things and that we go to different groups to learn different things.

Alternative spaces, & groups - engagement in learning is distributed across these spaces and might not look the same. Context dependent , non uniform.

Alternative learning scenarios. What level of choice ? are you locked in once you've chosen your course?

To what extent does individuality become obscured? What are the implications of this for learning and engagement?

Are there multi-disciplinary opportunities that would support engagement?
Does engagement wane where choice and variety becomes limited?

What about the in between spaces? The spaces where students transit through and move through? What potential here, are is everyone on their way to somewhere else? Social spaces, sticky campus?

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Alternative ways of engaging

Representamen
Image Elements

People (hundreds of them)
white background
Groups of people

Object
Picture Object + Concept Object
(PO+CO)

PO: An aerial view of lots of people grouped into circles and lines.
CO: Students working and collaborating in different ways annd places.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The way that technology facilitates engagement.

How did you choose these image as a representation of the concept?

I was trying to capture something I'd been part of recently so I was searching for technology and collaboration and came across this one which was sort of the closest ting I could find.

Image description

It's a view of a big deskspace with lots of people working on it. I like the view from above, the birdseye view because you can see how busy it is, there are five laptops, multiple devices, coffee, drinks, notepads and people engaged in an activity.

Can you elaborate on your interpretation of the image in relation to the concept?

Well, like I said, when I thought about technology and engagement, it made me think about a project task we'd done recently and how technology was part of that. In fact it wasn't part of it, like it wasn't part of the assessment but I think it would have been impossible to engage with it without technology, especially when there was a group of us. I mean it all gets a bit mad when there are people with different ideas and you're getting judged as a group, the tension rises you know. I think in that situation technology makes it easier for everyone to engage at the same time and collaborate effectively.

Are the different types of devices here significant in that context?

OK, I hadn't really thought about that but for a start, the headphones are fairly typical, everyone has them and when we're working on something in that group we're probably gonna plug in and listen to music so we can focus a bit.
Hard drives, because sometimes they're a bit easier than working out where things are on One Drive, well in my experience anyway. It's so frustrating navigating those things to point where sometimes I've just given up and gone and done something else.
Mobiles, well in that situation just for checking into social media and stuff I guess.
One thing I would say, and that's not about devices or anything, but the drinks and snacks are pretty crucial. I mean in the spaces we have like this and we're working, its social and everything, not having to leave that space to go to the refectory keeps us there, we just crack on with it. Its the vending machines in there, actually they're pretty much like technology I guess so it still fits here doesn't it?

Technology - Engagement in social, collaborative contexts enabled by this. Image is a representation of a familiar scenario - close link between reality and the conceptulisation of engagement.

Technology facilitates engagement and social interaction.
Connected to knowledge/networks applied to the task
Collaborative learning scenarios using technology can enhance engagement.
PH perspective - learning is not an individual, isolated phenomena.
Embedded graduate skills - engagement - outcome - success.

Technology - broad definition is important. The vending machines, the location, the product have an influence on engagement with learning. Sustaining the activity in situ - not breaking the collaborative action.
Music - motivation & focus - reported by other participants
Challenges around access/technology - when things get in the way of learning - technology leads to non-engagement.
What are the implications for HEIs.
Tech can be an enabler and a barrier.

Guided interrogation of pictorial meaning, and alignment to the concept

RC8_IGA_3

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Technology

Object

Representamen

Image Elements

Laptops, hands, cables, calculators, pens, headphones, cups, coffee pot, mobile phone, tablets, external hard drives, bottle of water, notebooks, table top

Picture Object + Concept Object
(PO+CO)

PO: A deskspace with people working on laptops.
CO: Technology enabled engagement

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

My work as a barrier to engagement with learning

How did you choose these image as a representation of the concept?

I have a part time job at a coffee chain in town and I was going to use an image taken from their website, but I though I'd better not, so I searched for a fairly random one. What I liked about this one though is the focus, I'm like that at work, its busy and you have to keep up.

Image description

Like I said, this is a busy coffee shop, there are customers in the background, someone else serving I think, and the main focus is on the person in the foreground making a latte or something, you can't really tell here. He's sort of still and concentrating and then its busy and noisy around him.

Can you elaborate on your interpretation of the image in relation to the concept?

This is a pretty good match to what it's like. I have to be fully engaged in my work when I'm at work, and I have to work. What that means is that there's no way I can engage in my uni work. There are obviously times when I have it in my head, and I'm sort of thinking about an assignment if I'm not serving anyone, but generally there's no space for that stuff. I mean it's quite a good break actually but I do get anxious when there's a deadline coming up and I've got literally no chance of getting on wth it because I'm making lattes all day!

So this is a real barrier during the time you're at work, does it continue to be a barrier when you're not at work?

Mmmm? I think I know what you're getting at here. I would have to say no, no it's not a barrier when I'm there because I feel ready to get on with my work, get to lectures and stuff . I suppose it makes me appreciate the time I have, I'm not going to waste it and get stressed about that when I'm in the shop on my next shift.

A close representation of reality.
Barrier - as having no opportunity to engage with learning due to other commitments.
Committed and engaged with work - University would see this as not being engaged.
A neccessary commitment.

