PhD by Professional Practice

Mode Neutral Pedagogy: Development, Research and Praxis in Higher and Professional Education

Brian Smith

Submitted in partial fulfilment of the requirements of the University of Bolton’s PhD regulations

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Declaration

I confirm that this work is my individual effort and has not been submitted previously in support of any other qualification or course. All quotations and sources of information have been properly acknowledged in the text

Signed Date 12th February 2019
Abstract

In an attempt to answer longstanding questions of what makes students ready for learning, sustain their engagement and meet their life-long goals, I provide a critical commentary on the themes found in a unique educational framework.

I have continuously questioned why my published Mode Neutral pedagogy encourages learning to occur in my praxis as a Higher Education Academic and Operating Department Practitioner in the hospital perioperative setting. Signs of engagement, expression and commitment to learning promote individual identity alongside a visible presence. Unconditional teacher responses, and the balance of structured content and proactive communication remove barriers to learning and raise opportunities for strengthening individuals' emotional intelligence.

These aspects of human existence precede the learning elements of motivation, aspiration and belonging. The Mode Neutral Pedagogy method integrates these elements in the pre-learning phase and beyond to create a self-efficacy learning experience. The learner’s ‘sense of being’ is fundamental to this pedagogy as it fosters connectedness and a nascent self-concept, attitude and development for learning.

Those who adopt all or aspects of Mode Neutral continue to identify five intrinsically linked themes that explain why students do well throughout a Mode Neutral experience. These dominant five themes are referred to as Five Levers™ - they illustrate the combined effect of Identity, Presence, Co-Presence, Emotional Intelligence and Immersion on the learner’s achievements. The Five Levers™
discovery is unique and essential to educational development, and synthesis of new learner acquired knowledge. Pedagogical models that do not proactively consider this sense of being may place barriers in front of the learner's lifewide and lifelong learning.

There are also some limitations to this approach. In particular, transferability of the Five Levers™ framework is untested in other disciplines other than healthcare. It is unclear whether my personality, pre-disposition values and other attributes act as the 'glue' in Mode Neutral, rather than the presumed Five Levers™. Nevertheless, this thesis provides evidence of Mode Neutral's impact on healthcare practice for those working in hospitals.

Keywords: Mode Neutral, Five Levers™, Reality, Ontology, Nature of being, Sense of being, Lifewide learning
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Acknowledgements

There are several people I have to thank for getting thus far in my PhD journey; to those who supported and nurtured my development to challenge how we educate today’s and tomorrow’s generation, I thank you.

To the thousands of students that I have had the privilege to teach, and to be taught by, alongside those clinical colleagues who allowed me to explore their sense of being within their practice – I thank you for trusting and sharing.

My sincere thanks go to Dr Duncan Cross, Director of Studies and Professor Jerome Carson who gave all their experience, critical and direct thinking to me during our supervision sessions to produce this body of work.

A very special mention has to be to my family who have been there for the “old grey haired guy” writing energetically whilst life passed him by.

My gratitude and humble appreciation go to all.
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<td>Acquired Immune Deficiency Syndrome</td>
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<td>AHP</td>
<td>Allied Health Professional</td>
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<td>AI</td>
<td>Artificial Intelligence</td>
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<td>CINAHL</td>
<td>Cumulative Index of Nursing and Allied Health Literature</td>
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<td>CoI</td>
<td>Community of Inquiry</td>
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<td>CoP</td>
<td>Community of Practice</td>
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<td>CPD</td>
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<td>CSC</td>
<td>Care Sector Consortium</td>
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<td>CD</td>
<td>Curriculum Design</td>
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<td>Communication for Learning</td>
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<td>Department of Health</td>
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<td>Emotional Intelligence</td>
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<td>EOF</td>
<td>Education Outcome Framework</td>
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<td>ESP</td>
<td>Embodied Social Presence</td>
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<td>GIF</td>
<td>Graphics Interchange Format</td>
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<td>GT</td>
<td>Grounded Theory</td>
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<td>HEA</td>
<td>Higher Education Academy</td>
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<td>ICT</td>
<td>Information, Communication and Technology.</td>
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<td>JISC</td>
<td>Joint Information System Council</td>
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<td>MIT</td>
<td>Massachusetts Institute for Technology</td>
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<td>MOOC</td>
<td>Massive Open Online Courses</td>
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<td>NHS</td>
<td>National Health Service</td>
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<td>NVQ</td>
<td>National Vocational Qualification</td>
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<td>ODP</td>
<td>Operating Department Practitioner</td>
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<td>PCT</td>
<td>Primary Care Trust</td>
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<td>PICO</td>
<td>Problem, Intervention, Comparison, Outcome</td>
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<td>PRISMA</td>
<td>Preferred Reporting Items for Systematic Meta-Analyses</td>
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<td>RT</td>
<td>Role of the Tutor</td>
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<td>SE</td>
<td>Student Experience</td>
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<td>VLE</td>
<td>Virtual Learning Environment</td>
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<td>VR</td>
<td>Virtual Reality</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>ZPD</td>
<td>Zone of Proximal Development</td>
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Chapter 1: Introduction/Background

This PhD by professional practice will critically discuss the common themes found in my practice as a Higher Education Academic and an Operating Department Practitioner working in hospitals.

The primary objectives of this critical commentary are to:

1. Critically review the claim that the themes and their association forming the Five Levers™ framework underpin human interactive and learner ‘buy-in’ during learning experiences

2. To provide an original contribution to knowledge showing how the Five Levers™ framework has changed practice.

The thesis is a critical commentary of my discovery of a new framework grounded in reflexive and reflective investigations of traditional pedagogies in practice, and a challenge of my own pedagogical model – Mode Neutral. It addresses the long-standing question of how do students ‘buy-in’ and become engaged in their learning.

I adopt Volkov et al.’s (2016) view of ideology as the occurrences that occur in everyday consciousness generated through real-life experience. At a simple level, ideology is best described as the ideas, views or beliefs applied to a given situation.

I argue the lack of teacher/practitioner promotion of a sense of being within the learning experience places barriers in front of the learner’s praxis. I use the term praxis within this thesis to refer to the combined use of critical thinking, reflection and action. An individual’s praxis may include self-challenge of any action taken, question the impact and refine their knowledge, skills and behaviour in Higher and Professional Education, and within their workplace. This thesis fuses together the evidence from a decade of my learning and teaching activities, including research studies and
publication of articles to demonstrate the impact of my pedagogy and educational framework.

The chapter starts with setting the scene of my background. This is important to highlight the conscious and unconscious considerations in my teaching practice and why they led to the discovery of a new educational framework.

I have a thirty-two-year healthcare background, with two decades of concurrent teaching of medical students, nursing and allied health professionals (Operating Department Practitioners). My early teaching roles extended beyond the classroom into simulated experiences with high-fidelity manikins, to dissection of human cadavers and coaching ‘live’ clinical practice. Learners developed their understanding of the subject through complex clinical situations and often drew on lifewide learning to problem solve (Jackson, 2013).