The student experience - complex and just focussed on the 'student' experience. Work experience has to be negotiated as part of this.
Barrier relates to time and opportunity to engage with learning/study - impact may erode resilience and increase anxiety.
HEI response to this?
What awareness? Data/ assumptions?
Do HEIs have a tangible picture of part time work undertaken by students and how this might influence engagement opportunities/ patterns?

Guided interrogation of pictorial meaning, and alignment to the concept

RC8_IGA_4

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Barrier

Representamen

Image Elements

A person, cap,milk jug, cup, saucer, coffee machine, tables, people, glasses, bottles, lighting, tiled wall.

Object

Picture Object + Concept Object
(PO+CO)

PO: A barister making a drink in a busy coffee shop.
CO: Work commitments as a barrier to engagement.

RC8_IGA_5

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

The motivation to engage.

How did you choose these image as a representation of the concept?

Took me a while because I wasn't really sure what I was looking for. I didn't just want to choose one of those images that try and inspire you with people climbing mountains or anything becasue for me it doesn't feel as simple as that. So when I came across this, I was searching for 'motivation to learn', it was all the bits of it that sort of made sense to me.

Image description

A hanging mobile model with different coloured shapes suspended by lines that all make up and image of a head.

Can you elaborate on your interpretation of the image in relation to the concept?

Motivation comes from different things. Sometimes just one of those things gets you going and and sometimes they all need to be there.
When I thought about this, I thought about the reason why I chose the course, I loved Sociology as a subject so I guess that was motivation. I didn't really know what I wanted to do for a job, I wasn't thinking that far ahead at that point, but it was Sociology that got me here.
Its different for assignments and the day to day things though, yes its still sociology but, some tutors motivate me more than others, I find some tasks more interesting than others, and then there's the other people on the course, I mean not all of them, I mean the four or five other students that I work with and I guess have a bit more of a relationship with, being able to talk things through with them really helps.

Image choice is aligned to the concept but a particular interpretation of that.
Motivation to Learn = engagement
Motivation - fragmented - not wholly located within the individual.

Motivation - distributed/fragmented
Other actors have an impact
Tasks/Tutors/Other students - the interrelationship creates the medium to sustain motivation.

Subject interest as a keen motivator at transition to HE but this needs to be nurtured through pedagogy, relationships and opportunities.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation

Representamen

Image Elements

different shapes, lines, curves

Object

Picture Object + Concept Object
(PO+CO)

PO: A hanging model of a head made up of many pieces
CO: Motivation comes from different sources.

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC8_IGA_6

What is the concept associated with this image?

The opposite to engagement

Opposite = not engaging in learning. Choosing to do something unrelated.

Image choice - a purposeful and informed choice aligned to the concept.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

How did you choose these image as a representation of the concept?

This was easy because I know this is something I do all too easily, I searched online for images of streaming services. This seemed to fit the bill.

Image description

It's like a shelf of DVDs or a wall of multiple screens showing lots of different programmes.

Can you elaborate on your interpretation of the image in relation to the concept?

This image represents the whole binge watching experience. I mean I know there's always been TV and stuff, but this is so easy to get into because you can watch stuff on your laptop, your phone, PC and your TV so you kind of don't have an excuse for not watching stuff. Even when you know time is precious, and maybe you should be working on an assignment late, the temptation to catch up on the latest eposide or two is overwhelming. I've seen people sitting back in their chairs in the quiet area in the library, with headphones in watching whole episodes of things like they were on a train or something. I think given the fact they're in the library and supposed to be working, that's definitley the opposite of engagement isn't it?

Opposite = the opportunity to engage in something else - not in learning - is omnipresent.
technology has significant agency here to disrupt patterns of engagement.
Individual choices are made - are there strategies in place to support students understanding of how to manage this disruptive agency?
How is 'binge watching' portrayed in the wider student population? Is it normalised as part of the lifestyle without fully appreciating the potential impact?

Opposite

Representamen

Image Elements

images of people, text, titles, cartoons, different sized screens

Object

Picture Object + Concept Object
(PO+CO)

PO: A streaming service showing lots of titles.
CO: Binge watching is the opposite of engagement

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC8_IGA_7

What is the concept associated with this image?

The outcome of engaging with learning.

How did you choose these image as a representation of the concept?

I actually searched for 'MI5 Graduate Careers', sounds a bit odd saying that out loud, but I was looking generally at graduate careers in the Civil Service. I did a general search on Google and then filtered just for images.

Image description

A view of the Houses of Parliament in London. Like a photo taken from the south bank looking over the Thames and along the bridge. Its kind of dark and stormy looking, its sort of sepia coloured, there's no people or cars or buses or anything, not sure why but it feels a bit forboding.

Can you elaborate on your interpretation of the image in relation to the concept?

Well, like I said before, I didn't really have any career goals before coming to university, I chose sociology because I find it really interesting. It's only since I've been at uni that I've become aware of the sort of opportunities out there. I mean when I tell people that I'm doing sociology, everyone thinks you want to be a social worker which makes me laugh really. I know I want a job out of the north east and I'd like a challenge and the Civil Service has loads of opportunities I think for graduates. I think its difficult to get through some of their selection stages but I'd love to give it a go. So, going back to the image, its in London obviously, I know that the only way I'll have a chance is by doing well, in terms of engaging with learning then that's what I need to do and then this might be the outcome.
It's forboding, the colours and the mood because it's all a bit uncertain.

Outcome - career opportunity as the long term outcome of engaging with learning.

A targeted image search informed by prior knowledge.