![Figure 1: Miller's (1990) Framework](image)
Using Miller’s (1990) framework for clinical assessment supported my teaching to building practitioner cognition and behaviour from “knowing to doing” under direct observation in clinical settings. My enhancement of the clinical learning experience became a prominent strategy, albeit on a biased footing to produce “knowledgeable doers”. In 1992, I worked at the Royal Liverpool University Hospital and sought approval to involve patients in the learning activities for medical students and nursing colleagues. Inviting patients to teach on medical, nursing and allied healthcare programmes was not widely adopted until 1998. I chose this approach to assist the development of person-centred care using Rogers’ (1959) principles of self-concept. Patient experience was important to share with others and led to the provision of care that could reflect the patient’s needs.

Hospital ethical approval was granted, and patients’ consent was obtained for video-recording of their operations for educational purpose. The recordings were used in problem-based learning activities with medical students to deepen their appreciation of anatomy and physiology, and surgical techniques such as Roux-en Y Gastrectomy and anastomosis.

Normally, an operating surgeon would teach observing medical students. I narrated the ‘live’ operation, and the recorded voiceover in the footage was used to challenge the students’ understanding of the surgical risks. This approach was extraordinary and became the starting point to question how interdisciplinary learning generated immersive learning experiences. A further consideration was my developing belief that powerful narration can provide insightful information to others to make sense of the world around them (Altes, 2007)
I witnessed an increase in student engagement in this approach because the materials were real ‘lived’ experiences rather than classroom teaching. Tactful reorientation of my lessons to incorporate more of this material promoted further student engagement, which determined what students learnt from the session (van Manen, 1993). My thoughtfulness towards how health and medical learners engaged in the context led to a further opportunity where I developed myself and became a registered Emergency Medical Technician with Paramedic UK. At the time, Paramedic UK (Registered Company 2330693) provided a voluntary register for staff working or undertaking pre-hospital emergency duties. This employer-supported initiative facilitated voluntary work at Oulton Park, Cheshire. Caring for motorcyclist and racing car enthusiasts during race meetings was beneficial in my heightened reflective thinking and situational awareness skills.

My reflection on these events was central to exploring behavioural approaches to teaching and learning and promoting learner metacognition about learning. Although theoretical principles of how humans learn were embedded in my teaching praxis, I revisited Gagne’s (1985) conditions for learning theory to investigate how they actually contributed to a learner’s self-concept. Gagne’s classifications specified the internal and external conditions a learner requires to facilitate their cognitive and psychomotor learning. Attitudes, values and behaviour were among the nine instructional events encouraging cognitive learning (Box 1).
1. Gaining attention (reception)
2. Informing learners of the objective (expectancy)
3. Stimulating recall of prior learning (retrieval)
4. Presenting the stimulus (selective perception)
5. Providing learning guidance (semantic encoding)
6. Eliciting performance (responding)
7. Providing feedback (reinforcement)
8. Assessing performance (retrieval)
9. Enhancing retention and transfer (generalisation).

Box 1: Gagne (1985) Conditions for Learning

My exposure to Gagne’s work became a central element in my innovative work across the Merseyside and Cheshire Strategic Health Authority. Live interviews with service users who had Acquired Immune Deficiency Syndrome (AIDS) impacted significantly on the way learners thought about the illness and how it becomes life shortening. The purposefulness to this activity was the inclusion of Gagne’s work, supported by Miller’s framework and the philosophical position of Roger’s person-centred care. My reflection on the events highlighted a sense of an immersive state among the learners. The real-life events balanced with the philosophical elements of the three authors’ work appeared to stimulate the learner’s cognition and emotive responses.

In 1994, I integrated technology into my teaching practice deploying digital scanners and access to the dial-up Internet to create online workbooks through multi-media
resources: digitised chapters, GIF illustrations and sound recordings. Computer-based learning alongside constructivist theories encouraged the creation of a digital problem-based resource in healthcare (Laurillard 1993). While Laurillard’s constructivist model provided scope to share best practice with limited text narrative, I noted a disconcerting gap between the learner’s processing of computer-based information to its application in clinical settings.

At the turn of the century, I continued to contribute to national agendas transforming clinical and higher education teaching and learning. With the demise of the English National Board for Nursing, the number of Continuing Professional Development (CPD) programmes available for nursing colleagues was limited. A rise in National Vocational Qualifications (NVQ) occurred with myself contributing to the production of national standards for the Care Sector Consortium. Layder’s (1997) social theory constructs played a crucial part in my thinking about the standards and social individuality and interdependence in a constructivist learning experience. I wondered how do learners learn? And how might those aspects be deployed in teaching to enhance the learning experience?

Entering Higher Education as an academic in 2001, I began to devise a new programme for hospital operating theatres (also referred to as perioperative practice). The development of a Certificate in Higher Education in Operating Department Practice was not new to myself because of the previous decade working with universities and medical deaneries, but this was the first formal occasion I led an academic team in programme development.
Between the period of 2001 and 2005, I drew upon my success in clinical teaching using multi-media to enrich the learner’s acquisition of knowledge. The advent of the Internet and emerging technologies added new dimensions to the way knowledge could be shared in an interdisciplinary manner. Videos, patient stories, narrated surgical operations to online quizzes, became central features in my teaching praxis.

At the time, I became aware of Hartley & Davies’ (1978) view on the 10-15 minute attention span. I tested this theory in my teaching and learning activities and noted how students lose concentration after 20 minutes of the same activity. When they experimented with different teaching methods every 20 minutes, the students became refreshed and refocused on the subject material. Running parallel to myself unearthing of what teaching activities and frequency work in the classroom, I challenged myself in analysing Shakespeare’s plays to comprehend how actors and visual effects immersed their audience in the performance. Fascinating learning points occurred showing how changing scenes, every 20 minutes and the sequencing of information to build up the storyline evoked human responses of a sense of being.

This sense of being become part of my evolving approach to teaching and curriculum design during a subject review in 2003. Peer-reviewers described my approach as an underlying desire to bring excitement, engagement and exemplification to higher education and clinical education. By inviting learners to be active co-designers of their experience it gave them ownership and a voice in structuring student-centric learning. Students and I worked effortlessly together to add variety, choice, rich content to the classroom and online spaces where learning could occur. Healthcare learners remarked on how the online synchronous and asynchronous chat discussion facilities
supported their learning and student cohort identity from different geographical locations. My approach became a project within the Centre for Excellence in Teaching and Learning, called Mode Neutral Pedagogy.

In 2005, I self-challenged the epistemological understanding of the term ‘pedagogy,’ its application in healthcare, higher education and the digital learning era. At the time, healthcare professionals, academics and employers expressed dissatisfaction that Higher Education curricula did not produce ‘knowledgeable-doers’ (Department of Health [DH], 2005). In later years, Medical colleagues, Allied Health Professionals, Nursing and Managerial co-workers knowledge exchange were not straight-forward as political, social and economic agendas tussled for public money to improve healthcare (DH, 2006). The National Health Service (NHS) among others, has remarked that workforce education is perhaps best achieved through a range of educational opportunities (DH, 2011). Higher Education, Commercial Training Workshops, Simulation Centres are long-standing suppliers of learning experiences with a far-reaching impact on the quality of care delivered by the NHS (Barwell et al., 2013; Eraut, 2004).