The mood of the image is significant - an outcome that is uncertain, forboding, lonely?

Sense of moving away, beyond being a student, away from the support and friendship?

conceptualisation of outcome is based on ideas around graduate employment and how the subject/discipline might provide a gateway to this opportunity.

Uncertainty because the outcome (the career) is also dependent on the level of engagement as a student to ensure a successfull academic outcome.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Outcome

Object
Picture Object + Concept Object
(PO+CO)

Representamen

Image Elements

Building, cityscape, river, bridge, tower, sky, clouds.

PO: A view of the Houses of Parliament, Westminster Bridge and the River Thames.
CO: The outcome of engagement with learning is a graduate career.

Interrogation Cues.
Guided reflection and elaboration of meaning

How does this image represent your idea of a study environment?

I chose this because its calm. A study environment that is calm helps me to engage in learning, gives me space to think.

How did you find this image?

I was searching for images of sunrises, of calm sunrises and I found this after a bit of browsing. It kind of matched what I was thinking about when I thought about somewhere that works for me when I'm studying.

How do the things in the image relate to the reality of your experience?

It's more of a feeling I think. I can't actually see the sea from where I live or where I study. I don't often get to see a sunrise so its certainly something I imagine rather than somethiing that actually happens.
I like to study in a place that's quiet and where I don't get distracted so when I'm writing an assignment I tend to use the quiet spaces in the library.

If this was a sunset, would that be significant in terms of when you study?

I don't know really. I do stay in the library later sometimes. It does get quieter later and in the winter its just dark outside and you can't really see much out of the window. It just feels calm and quiet inside. There are other students there, but everyone is just doing their own thing. If I went home I wouldn't get that sort of space or quiet because there are five us sharing one house and we're all doing different things, I mean courses.

Engagement with learning associated with quiet study.
The environment needs to facilitate this.

A clear sense of what the concept represented informed the image search rather than an idea that was more closely assoicated with the reality.

Minimal distraction
Diverse spaces - library - quiet space.
Engagement with learning in this environment is not a collaborative exercise.

Quiet study environment - Library as a sanctuary
Influenced by the reality (sociomateriality) of life as a student.

RC9_IGA_1

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation (PI + CI)

Study Environment

Representamen

Image Elements

A sunrise or a sunset, clouds, sea, ripples

Object

Picture Object + Concept Object (PO+CO)

PO: A sunrise or sunset
CO: A calm, quiet environment to study

RC9_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Alternative engagement in learning

How did you choose this image as a representation of the concept?

This is completely different to the image I chose for the 'study environment' idea. This is noisy, crowded but everyone is engaged in learning together. Its a lot like the learning zone in the library. When I was browsing for learning zones, I sort of knew what I was looking for and then chose this one.

Image description

Lots of students grouped around tables, most with laptops. They're in a big room with divided off sections. It looks busy and social but definitely a learning area. They might all be doing the same thing but then again they might not, I don't think it matters.

Can you elaborate on your interpretation of this image in relation to the concept?

I mean its an alternative to the kind of environment that I first thought about when I thought about a place that was conducive to learning personally. But, its the sort of place we have at university, the sort of place you might go to work on shared projects or share ideas or complete tasks you've been given in a lecture.

Would you say this is a close representation of the reality of your experience in that respect?

Yes, its like this quite often, but I wouldn't try to work on an an assignment in a place like this, I'd find a quiet calm place. I guess alternative here means different purposes.

How do people interact in this space?

They share ideas and talk, especially if they're working on a group task.

In this image, does the person standing up represent a tutor?

No, not for me, I don't think this is a place that would be good for teaching. He's probably a student.
This might be after a lecture or before a lecture I guess, more independent maybe.

Learning (and therefore engagement with it) is conceptualised in different ways, occur in different spaces.

active (directed) participation vs independent study

Space facilitates this kind of engagement. A different space for a different purpose -
How are learning environments/resources aligned with purpose?
How is this reflected in HE pedagogy, courses
What implications here for measuring/monitoring engagement?

How do we account for the differences in collaborative engagement vs independent engagement?

How is this kind of engagement with learning facilitated, encouraged, modelled?
What assumptions are made regarding the experience of students and their capacity to engage in this kind of activity?
Is it valued by the institution or is value attributed only to summative module assessments?

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Alternative ways of engaging

Representamen

Image Elements

People, tables, laptops, chairs, rucksacks, media screens, room dividers, ceiling lights, wall lights

Object

Picture Object + Concept Object
(PO+CO)

PO: Groups of young people sat around tables
CO: Students working in groups, engaged in learning activities in a shared space.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

How technology influences my engagement with learning

How did you choose these image as a representation of the concept?

Rather than using technology as a search term I used 'circuit board'. The hard part of all of that is then choosing one, I could have chosen any, but decided eventually on this one because of the detail.

Image description

Close up of a circuit board with microchips, and connections. There's other stuff on there, capacitors maybe and fixings where the board is screwed to something. It's all sort of dark, green, black, silver you know, the sort of colours of technology.

Can you elaborate on your interpretation of the image in relation to the concept?

Its hard to imagine where technology doesn't impact. I chose this rather than an image of a laptop because it kind of made me think of how technology links everything together meaning I can engage and access what I need from anywhere. This is about the things that can't be seen but that make it all work and you get this stuff in literally everything but more than that, its inside these chips that my work is saved and where I log onto Blackboard and where I watch recorded lectures. When you start thinking about it at that level and think about technology it hard to think about how it used to be, I guess it was more about actual libraries and taking books out.
The other thing I thought about after I posted this image in Padlet was that it looks a little bit like buildings, you know, the chips and things look building, well sort of, it reminded me of a campus map where each one of those might be a building with students and tutors inside and the other bits, the spaces between the building.

Technology - as a foundation for engagement.
Connecting an supporting infrastructure

Image search targeted at this level of detail rather than at device level - an understanding of the agency of digital networks, connectivity and the digital realm.

A deep appreciation of the power of technology.
Not all learning, not all engagement can be seen or is explicit, but it is contained within as data - a micro digital reality - unseen but with powerful agency to impact and influence behaviour of intstitutions and individuals.
PH perspective the individual does not have a free choice here - they have to engage in this manner. Engagement with learning could be distilled to level of data but the interesection of technology and data happens in very fluid, human, emotional level - our understanding needs to be focussed at this level.

The campus analogy illustrates this concept well - insightful analysis.

Guided interrogation of pictorial meaning, and alignment to the concept

RC9_IGA_3

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Technology

Representamen

Image Elements

microchips, circuit board, solder, connectors, connections

Object

Picture Object + Concept Object
(PO+CO)

PO: A close up of a circuit board.
CO: Technology making engagement possible.

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC9_IGA_4

What is the concept associated with this image?

A barrier to engagement

How did you choose these image as a representation of the concept?

I think I was searching for expectations, or centre of attention, something like that. It was a hard one to try and find the image that fitted exactly with what I was thinking.

Image description

This is a man who has come to the attention of others, its like they're all pointing at him and he's feeling uncomfortable. He's standing against a white wall, wearing a suit and nine people are pointing their fingers at him, he's surrounded by them.

Can you elaborate on your interpretation of the image in relation to the concept?

When I chose this image I was thinking about it representing me and trying to fit everything together and deal with other demands on me, like other peoples expectations.
Sometimes I feel under pressure and like there isn't anywhere to turn and when I get into that kind of thinking I switch off, its like putting the barrier down to keep things at arms length and that includes uni work.
I think that's why he's against the wall here, there's no where to go.

In reality, who are 'the people'?

Well, the tutors first off, and the expectations about how to work and which sessions to go to, how to write assignments, I guess the regular expectations of being a students but then added onto that, parents. Not wanting to let them down, their expectations of me, they're investing in me I know that. Then there's work, I work in retail part time, so the expectation there is different and it feels like they think uni is not as important as I do. Sometimes I think they don't understand that its not easy for me to put in another shift.

Barriers - something that is working against engagement with learning.

Image choice indicates competing priorities/expectations can be a barrier and result in disengagement.

Pressure to perform/succeed can be counterproductive.
High expectations where they conflict and are unreasonable impact negatively on engagement and learning.
Implications for HEIs to recognise triggers, to fully understand the nature of competing demands and where expectations related to being a student impact and need to be understood in a broader context. Data driven approaches unlikely to capture this.
Multiplicity
A complex negotiation of roles, relationships and responsibilities.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Barrier

Representamen

Image Elements

Man, suit, tie, hands, fingers arms, white background.

Object

Picture Object + Concept Object
(PO+CO)

PO: A man being singled out, being pointed at.
CO: Expectations of others can be a barrier to engagement.

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

RC9_IGA_5

What is the concept associated with this image?

What motivates me to engage with learning.

How did you choose these image as a representation of the concept?

I was thinking about all the images out there with motivational characters or sayings on them, I just searched for motivation, scrolled through loads and chose this one that caught my eye.

Image description

It's an image of Buzz Lightyear, a disney character, I think it's quite recognisable to most people. It looks like he's looking at you and he's about to run or jump or something.

Can you elaborate on your interpretation of the image in relation to the concept?

So, I was thinking about the 'buzz', that feeling you get about something when you've done well, got good feedback on your work, you know, getting it right. I remember this character in the image from when I was growing up and he's a character that's always motivated and positive, so I though that sort of fitted with what i was thinking here.

Can we explore the 'buzz' idea a little more and how it supports your motivation to engage with learning?

Yes, I mean it's not like I'm this bouncy, loud annoying student that's overly positive about everything, but for example when you're in a lecture or something and you ask a question and the tutor actually listens and builds a sort of discussion around what you've said, thats a situation where I feel we're all engaged in the same thing and it makes me feel good that I've contributed to how that went.
The other thing I sort of mentioned before was getting feedback on a piece of work, that gives you a buzz, like when you see the grade for the first time, as long as its a good one obviously. But then if you read you work and the comments on it and they're actually making supportive comments and being encouraging rather than telling you that you've made this mistake and that mistake and stuff. I don't really find that motivating in fact I got really annoyed with some of the feedback on my last assignment, it was like they'd made their mind up before reading and just higlighted everything that made it that way. I did email the tutor and felt a bit better after we went through it but there was definitely no buzz there.

Image choice is informed by ideas of a motivational character. A positive outlook, feeling good.
A recognisable character that is associated with the concept here.
This provides the motivation to engage with learning.