There is a broad acceptance that healthcare education and the delivery formats have a direct correlation to improving patient care despite it being very difficult to measure (DH, 2013; Green, 2013). Nursing staff and Allied Health Professionals are among the multi-professional groups using their skills and know-how to deliver evidence-based care to World Health Organization (WHO) recommendations. High-quality healthcare programmes are necessary to develop the knowledge, skills and
behaviour of the healthcare workforce to ensure patient safety, reduction in human errors and the promotion of patient wellbeing (Braithwaite et al., 2012).

In this regard, Smith et al. (2008) believed the learner experience should be holistic and consider the needs of the learners in their acquisition, assimilation and application of knowledge within their clinical activities. Second, they believed the optimised learner experience occurs through a unified curriculum design and delivery model. In 2007-2010, this was particularly pertinent to their design and delivery of their novel healthcare learning programmes at Edge Hill University. During this period the University-NHS partnerships focused on creating enhanced education, with effective communication to transform the health service performance (Kings Fund, 2010). Over a three-year period, the ‘Mode Neutral Pedagogy’ was developed describing an immersive teaching and learning praxis. The term challenged the status quo of how educators designed and delivered learning experiences to facilitate greater learner participation (Miller, 2011). Mode Neutral was reported to have a different philosophical position compared with traditional on-the-ground or online learning pedagogies. Its principal aim is to converge online and on-the-ground communication as a unified entity without visible lines between the modes to facilitate lifewide and lifelong learning (Watson, 2008).

Placing the learner in a real healthcare environment for learning purposes does not come without risks (Durkam and Alden, 2008). Reed et al. (2008) adopted Ferdig and Trammell’s (2004) belief in using online resources to arouse and stimulate curiosity in the subject area. The available research considered discourse and communication in online discussion boards, chat rooms, social networking, and classroom
environments. There were none considering communication across the real and virtual domains. It is this point that influenced Smith et al. (2008) to undertake a study of communication across the virtual and physical domains. Their deep-rooted belief was a direct link between communications and learning to promote communication for learning, otherwise referred to as distributed cognition.

The model commences with the wider learning ecology where learning comes from developed behaviours and abilities from many life experiences (Gunderson et al. 1995). This eclectic learning is facilitated in Mode Neutral through a multi-format curriculum design. The novel methodology affords individuals the opportunity to learn at their own pace and in a place where cognition, psychomotor and kinetic dimensions converge (Bloom et al. 1956; Anderson and Krathwohl, 2001). It is essential that learners feel engaged in the educational experience and have the ability to store interconnected units of information in long-term memory (Bartlett, 1932). This sharpens the learner's sensory perception, attitudes, and behaviour not only in the physical environment but also in the co-habitat of digital 'cyberspace' (Harasim, 2006; Isdale et al., 2002). Arguably educationalists, healthcare staff, managers, and others must first consider the objective reality of their learner, before developing learning in a physical or virtual space. A psychological environment of 'reality existence' naturally produces human cognition of feeling present and potential to have a value, able to influence and shape the outcome of their participatory efforts through existence, transference of unconsciousness to consciousness identity, in a Mode Neutral learning experience.
Smith et al. (2008) assumed learners were ready to learn in Mode Neutral Pedagogy. Like other pedagogies, it overlooked the firstontological principle of ‘nature of existence’ in the learning space and how the maturity of learner’s metacognition underpins their readiness, self-concept and relationship with the universe. Moreover, drawing upon the work of Maslow (1943), Pink (2011) and Csikszentmihalyi (1990), I revisited Mode Neutral, to question where Mode Neutral integrated motivation theories but discovered other themes within the data. I concluded there is bedrock to preparing humans for learning and development. The importance of Identity, Presence, Co-Presence, Emotional Intelligence and Immersion have emerged during the secondary review of the previously gathered data.

From 2008-2012, I was the originator and publisher of Mode Neutral pedagogy and had undertaken several studies to measure the impact of this novel teaching approach. In 2012, the Higher Education Academy awarded me a National Teaching Fellowship for the impact of Mode Neutral on enhancing the student experience.

Over the last six years, several organisations have adopted Mode Neutral including Liverpool Primary Care Trust, North-Western Medical Deanery, Edge Hill University, University of Derby, Birmingham City University and Arden University and the Association for Perioperative Practice. Moreover, the citations within the accompanying portfolio (Section 3) highlight where others have considered Mode Neutral in digital, primary and secondary education and highlight the importance of identity.
The portfolio of evidence accompanying the critical commentary is in the form of peer-reviewed published chapters, citations of Mode Neutral, Endorsements from organisations adopting Mode Neutral, published peer-reviewed papers, national and international conference presentations, media coverage and prestigious awards recognising the impact of Mode Neutral and the emergent Five Levers™ in the health and higher education.

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<th>6. Presentations</th>
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<td>- 8.2 North Western Medical Deanery</td>
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<th>9. Awards</th>
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<td></td>
<td>- 9.2 Senior Learning &amp; Teaching Fellowship</td>
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<th>10. Other evidence</th>
<th>- 10.1 University of Bolton – Validation document for Integrated Degree Apprenticeship for Operating Department Practitioners level 6.</th>
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Endorsements and citations of other professionals using the Mode Neutral model are included in sections 3 & 4 of the portfolio. These validations of impact alongside the further evaluative studies I have undergone led me to believe there was a deeper element to Mode Neutral promoting self-directed behaviour for learning, readiness for learning and sustained engagement in their goals. In the remaining chapters of this thesis, I will draw upon the portfolio evidence to show the discovery and impact of the five dominant principles underlying the promotion of student-centred learning, which is not dissimilar to the Rogerian theory of person-centeredness.

Those principles include Identity, Presence, Co-Presence, Emotional Intelligence and Immersion. A questionnaire was developed based on themes derived from the learners’ Mode Neutral experiences. The questionnaire plots each score on the dominant principle axis showing their impact value. A connecting line is then drawn across all principles to represent the linkage between them. My questioning of the associations or links between those principles has drawn me to the conclusion that a conscious, overt application of them will support the learner’s ‘buy-in’, foster connectedness and nascent attitude towards learning development.

Therefore the original contribution to knowledge in this thesis is the discovery of the dominant principles and the development of the Five Levers™ framework for human sensory reality, metacognition and sense of being in a Mode Neutral experience.
1.2 Chapter summary

This chapter has introduced my lifewide learning across roles resulting in the development of a new pedagogical model – Mode Neutral, which may have overlooked the essential element of ‘nature of existence’ and its connection with more in-depth learning. Reviewing the impact of Mode Neutral in practice, I believe there are five dominant principles governing learner’s readiness to learn, their transition through stages of development leading to self-efficacy within any given context, location and educational, ecological system. These are referred to as Five Levers™ and are fundamental to pedagogical praxis in both healthcare and higher education settings.
Chapter 2: Literature review

The objectives of this chapter are to review the underpinning literature while considering the claim that five themes govern the students' real existence and readiness in learning or knowledge acquisition. Although the advancement of Mode Neutral pedagogy has been developmental in my teaching praxis, it is necessary to review the secondary literature to consider authored papers on the associated links between the dominant principles of Identity, Presence, Co-Presence, Emotional Intelligence and Immersion forming a new framework for learning – Five Levers™.