About to run / jump - analogy for learning - throwing yourself into something.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation

'Buzz' - feeling good, positive feedback - motivation to engage
two strands here -
Teaching and learning interaction in taught sessions - HE pedagogy implications
The other is assessment and feedback - supporting scholarly work of students - build in formative commentary, engage with the ideas being put forward by the student, don't approach from a purely summative perspective.

Creating the buzz - how do HEIs do this - how are they proactive in building the buzz and generating the conditions where engagement is a concept or a state that isn't simply embedded within individual students but in the assemblage of things that make make up the university?

Representamen

Image Elements

cartoon character, space suit,

Object

Picture Object + Concept Object
(PO+CO)

PO: Buzz Lightyear character in action
CO: The 'buzz' feeling good, the motivation to engage.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The opposite of engagement with learning

How did you choose these image as a representation of the concept?

I specifically searched for 'boring lectures'. You'd be surprised at how many images there are, it was quite difficult to choose in the end, I just sort of started looking at them all!

Image description

This is a small group of students sitting in a big lecture theatre, a bit like the ones we have at uni. All of them but one look really bored and one of them has her head in her hands and is probably asleep and waiting for it to be over. Some of them have got books, but I don't think anyone is actually reading. The person that doesn't look bored, you can't tell what she's doing but it looks like she's writing, she might not be listening though.

Can you elaborate on your interpretation of the image in relation to the concept?

I thought this was a good example of the opposite of engagement with learning because I've been in these kinds of situations and I really don't think I learnt anything because I completely switched off. Sometimes when others start switching off, I do too, you can sort of feel it as more people around are shuffling and playing with pens and cups and scribbling, checking social media etc. It's a bit contagious. Lectures are sometimes a bit like this where its the opposite of being engaged, in fact I think there might be more students that should be in this image but they've decided not to turn up.

So in this scenario, in this image, what do you imagine the tutor to be doing?

Well, in my experience they're talking through a Powerpoint with loads of slides. It's difficult to keep engaged when that's going on for an hour.

In lectures that are the opposite of this, what is happening?

There's more interaction and discussion about certain points.
A whole lecture of discussion or questions doesn't work, but a balance keeps it interesting cos sometimes I really want to ask a question and then don't feel I should interupt, but if they stop, or use a mentimeter quiz or something it generates a lot of discussion especially when you can see the tutor actually is engaged with that.

Image choice informed by experience. Concept of opposite is associated with non engagement, the opposite of being engaged in learning in an environment that is designed for learning.

Students engaged in alternative activities, pseudo engagement. Attendance monitoring would pick this up as 'engagement' because they are physically present.

Low attendance - as an indication of an engagement issue - but not just with the non attendees - what are the root casues of that - how can they be addressed?

Engagement - creating the conditions for engagement is more than the physical environment, physical presence, technology infrastructure
The conditions for engagement reside crucially in the relationships between people, between students and staff, between students, and all this in relation to the environment.
HE pedagogy
Confiidence, subject knowledge,
Staff engagement - the flip side of student engagement

Guided interrogation of pictorial meaning, and alignment to the concept

RC9_IGA_6

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Opposite

Representamen

Image Elements

lecture hall seating, rows, people, books, a laptop, an apple, glasses, coffee cup

Object

Picture Object + Concept Object
(PO+CO)

PO: A small group of people sitting at desks
CO: Students in a lecture theatre not engaged in learning.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The outcome is a destination with opportunity

How did you choose these image as a representation of the concept?

The thought of finishing uni and being at the beginning of a journey, or maybe uni being part of that journey, basically I searched for roads and destinations. I chose this because i didn't want to have any people or cars in it, just going off into the distance you know.

Image description

A long straight grey road with yellow stripes down the middle. It's going off into the distance and you can't see the end of it. It's heading towards mountains, open sky and it kind of looks a bit like one of those long roads you see in images of America.

Can you elaborate on your interpretation of the image in relation to the concept?

I liked the way this road goes into the distance but you don't know the destination because I don't really know the outcome. I mean I know if we're talking about engagement then the outome of doing that will hopefully be that I get a degree, but then I was thinking that isn't the end of it, it'll probably lead to somewhere I'm not expecting ultimately, but I don't think that's a bad thing. With a degree in psychology I think there's all sorts of possible outcomes and I haven't really decide on any one particular one at the moment, I quite like the idea of doing a Masters, I don't know. Maybe there are different roads depending on what you choose?

That is obviously a long term view of outcome as a concept, have you thought about the more immediate outcomes?

I think that's what I was meaning when I was talking about uni being part of the journey. I mean next month, the outcome of me engaging with learning will hopefully be that I get a decent grade for the module assessment I submitted the other week. I suppose there's quite a few of those things as you go along, like little outcomes that build up to bigger ones along the way.

Image choce - concept of outcome - destination - engagement means that you get to go somewhere.

A solitary idea - embarking, going forward in to the unknown, but a positive idea.

Aligns with other interpretations from other participants.

Outcome = choice, options.
Understanding the options available is perhaps important and would support engagement but having to choose one is not so important as having the choice in the first place.

Aligns with the notion of Student Journey but extends to the notions of career path and career trajectory
Transition from HE to work
University experience being seen as part of the journey, not something that is disconnected from the ultimate outcome.

Short term outcomes - assessment points, formative feedback, progression, career readiness.

Guided interrogation of pictorial meaning, and alignment to the concept

RC9_IGA_7

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Outcome

Representamen

Image Elements

road surface, yellow lines, mountains, trees, sky, cloud

Object

Picture Object + Concept Object
(PO+CO)

PO: A straight road going off into the distance
CO: The outcome is a road leading to opportunities

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Interrogation Cues.
Guided reflection and elaboration of meaning

How does this image represent your idea of a study environment?

As I am a distance learner, this picture of a 'home office' reflects my study environment

How did you find this image?

I've chosen the images as representations of me or my experience rather than actual photos - so they're sort of interpretations of my reality.
I Googled study environment to get a broad range of images and picked the one that represented my thinking the best.

How do the things in the image relate to the reality of your experience?

My desk looks a bit like this in terms of it being organised chaos and it looked like a home office rather than it being a classroom or people around. That image represents my learning environment. If I'm not looking at the screen, then I am a pen and paper sort of person and I've got all of that in one sort of relatively efficient place. I can engage as a distance learner perfectly from here.

There's not a lot of structure in terms of where the things are and I'm a bit like that, but I just need them there. When you're clicking on windows and tabs and searching for references and stuff, its difficult to have all your pens in a straight row and all that.

Another thing that made this image jump out for me was the technology of course which you need but also because there is pen and paper and theres highlighters. I mean I know at the start of the course they said you shouldn't need to make notes or print stuff, in theory you probably don't but I'm still the sort of person who really does need to get a few bullet points down

I use the hard drive because I'm a bit cautious and anxious and I have an assignment due in soon and the thought of losing it and trying to start from scratch is a nightmare and I would have a meltdown.

The plant is a sort of natural decorational thing here, the cup of coffee represents the long hours or losing the will to live! I try and maintain a good routine in terms of when I study, and carve out a bit of time, so I can be here for a stretch. Yeah, sometimes pretty late too.

Mode of Study - influences engagement - highly situated

Image choice informed by the concept
An interpretation of reality.

Messiness/ Chaos - Spectrum of organisation
Efficient
Connected but physically isolated.
These things have agency/purpose

Technology - connected, reliance, anxiety
Multiplicity of study approaches
Established practices represented here as well as technology facilitated ones.
Engagement with learning sustained as a result

A highly situated study environment where engagement with learning is a negotiated state. (Sociomaterial perspectives)

RC10_IGA_1

Guided interrogation of pictorial meaning, and alignment to the concept

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Study Environment

Representamen
Image Elements

Screen, External hard drive, cup, plant, notebook, specs, highlighters, usb drive, phone, keyboard, mouse, CD, desk

Object
Picture Object + Concept Object
(PO+CO)

PO: A desk with things on it
CO: A desktop where I study

RC10_IGA_2

Interrogation Cues.
Guided reflection and elaboration of meaning

Guided interrogation of pictorial meaning, and alignment to the concept

What is the concept associated with this image?

An alternative way of engaging as a student.

How did you choose this image as a representation of the concept?

I was searching for 'distance learning' and this came up quite quickly.
On my course we've got people from all over the world so it fitted really well in terms of it being an alternative to the regular full-time undergraduate view of things.

Alternative modes of study
of learning
influences how engagement is manifested.
Clear expectations

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Image description

The image represents all the students on my course and how we're all connected in that way. We're all doing the same thing but we're not in the same place. I don't actually know what most of them look like.

Do expectations of this alternative match the reality of the experience?

Communication, cohort cohesion, belonging

Engagement as a solitary, distant endeavour

Can you elaborate on your interpretation of this image in relation to the concept?

Engagement policy and metrics focussed on standard UG experience?

Where does 'belonging' fit into this scenario?

Is this an isolating experience?

The whole thing I'm doing is an alternative.
Outside the standard experience of being a student where you'd be in a lecture theatre or classroom and if you had a problem with Blackboard or anything you could just actually speak to a person. This is the alternative to that, its what I've signed up for

Alternative ways of engaging

I was thinking about my UG study and how different this is.
I mean its swings and roundabouts, this is more suitable for me right now but then I sort of think well you know if I'd have been able to just go and see the person leading the module last week when I was really worrying about this essay, like a standard student would, then that would have really helped. Could have resolved it quicker.
As a distance learning student you can still ask, but you wonder if you've worded the question right, are you being clear and will you get a response in time.

Prior experience provides important context for this experience.

Communication is key to continued engagement in this scenario.

Anxiety in distance learners?

Representamen

Image Elements

Earth image
icons/portraits/headshots/cartoons/characters
dotted lines
blue background

Object

Picture Object + Concept Object
(PO+CO)

PO: 6 character icons surrounding an image of the earth
CO: students enrolled on an online distance learning course.

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Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Technology supporting engagement

How did you choose these image as a representation of the concept?

The reason I chose this is that although I imagine all the academics and most of the students are in the actual university, quite a lot of the students, more than I thought on my course are from around the world. There's one person from NZ, one person from the Middle East, I just thought it's tech that's actually connecting us to the university, to the course and each other. So I searched for things like connected learning and technology learning to get this image.

Image description

This is a representation of the world with people, I'm guessing students, represented as icons that are in orbit around the world and connected by networks, I guess the hand in the foreground is me connecting and engaging with the course and other people on the course.

Can you elaborate on your interpretation of the image in relation to the concept?