Therefore, the literature review will investigate five areas:

1) Identity – How the students view themselves in the learning process?
2) Presence – How important is sharing (student) views in the learning journey?
3) Co-Presence – How feedback shapes students cognition, reinforces their identity and confidence?
4) Emotional Intelligence – How self-awareness influences others behaviour towards the subject matter?
5) Immersion – Is focus a combinatory state of the other four areas that lead to successful learning?

The literature review will examine the fundamental elements of healthcare students’ ontology and the associations within the learning experience (Watkins, 2000). Sjostrom & Dahlgren (2002) extend this thought by knowing what theoretical elements support the development of individuals’ learning alongside identifying any weakness in the general application, highlighting where there are barriers to developing life, social and employability attributes (Higher Education Academy, 2017).
The literature review will also draw on past theoretical perspectives of how humans learn. This will be necessary to show valuable perspectives on contemporary teaching design. Furthermore, filtering of the literature will be necessary to ascertain if published data suggest any direct interconnections between the five themes in the classroom, workplace, or social settings.

2.1. Search strategy

A literature search was carried out using a range of keywords and filters with EBSCO, Pubmed, Medline, PsychINFO and CINAHL databases. Three phrase categories were deployed to capture the data. The primary phase allowed for the initial identification of published terms and was then validated through the secondary phase of asking the collected data if there was an impact on the learner or learning experience.

2.2 Keywords

<table>
<thead>
<tr>
<th>Primary phrase</th>
<th>Secondary phrase</th>
<th>Extend phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity + Learning</td>
<td>Identity impact learning</td>
<td>Community of Inquiry</td>
</tr>
<tr>
<td>Presence + Learning</td>
<td>Presence + student achievement</td>
<td>Attendance and learning</td>
</tr>
<tr>
<td>Co-Presence + learning</td>
<td>Peer Feedback</td>
<td>Communities of Practice</td>
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<td></td>
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<td>Distributed cognition</td>
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<tr>
<td>Emotional Intelligence + learning</td>
<td>Self-aware when learning</td>
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<tr>
<td>Immersion + learning</td>
<td>Immersive state</td>
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<td></td>
<td>Focused learning</td>
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<tr>
<td>Identity + Presence</td>
<td>Identity leads to engagement</td>
<td></td>
</tr>
<tr>
<td>Presence + Co-Presence</td>
<td>Communication + learning</td>
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</table>

Table 1. Keywords deployed to retrieved database articles.
Boolean operators such as ‘AND’ and ‘OR’ and ‘NOT’ were used to find any articles that were perhaps outside of the initial phrases.

2.3 Inclusion and Exclusion criteria

Inclusion and Exclusion criteria were deployed in particular to demonstrate the academic thinking of the five areas relating to the contemporary development of learners. Therefore, the inclusion criteria included articles in English from 2010 to 2018. Given there is a strong healthcare backstory to my work, it is necessary to include articles that are primarily healthcare. As this thesis is principally concerned with learning in healthcare, articles not relating to this area have been discounted.

Articles relating to tertiary education or under eighteen years of age development have been excluded but referred to in the portfolio of evidence. Although publications beyond a ten-year time span are useful, they are excluded in this literature review underpinning the critical narrative relating to Mode Neutral.
The table below illustrates the inclusion and exclusion criteria using a modified PICO method to develop this thesis' underpinning questions.

<table>
<thead>
<tr>
<th>Population</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Outcomes</th>
</tr>
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<tbody>
<tr>
<td><strong>Inclusion</strong></td>
<td>Adults in learning (age from 18 upwards).</td>
<td>Classroom learning, Placement learning, Simulated practice, Online and Distance Learning</td>
<td>Transitional pedagogy, Constructivist pedagogy, Critical Enquiry, Community of Practice</td>
</tr>
<tr>
<td></td>
<td>Ideally, articles related to healthcare roles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exclusion</strong></td>
<td>Child and adolescent development Non-health professional articles</td>
<td>CD/Computer learning</td>
<td>Self-directed study</td>
</tr>
<tr>
<td></td>
<td>Articles before 2008</td>
<td></td>
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</tr>
</tbody>
</table>

Table 2. Developing question under a PICO module in line with an exclusion and inclusion criteria.
2.4 Results

In keeping with Hart’s (2006) view, the first step to critically appraising the literature was to review the abstract for each article to ensure it was relevant to the study. This is an important step when using a PRISMA statement to analyse the secondary literature (Moher et al. 2009).
Following the three-phase search, produced a total of \( n=7112 \) articles identified in the databases. Following removal of duplicates and greater scrutiny of them against the subject matter, 29 remained pertinent to the research question. The peer-reviewed articles included empirical research and descriptive case studies towards the ontological characteristics of learning within academic, work and social environments. Only three papers in the literature review gave insight into the healthcare learner’s personal experience of social, cognitive and identity presence. Identifying papers that demonstrated clear links between identity, presence, co-presence and emotional intelligence for those working in the healthcare context was challenging because there appears to be no literature depicting the relationships between these parts. Therefore the literature below has the closet affinity to the parts in this thesis’ Mode Neutral model, and its accompanied dominant principles to promote nascent learner development.

Adawu and Martin-Beltran (2012) contributed to the broader research debate that identity construction among learners formed from the elicit aspect derived from language. Their study inferred there is much need for further research to understand how identity construction takes place from the learner’s own first-hand experience. Moreover, they suggested an exploration of how learner’s use time and space to build their identity from autobiographic or self-expressed data. It is suggested that these become points of transition where learners constructed identities that play a crucial role in transformative learning.
Bennett et al. (2016) explored the broader concept of what Lieberman and Mace (2009) said about making artefacts and events of practice support the identity formation for learners in their socio-economic environments. The underlying suggestion is that identity is ever changing and influenced by the social factors within the environment alongside the student projection of themselves in the collective group. They believe the introduction of digital technologies such as e-portfolios encourage the learner to reflect and refine their thinking either directly in the digital space or in the cognitive domain.

Briggs et al. (2012) presented a new model of how learners can transition through different stages of learning building their learner identity in higher education. They view building learner identity as an essential element for achievement and retention. They draw upon the literature to discuss the importance of the induction process and how it prepares the learner to become ready for higher education studies.

The Centre for Learner Identity Studies (2014) believes that learner identity has a correlation to their “onboarding” in different educational sectors. Their work relating to primary and secondary education reported on six bases where identity supports the learning experience. Those include gender, generation, place, social class, ethnicity and spirituality.