This shows how technology enables us to connect, via different means (Phone, e-mail, social media) with ease, to colleagues around the world. Tech is the chain that connects me to the whole student experience because without it this course wouldn't exist for me.
I log onto BB usually 2 or 3 times a week because what I try to get is each weeks reading and stuff at the start of the week, download it so I've got it and then sort of crack on then I just sort of log back if I've got a question or to check email occasionally.
I mean I don't interact with people on here all the time, in theory it might make it a richer experience for us but in practice it sort of depends because as much as I do interact with the other students on message boards etc, where they're from doesn't really matter, its always interesting to hear but it doesn't affect my learning.

As a distance learner, I can see how technology is crucial to your experience as a student, is there a downside to technology in this context?

Well, the reason I mentioned Social Media in my image comment was that some people mention WhatsApp etc to connect and discuss assignments and other bits of work and don't get me wrong that nice if you're into that sort of thing. But I'm cautious about doing that, not because I don't want to get to know people or that I'm anti social, I'm more worried about when it comes to discussion of essays or whatever, about boundaries you know, so my sort of interaction with people is basically by BB and you're out in the open as it were.
But there's a lot tech that works really well like Teams, Panopto etc, email and my phone, you know to connect to my Student Success Advisor.
We usually touch base twice a module - it might be having a chat before deadlines, usually because I'm one of them when it comes to essays that wants to talk out loud about what I've done and try to convince myself that its in the right stratosphere and in fairness he's a good sport with that.

Image choice - informed by programme experience - connected over a distance to University and other students.
Networked community
Technology assoicated with connectedness and learning (Siemans - Connectivism Theory)

Technology = access and opportunity communication and connectedness all underpin engagement in this context.
Technology interfaces at an individual level to fit in with other priorities - choices being made about when to engage - tech facilitates this

Sociomaterialistic perspective - the agency of networks, techs and connections Interface as a tangible point of engagement.

Interaction and engagement should not be assumed becasue tech is present - needs to be facilitated, supported and a feature of a digital pedagogy.

Relationships mediated by technology can lead to disengagement, hiding is easy - engagement should be nurtured - relationships at the core of this, safety, security, openness.

Support over long distance successfully enabled by technology underpins engagement in this scenario.

Guided interrogation of pictorial meaning, and alignment to the concept

RC10_IGA_3

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Technology

Representamen

Image Elements

World, Hand, Mobile Phone, icons, selfie shots, network connections.

Object

Picture Object + Concept Object
(PO+CO)

PO: A representation of the earth surrounded by icons of people, a hand in the foreground holding a mobile phone.
CO: Technology making it possible to connect and engage with people around the world.

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Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

Barriers to engagement with learning

How did you choose these image as a representation of the concept?

This was a barrier showing two sides which is important for what I was thinking. I actually searched for barriers to communication when I found this image.

Image description

A representation of a brick wall, a barrier with two groups of people in silhouettes. The ones on the left are trying to get over to the right and they're using a sort of human cannon to get over the barrier.

Can you elaborate on your interpretation of the image in relation to the concept?

So this wall shows a barrier to engagement that can happen for all sorts of reasons. Sometimes a lack of communication can be a barrier. When I look at this, I think that sometimes the issue is on my side and sometimes its something on the other side.

So, the other side, well there was a module that someone seemed to leading for the first time, you wanted clarification on things, but despite my best efforts I didn't get very far and that was really frustrating, you know it became a barrier.
On my side of things, it's what I put there. Like I'm a worrier and I know generally I have a tendency to put problems in place that weren't there in the first place even though I recognise that in others.
What I mean is that sometimes I'm worried I'm asking a stupid question, I'll still ask it but I worry about what they think. So for example we've been using SPSS and I'm even worried about pressing the wrong button, asking it to do the wrong thing and ruining my whole data or whatever. So on this module I've asked questions to clarify how to do things without asking for the answer and I worry about that.

An aspect of the image you picked up on was getting over the barrier. How does that work in reality?

I'm good at organising myself, my time so I organise my studies to manage all of this. I don't try and take one big leap but I do things little and often. It does create conflict for me though, you know going back to that idea of a barrier, you get round one and then I put another there. I'm supposed to be going out and meeting friends tonight that I haven't seen since before lockdown and I'm worrying about this assignment which I've actually nearly done and I'm thinking I should just stay in and finish it. So I guess its where the everyday stuff gets in the way and you have get over it otherwise you're stuck aren't you?

Barrier = communication
Limits engagement where it is not working.
Strategies for getting over/around barriers
Engagement with learning is not straightfoward, can't be assumed, what are potential barriers?
How can students be supported as they adopt strategies to negotiate them?

Staff engagement/communication strongly associated with engagement.
Institutional barriers
Personal Barriers

Question anxiety
Quality of feedback and support, response to queries underpin engagement

NSS responses reflect this kind issue

Social reality barriers -
Engagement is a highly negotiated state influenced by the complex nature of individual day to day experience.
Engagement does not occur on a blank canvas
Everydayness
What things are to be negotiated?

How can HEIs communicate to students that they understand this?

Interruption strategies = sustaining engagement over the long term?

Guided interrogation of pictorial meaning, and alignment to the concept

RC10_IGA_4

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Barrier

Representamen

Image Elements

Wall, white bricks, a human cannon, silhoette figures, blue background, white trajectory

Object

Picture Object + Concept Object
(PO+CO)

PO: A represenation of a brick wall dividing two groups of people
CO: Overcoming barriers to engagement with learning

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The motivation to engage

How did you choose these image as a representation of the concept?