Conversely, Choi (2017) described learner transition through learner identity associated with innate characteristics compared with externally displayed attributes highlighted in the Centre for Learner Identity studies. Choi believed determination, self-regulation and reflexive strategies were visible in his study of twenty participants.
Christie et al. (2015) noticed the interconnections between teacher presence and social presence of students among 81 PhD students and 53 students in their final year of teacher education study. The sense of belonging to a group where the teacher was visible and engaging similarly to the students, impacted on the learners’ identity formation and their contribution to the discussion within the blended and online activities.

Coll and Falsafi (2010) found in their practice that promoting learner identity in the curriculum design would encourage students to continue to negotiate their identity within a Community of Inquiry. Constant refinement of identity generates pro-active engagement and positioning of oneself within the group discussions.

In contrast to learning, the external influence of one's identity in the external world drew Hewitt et al. (2010) to the conclusion that identity promotion can raise confidence and diminish the isolation and negativity for refugees and asylum seekers. In this regard, Hewitt et al. believed self-efficacy was influential in assisting individuals in achieving their learning aspirations in education, societal contribution and impact on the world around them.

Garrison et al. (2010) focused on testing the Community of Inquiry framework across different geographical locations to see if the social and teacher presence mattered in the learner’s experience. The causal relationships between the three elements not dissimilar to Mode Neutral were that Teaching presence, Social presence and Cognitive presence were critical in developing learning communities and open group
cohesion.

Kolb & Kolb (2009) also explored the concept of learner identity and concluded from their studies that those with an external view of themselves as learners, and intrinsic awareness of how they learn, were more likely to engage in the learning process.

Jones (2010) focused on gathering subjective views from students relating to their learning experiences and how their first-year experience at university enhanced their sense of being. A sense of belonging according to Jones is an essential cognitive feeling when learning to avoid the feeling of being isolated, helpless and an outsider of the conversation or transference of knowledge. This included self-reflective views on what they were bringing to higher education and how this may support or hinder their engagement within the cohort or learning community.

Lairio et al. (2013) sampled 283 undergraduate students studying applied sciences in a Finnish university. Their foci were to determine if the university experience encouraged the construct of learner identity and its transferability beyond higher education. The majority of students indicated the formation of their identity while studying provided an opportunity to develop their critical thinking skills and test them in the group discussion. Moreover, the link between their identity formation and academic writing developed their confidence to tackle social communication.

Lawson’s (2014) mixed methods study with 99 UK marketing/business undergraduate students highlighted there was no direct transferability of learner identity into an employment setting. They found the development of employability
attributes within a marketing/business curriculum were not necessarily transportable between higher education and employment.

Mezirow (2009) stated that disorientating dilemmas act as triggers for individuals to challenge their beliefs, reflective thoughts, or ideologies about how they fitted into the world around them. He believed different situations, and new experiences with opposing views or beliefs influence the individual to reflect and perhaps change their views critically. Mezirow believed transformative learning in the classroom occurs when opportunities are within the curriculum design and social interaction between learners.

Calleja (2014) reviewed Mezirow’s (2009) belief on transformative learning experiences occurring when disorientating dilemmas are present, and moreover, he linked the transformation to the change in an individual’s perspective. His review acknowledged Freire’s (2004) conception of conscientisation and consciousness group with communication being the effective action in promoting dilemmas and opportunities to occur in the learning experience.

Moon-Heum & Demei (2013) looked at the associations between intrinsic goal orientation and self-regulated learning within an online learning context. They found that students who had an intrinsic motivation regulated their activities positively to achieve successful outcomes. Those who did not have any extrinsic drivers or influences were unlikely to engage in the learning process. Self-efficacy and self-regulation are highlighted as critical elements in the learner’s identity within the discipline, group and teacher-led activities.
Nystrom et al. (2008) looked at the educational experience from a different perspective and considered the graduate’s professional identity in their future career and how it changed over time. They concluded there is a link between lifelong learning and the continuation of developing a workforce that is flexible and employable.

Reay et al. (2009) found that students from a non-traditional background, in particular, those from low social-economic backgrounds, and living in deprived less affluent areas perceived they had a low entitlement to education. This cognitive disassociation with education meant they had no identity and were not prepared for the learning experience.

Shea & Bidjerano (2010) sampled 3165 students using structured questionnaires to measure the learner’s self-efficacy through cognitive, behavioural, motivation and social constructs. Examining the Community of Inquiry framework provided an opportunity to measure the learner’s presence in an online learning format. They too agreed there was a relational aspect to the teaching and social presence leading to a cognitive presence.

Snider & McCarthy (2012) considered the use of e-portfolios within two international studies and samples of 22 other e-portfolios. They identified how essential e-portfolios promote reflective thinking and how the software created restricted elements. Students were constrained by the inflexibility of the software. They were able to upload reflective thoughts, artefacts of their learning but were unable to
customise their account to develop an online persona. Instead, the software did not take into consideration the importance of identifying the learning journey and how it supports the students need to reinforce their identity.

Coll and Falsafi (2010) believed that meaning from the material and discursive interactions shaped identity construction. They claim gestures, physical position, and level of exposure; all have a vital role to play in the learning experience. While other authors do not dispute this, there is an implicit thread in the literature suggesting there are greater ontological factors to be considered in how a learner cognitively prepares for higher education. Forming a vehicle for nascent development and affirmation of a learners ‘sense of belonging’ throughout their learning experience or beyond into social and employment settings, appears to be influenced by numerous factors from social, political and economic quarters.

Much of the literature describes the behaviour of goal setting, social interaction, yet there is a lack of publications showing the relational aspects of the proposed Five Levers™ to build self-efficacy in the social, cognitive and identity presence states. Given there is a lack of published articles that link identity, presence, co-presence, emotional intelligence and immersion together, then it has become necessary to revisit the publications underpinning Mode Neutral.
2.5 Historical perspectives

Education remains a precious commodity in a global society where tension continues to persist between delivery and access (Provost, 2014). Nevertheless, learning is independent of these frictions and is under the internal control of each person’s memory architecture. Sperling (1960) stated a person’s visually stored imagery in the iconic memory was independent of attention. Persuh et al. (2012) disagreed and showed the interconnections between attention and stored visual images. If attention requires a conscious element in the acquisition of the imagery, then arguably an individual’s being qua being is fundamental to their learning. Aristotle believed humans use their wisdom (sophia) to determine the causation of events thus making sense of their reality (Anagnostopoulos, 2009; Barnes, 1975). Common axioms in Aristotle’s description are critical elements to show reasoning when using four underpinning questions to challenge the patterns or combinations in an event or experience. In turn, the question is, what is it? And how was it created? The culminating question is what purpose does it serve (Barnes et al., 1975)? The questions lead to the four causatives in Aristotelian metaphysic narrative: the material cause, formal cause, efficient and final cause. Reality interrogation is purposeful in revealing the one thing people are in pursuit of, that is eudaimonia – Life fulfilment or Self-Actualisation in Rogerian theory. The nature of a person’s existence or their perception of reality is a critical factor in learning (Anagnostopoulos, 2011) self-actualisation (Maslow 1970) or self-efficacy (Bandura, 1994).