I was thinking about my own motivation being about proving it to myself so I was searching for personal motivation ideas. I guess this one sort of made sense at the time.

Image description

A pair of hands. The left hand is holding a flashcard or piece of paper, the right hand is holding a pair of scissors. The word on the paper is "'I can't'" but the right hand is cutting the end bit off so it'll look like 'I can'.

Can you elaborate on your interpretation of the image in relation to the concept?

Well this is all about me proving to myself that i can do this and all the doubts I have about it along the way. Like I said, I'm a bit of a worrier. I'm a third of the way through and the grades I've got so far are better than I thought at first and that keeps the motivation there. I'm still surprised though when I get my grades, sort of hoping for the best but expecting the worst. So it's always on that balance of I can or I can't.

Does this relate to any long term goals that you have?

Well I guess the long term idea is less about the Can I can't I, and more about the kind of long term career goals that I have which is more about the things I have for the 'Outcome' concept.

Guided interrogation of pictorial meaning, and alignment to the concept

RC10_IGA_5

Motivation to engage - intrinsic drive to engage, to prove to self, to succeed.

A precarious/binary state where the positve is not assured and the negative may impact on engagement.

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Motivation

Motivation

Implicit drive - explicit outcomes - grades/feedback
Explicit outcomes impact directly on implicit motivation

Motivation over the longer term assoicated with outcome/career ambition.

Representamen

Image Elements

Pair of hands, scissors, flashcard, wooden flooring

Object

Picture Object + Concept Object
(PO+CO)

PO: Someone cutting up a piece of paper with I can't written on it.
CO: The motivation is to prove that I can do this.

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The opposite to engagement

How did you choose this image as a representation of the concept?

I was looking at communication again but now I realise this is all a mixed up with the ideas I had around barriers. I wanted an image showing a lack of communication or communication difficulties.

Image description

Two people trying to communicate over a gap in a cliff, like a divide or a ravine or something. It means they can't talk to each other without using a megaphone. The background is blue sky, sun and clouds, maybe that's supposed to be calming?

Can you elaborate on your interpretation of the image in relation to the concept?

I thought this image shows poor communication or too much distance/volume.The exact opposite of what you may expect engagement to look like. It is a lot like a barrier and I suppose that's got something to do with me being a distance learner and communication being absolutely the most important thing for me.
Maybe here there's the whole things of getting yourself heard and thinking about the way in which you communicate because if you don't get that right then engagement doesn't work and I guess the opposite of that is not being engaged.

This relates to technology as well because sometimes in the discussion boards when people are asking questions and I look at the things they're saying, I mean I'm a natural worrier and I look at those comments and I worry that I'm not in the same ball park, so just for my own sanity I don't scroll through the responses - I think to myself I'm not engaging in that. I mean some of the people on there are like you know, use really unnecessary words and language, I mean to sort of impress, and I have to Google some of the stuff they say and it could be said in such a simple way.

Opposite - linked to non engagement and associated with communication barriers.

Recognition here that there is an interrelationship between engagement concepts.

Images for RC10 are mostly representations / rather than photographic images.

Barriers created by Technology and poor communication lead to disengagement , non engagement - reduced engagement.
May lead to increased anxiety / disaffection

Student voice - making yourself heard - but also amongst student body - what protocols exist - how do these relate to engagement?

Guided interrogation of pictorial meaning, and alignment to the concept

RC10_IGA_6

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Opposite

Representamen

Image Elements

A man, A woman, sun, sky, clouds, cliff, a gap, megaphones

Object

Picture Object + Concept Object
(PO+CO)

PO: Two people shouting across a divide.
CO: Poor communication, the opposite of what engagement looks like

Interrogation Cues.
Guided reflection and elaboration of meaning

What is the concept associated with this image?

The outcome of engagement

How did you choose this image as a representation of the concept?

I wanted to choose something that signified a perfect outcome, so I though about this and searched for hitting the bullseye.

Image description

A red and white target board with a dart that has landed in the centre. The background and the rest of the image is plain.

Can you elaborate on your interpretation of the image in relation to the concept?

Well, I guess ideally I'd always like to hit the bulls eye, that'd be a good outcome wouldn't it? I mean with assignments and everything. It's like I said before throwing a dart and hoping for the best but expecting the worst.

Is there a relationship here between the image and the longer term?

I suppose so, yes becasue that's where I'm thinking about the target of all of this being a good outcome. I mean it has to be if I'm changing career, its got to be the best outcome and for me that's be a career in sport psychology or counselling psychology.

Outcome - a result of engagement
Engagement = success

Not a choice here but a definitive tangible outcome

Outcomes - short term goals /achievement / success
Long term - career ambitions

Underpinning engagement with learning.

Concepts related to outcome/motivation are more intrinsic more situated within the individual, located at the micro level.
Concepts related to technology/study environment more external more dependent on the relationship between social / material
Concepts - opposite / barriers located at the interface of the two things above.

Guided interrogation of pictorial meaning, and alignment to the concept

RC10_IGA_7

Interpretation
Picture Interpretation + Concept Interpretation
(PI + CI)

Outcome

Representamen

Image Elements

red and white target, dart, white grey background

Object

Picture Object + Concept Object
(PO+CO)

PO: A dart hitting the bullseye on a targetboard.
CO: The outcome of engagement, a perfect outcome

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