The nature of existence or ‘being’ is centric to ontological studies of why things exist.
Bandura (1994) described the cognitive, motivational, affective and selective processes that humans use to create self-belief leading to human functioning. In Plato’s readings, there are several dichotomies, which include Universals and Particulars, Substance and Accident, Abstract and Concrete Objects, Essence and Existence, Determinism and Indeterminism, Monism and Dualism, and Idealism and Materialism (Griswold, 2001). Essence and Existence emerged in one of my papers (Portfolio - Paper 5.1) with one participant commenting on their social presence in the learning experience.

“… so I can be sitting researching some articles, and when I am tired, I will dip into the coffee room. It means the coffee room and ability to communicate with your fellow colleagues is not just accessible for 1 hour a day; it is there all the time. There is great benefit from [knowing] that you can suddenly find someone replies to you at 11 o’clock at night and that was!” (Participant J)

The participant’s reference to the ‘coffee room’ was the sublimation of previous cognitive stored information about a physical place for on-the-ground conversations to an online domain. In this particular Mode Neutral experience, the term was deliberately given to the general discussion board for students to share and exchange information. The characteristics and purpose of an existential physical coffee room experience were deliberately applied to an online format. Drawing on this lifewide learnt representation, and their participation in the digital space at different times, students began traversing across the physical and virtual boundaries in a seamless manner. The participant’s narrative indicated their sense of reality was amplified (Butterfield, 2005) due to the familiarity with the concept. Consequently,
participant became consciously aware they were in a physical locality while their mind is tuning-in to the virtual space. Arguably, this could be interpreted, as divided reality or dualism and deliberate design of a Mode Neutral experience. Divided reality between the physical and cognitive state suggests that the human sense of being can diverge into different spaces. Schaffer (2010) would contest this view and argue that monism is present in cognitive collectiveness and sensory perceptions of reality. Thus describing the sum of the parts forms a singular whole – the coffee room.

**Universals and particulars**

Abstract coffee rooms are a universal and representative of the existing physical object and draw in the components of human learning ecologies from social, employment and educational experiences. In metaphysics, Universal is the characteristic of what a ‘thing’ possesses and maybe evidential in similar objects. For example, two identical tables may have similar organic characteristics, such as made from wood, as well as physical characteristics of four table legs a top and colour to match. Particulars of those objects are the differentiated aspects that describe the table compared to another. Vezina (2007) describes Aristotel’s interpretation of a “thing” or substance by explaining that there are many ways of sensing reality and co-existing in the world. The particulars are important elements in the makeup of the whole so the ‘thing’ can exist. A human person must first be alive before one can determine their universal or particulars of being in the internal (cognitive) and external world. In principle, Vezina (2007) stated Aristotle believed that ‘thing’ is fundamental to the principal component of being.

In the published Mode Neutral learning experience cited in Portfolio 3.7 and 5.1,
learner’s particulars, such as identity, role, communication, and expectations contributed to their ‘thing’ development. Captured data from the studies highlighted that students were engaged in a debate during different times of the day and night. The frequency of the ‘coffee room’ discussion witnessed a 52.4% interchange between 8 am, and 5 pm, while 33.3% occurred after 5 pm to 3 am. Within Mode Neutral design one of three aims is to encourage ‘Communication for Learning’; while this appears to be a loose term describing synchronous or asynchronous communication, the underlying proposition is to promote human existence and presence irrespective of time, to create a sense of being across the learning experience. In the same regard, Smith et al. (2008) achieved this in their study but failed to explain the importance of Aristotle’s ‘thing’ attributes and association with ‘reality’ allowing the learner buy-in to the experience. This is demonstrated in Figure 2 emphasising the learner first senses what is happening in the moment around them, and then uses additional information from the situation to form a picture and emotional reaction. Coupling of the two elements leads to metacognition and decision making about whether the learners choose to continue to be part of the reality - their sense of being. The accumulative impact of the three elements leads to a learner’s buy-in to the lived experience.
Smith et al.’s (2008) model allowed for replicable rudimentary curriculum design and a delivery model to transpire but lacked the granularity of how participant’s reality was facilitated. There was a lack of consideration for how the learner reconciled their relationship with the world around them. It also failed to support the refinement of the learner’s thoughts about the educational space, their contribution to identifying formation or whether there was any choice of being part of the learning community.

An interview response by one participant that led me to publish the Portfolio 2.1 chapter highlighted the learner’s sensing of the new learning experience. They appeared to be unsure of how they would react to studying in a familiar surrounding but alluded to particular characteristics that could form their ‘thing’ development or making sense of their demography in the experience. This indicator of pluralism holds the predisposition that diversity contributes to the individual’s learning (Talisse, 2007).

“I think when there is [sic] other people around contributing you tend to
contribute more because you feel you want to say something. How it is going to work online, I don’t know. Also if you are in one area with everybody doing the same thing you tend to contribute more, and you are more switched on. Whereas when you are at home when other things are going, I can get distracted.” (Interview Participant JX)

I believe, Smith et al.’s (2008) desire to promote learner engagement overlooked the bedrock to human ontology and assumed the work of Palloff and Pratt (1999) and Laurillard (2002) had considered the philosophy of human reality, cognition, and sensory perception. To attract human attention and quest for life fulfilment requires acknowledgement of the person’s existence. Schwandt (1994) believes human behaviour is goal driven and plays a significant part in communication across different events. While this links to Husserlian views’ of phenomenology (Husserl 1970, Kleiman 2004, Mackey 2005) by questioning the relationships between parts, the authors also missed the first monism bedrock to attention, motivation, desires, achievement, and other secondary functions. This thesis revisits Mode Neutral Pedagogy and explains the dominant principles that govern and maintain a learner’s sense of reality + thing development +being = ‘Buy in’.

2.6 Chapter summary
The historical development and application of Mode Neutral appeared to be ill-informed but with good intention to enhance the learner's experience. Exploring the notion that learner buy-in has roots in historical evidence showing reality, and thing development combined with a sense of offering hindsight on the assumptions made by Smith et al. (2008). Revisiting the literature was necessary to acknowledge that Smith et al. (2008) established the new claim that five dominant principles determine the learner's readiness to learn, and transition through stages of development leading to self-efficacy.

This chapter has introduced the literature review approach to retrieving published articles within a ten-year frame of reference. It highlights the inclusion and exclusion criteria against a PICO model question to ensure the correct articles collated are appropriate for the critical review stage. It reports on 29 publications with tentative links to the research question with only three central to the study. From the analysis of the literature, there are sporadic publications on one or two themes that question how individuals are in their learning experience or are able to transition through higher education. However, no articles are demonstrating broader considerations of multiplex ontological themes and their relational aspects of one another to promote sustained deep learning or identity transition for the learner (Bowin, 2008). Therefore, it has been necessary to revisit the historical publication that influenced the development of Mode Neutral.
Chapter 3 – Mode Neutral

As alluded to in my Portfolio - paper 5.3, healthcare learners want to learn and augment their experience, so that their employability skills continue to meet the health service’s requirements. This is why reflection is deep-rooted in the nursing and healthcare fields (Fisher, 2003). While learner reflection-in and reflection-on-action (Schon, 1983: 68) cannot be the single source of knowledge acquisition, other routes must be present to enable the learner to shape their understanding using multi-sensory inputs. This must be inherent in all pedagogical models deployed by educationalists. Furthermore, Smith et al. (2008) believed the academic should choose a pedagogical model every time a planned educational experience is going to take place. They stated it is just not the case, nor appropriate to use the same pedagogical model for every educational occasion. Greater alignment of pedagogical principles to the context of learning (Papers 1, 2 – Portfolio 5.1, 5.2) and the adoption of technology in the learning space develop a new blueprint for the academics and the learners forming the knowledge community. Over the last decade, we have witnessed the rise and fall of Massive Open Online Courses (MOOCs) and flipped classrooms. MOOCs emerged from the Massachusetts Institute of Technology (MIT) two years after Smith et al. (2008) published their first Mode Neutral paper. The MOOCs hype proclaimed learners could study in a global classroom with others from different localities (Bozkurt et al., 2016). The idealisation of giving students greater control saw diminished tutor involvement and consequential active to passive student engagement, thus resulting in low completion rates and disillusionment among learners (Breslow, 2016). Similarly, the flipped classrooms proposed to reshape the educational experience by permitting learners to watch videos or reading articles before attending an on-the-ground session. Hertz (2012) recognised the challenge
with the instructional model relying on the learner’s technology, which at times can be a lower specification and incompatible with the format in the virtual learning space. Secondly, low bandwidth reduced access to the pre-classroom materials led to learner disheartenment with students falling behind or leaving their studies (Portfolio – citation 3.19). Potentially, these factors can alter a learner’s experience resulting in a negative sense of reality. While their reality is altered, it diminishes the learner’s buy-in.

Smith et al. (2007) recognised this and devised a pedagogical model that would allow for building up of the learner’s buy-in ensuring all Mode Neutral components connected with one another. This thesis re-evaluated Mode Neutral model during 2008-2018 to make sense of how the model promoted the learner’s buy-in. Mode Neutral (MN) Pedagogy is primarily a new pedagogy using flexible scaffolding to structure the learning opportunity (Portfolio – citation 3.20). Mode Neutral has three overarching principles and three dimensions (Schroeder & Cook, 2015).

The overarching principles include:

1. Changing the locus of control from an externally perceived entity to internal for the learner (Rotter 1966). This is about giving the learner greater control and responsibility for what and how they learn.
2. Creating a convergence among the constellation of mode of delivery to one of mode of learning. The facilitation of learning should meet the learners approach to acquiring information
3. Ensuring the learning is context-centric fosters situated learning and student-generated learning. This is about the application of knowledge where it would normally apply allowing the learner to identify areas of development.

Smith et al. (2008) believed in giving the learner the control of their learning, enabled the learner to become autonomous and shape their engagement and experience. This first principle of shifting the control affords the human cognition to extend into community learning and across digital platforms (Portfolio – citation 3.27). Mode Neutral is a framework that entwines and converges classroom, clinical, and digital learning experiences to become synonymous (Portfolio – paper 5.1). Learners can use any mode of learning that best fits the way they acquire knowledge and learn without any constraints (Portfolio – paper 5.2). Individuals are connected to one another and can actively engage with a clear sense of purpose that promotes their identity and presence as individuals and collectively as a group. They converse with others in similar positions who are exercising a more significant deal of choice to how they ‘attend’ to their learning space, whether it is online, on-the-ground or in the workplace setting (Portfolio – media 7.1). In the data relating to Portfolio – Paper 5.1 one learner described their on-the-ground Mode Neutral experience as:

“I haven’t been in a classroom before where you are so interactive. I have been in classrooms where you listen and receive. But I have noticed the difference here is where you get involved more and talk out in front of the group. This is something new for me. I haven’t done that before.” (Participant F)
Those online also feel part of the same community of practice that is not dominated by classroom instruction (Portfolio – citation 3.11). The sense of divided reality emerged when participants began describing how they valued the online and physical learning not being time-bound. The time factor between interactions provided cognitive thinking shown in the learner’s thoughtful dialogue relating to Portfolio – Paper 5.1.

“The time I spent online provided allowed me to look back at what I had said and compare it with others. As a reflective practitioner, I often change what I think and say to fit with my practice”. (Participant H)

Learning on-the-ground continues to promote close relationships with those who attend physically, and for those online by unifying the experience. This psychological impact is similar to the current social movement of using Facebook, Twitter, and others to create a profound and long-lasting sense of connectedness or narcissistic learners. The Mode Neutral curriculum content is presented in different ways to whet the learner’s appetite and to arouse curiosity (Portfolio – citation 3.16). The experience is facilitated to promote the learner's sense of reality, thing development and being, as part of the learning community (Swan, 2002; Palloff & Pratt 1999). The academic teacher anticipates and predicts how the learner will behave and respond to the modelling of critical discussion (Edwards, 1998). Carefully authored narrative creates a stimulus and response effect, resulting in higher aural discourse, and a stronger appreciation of reflection from practice and across the lifewide experiences.
Arguably, one might describe Mode Neutral as a blended approach to learning as it integrates online, classroom and clinical learning together (Portfolio – citation 3.6). Smith et al. (2008c) describe blended learning in paper three as a term widely known as bringing two parts together (Thorne, 2003). In contemporary blended programmes there is usually an online and a classroom component; the primary difference with Mode Neutral is, it can integrate as many components from across the lifewide and lifelong experience and not be limited to the joining of two halves from the physical and virtual cyberspace. Its principal aim is to develop an all-encompassing framework encouraging the learner to move freely and seamlessly between the ‘mode of learning’ without interruption in the individual's cognition.

Figure 3: Pink's motivation theory
Pink’s (2011) ‘Flow’ is an extrinsic and intrinsic driver in assisting the learner to be in the zone where our abilities are matched against the challenges. Curriculum content, designing activities and anticipating the inter-alliance across the learning spaces are central to ensuring there is no learner anxiety or boredom in the experience (Portfolio – citation 3.8). Moreover, Mode Neutral is about promoting Pink’s autonomy where the learner will direct their learning and ‘get better and better’ with what they master. Also, the Mode Neutral affords the facilitator of learning to anticipate behaviour and attitudes throughout the curriculum design aiding the setting of challenge and rewards for the participatory community (Portfolio – paper 5.3). Communication is seen as an essential element in health care to be able to treat one’s patient and to share experiences with others (Portfolio - paper 5.1). Therefore Mode Neutral uses this to its advantage. Communication is one of three critical dimensions in Mode Neutral pedagogy; Communication for Learning is perhaps best described as the driving force behind establishing the knowledge community and harnessing of collective intelligence (Portfolio – chapters 2.1, 2.2, 2.3).

3.1 Dimensions

In my early Mode Neutral paper, Smith et al. (2008), I applied a formula to the model and described the interconnectivity of three dimensions. Student Experience (SE) = Role of the Tutor + Curriculum Design + Communication for Learning. The formula is represented in the diagram below and highlights the importance of actual dimensions in promoting a flexible learning experience where students can form their community of practice and use distributed cognition to make sense of the experience. In Portfolio – Papers 5.1, 5.2 and 5.3, Curriculum Design (CD), Communication for Learning (CL) and the Role of the Teacher have equal weighting in the trio of dimensions in Mode Neutral pedagogy.
Neutral. If one dimension is absent or weaker than the other two, the learner will not gain a full experience (Sherratt, 2008). Disheartenment and disillusionment start to manifest among learners feeling something is not right in their learning experience.

![Diagram](image)

Figure 4: Graphical representation of the formula in Mode Neutral Learning and Teaching.

The graphical representation highlights the importance of a balanced three dimensions providing the overall feeling of active engagement by educational staff and the learners. The formula linked to one delivery mechanism such as on-the-ground, workplace or online. Moreover, it is universal and applicable to any learning experience.
Figure 5: Graphical representation of Mode Neutral dimensions

Curriculum design (CD)

Healthcare settings are environmental spaces that have high risks and can lead to the wrong treatment being delivered and in some rare circumstances lead to life-threatening consequences. Therefore educational content must be designed in such a way that it will provoke and arouse curiosity within the learning experience, and lessen the risk factors in practice. (Arbaugh, 2007). Mode Neutral is not an instructional design model, but it does have a guided path of traditional linearity found in virtual learning environments (JISC, 2004). However, the designing of the ‘bite-size’ content, the unit of learning, allows learners to make other synaptic connections with the content, context and the community (Knowles, 1975). Advancing learners
critical thinking occurred in the initial research of Mode Neutral where learners adopted technology to widen the life experience by connecting with those in the different learning spaces. The technology provided flexibility for the learner to remain connected in a global community (Reason and Bradbury, 2006). The CD dimension is not restrictive, and old and new technology can contribute to the development of knowledge through learner cooperation and collaboration. Smith et al. (2008) suggested a hierarchy of their work and believed there were conditional elements that support the integrity of the three-dimensional aspects. Table 3 demonstrates the active condition for each of the dimensions. Weakness in the student experience can occur where any of the conditions are absent or poor performing.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Role of the Teacher (TR)</th>
<th>Curriculum Design (CD)</th>
<th>Communication for Learning (CL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions</td>
<td>Promote communication, Intimacy between learners, shift in ownership for learning.</td>
<td>Chunking of content, Pool of reflection.</td>
<td>Anchored instruction, Promote behaviour-modelling, Intelligent dialogue among learners,</td>
</tr>
</tbody>
</table>

Table3. Illustrates the active conditions that maintain the integrity of each of the Mode Neutral dimensions.

**Role of the Tutor/Teacher**

In Mode Neutral, Smith, et al. (2008) describe this dimension as behavioural modelling. The learners are equals and co-learners in the environment alongside their tutor which is in direct contrast to traditional tutor-centred teaching approaches (Biggs and Tang, 2007). The tutor varies their input and human actions with the condition to promote proactive behaviour, clarifying meaning and challenging cognition. Also, the tutor plays a co-learner role too by the storytelling narrative of their practice; in
particular they describe the cognitive, psychomotor and affective elements to their decision-making. From Portfolio – Paper 1, Participant J describes their Mode Neutral experience with particular emphasis on the tutor’s role as guiding (Portfolio – citation 3.23):

“I think inevitably whether a class is virtual or face to face, there is an element of needing to be led, you still need to see leadership, like a chair of a meeting, you still need someone to guide you to provide you the framework.” (Participant J)

Wenger (1998) described this role in their building of communities of practice. They described how one person might nurture the group while the locus of control remained with each member. This appears to be the very intention in Mode Neutral; the tutor focuses more on instigating, developing and forming a learner group that is self-regulated and sharing cognitive learning (Rhoden & Dowling 2006).

**Communication for Learning**

In a post-industrial society where there is greater access to digital devices and the Internet, learners adopt those technologies for social, work, and educational reasons (Breen et al., 2001). Mode Neutral recognises that ubiquitous technology is here to stay and plays a vital part in knowledge acquisition. This flexibility and accessibility allows learners to debate and cultivate higher-order intellectual skills. Mode Neutral uses anchored instruction in its design to fuel conversations among the learners. Political, societal and ethical debates are illustrated in their case study of a Mode Neutral cohort of healthcare learners. Smith et al. (2008) maintain this is an anchored
instruction containing predictive behavioural responses, unlike Jonassen’s (2000) belief in activity theory. Anchored instruction stimulates conversation, debate, and criticality for storage in the long-term memory (Atkinson and Shiffrin, 1968). While in Portfolio - papers 5.1, 5.2 & 5.3, the discussion of successfully balanced Mode Neutral dimensions promote what appears to be an increase in student motivation, expectations, and achievements (Portfolio – citation 3.1); they describe the possibility of other conditions underpinning their model. In this regard, the next chapter highlights the research findings from case examples highlighting the emergent themes.

3.3 Chapter Summary
The chapter has re-presented Smith et al.’s (2008) thoughts and views on how Mode Neutral provides a new model of learning with the learner at the centre of the construct. Traditional tutor-centric teaching praxis is superseded by the growing demand by students to have a flexible curriculum affording them the opportunity to learn in different spaces, both online and face-to-face contact using ubiquitous technology. Mode Neutral is reported to be a flexible scaffold with dimensions becoming the pillars of success in the student-centred experience. A coherent link between these dimensions and conditions which provide the on-going maintenance of the lifewide learning experience. The transmodal movement from online, to the classroom or blended learning, provides greater access and social mobility of knowledge applied to employment. While Mode Neutral is deep-rooted in scaffolding, constructive alignment and other historical published work, it too needs to be understood more for how it develops self-concept and self-efficacy in learning.
Chapter 4 – Mode Neutral in practice

There continues to be copious pressure for reshaping and refining health education (DH, 2013; Attewell, 1999). To understand those changes and pressures, one must critically analyse those demands and role advances to comprehend how today’s nurses and other allied health professionals’ education address public demands for better care. This is not limited to the health context. Moreover, Miller (2011) believed Mode Neutral provided an opportunity to transform teaching by allowing greater flexibility for the learner (Portfolio – citation 3.1). In their University of Illinois studies, they concluded Mode Neutral encouraged the development of a specific learning skill – a ‘way of being’ (Miller, 2011: p 462).

The critical question is what characteristics, conditions and influences are extant in the evolution of education, including nursing and the wider healthcare education agenda promoting a way of being? Moreover, have they brought about the demand for flexible learning (Keefe and Wharrand, 2012)? That is, education that can be delivered remotely and in situ in the employee’s workplace allowing learning to occur at the most convenient time and place (Manuti et al., 2015). Miller (2011) found learners would readily adapt for flexible learning through Mode Neutral style courses. Eighteen per cent selected on the ground learning while the remaining 82% preferred a distance or hybrid blend to their learning. In this regard, Smith et al. (2008) believed Mode Neutral pedagogy unifies the learner experience from distributed cognition irrespective of the modes and affords the learner the opportunity to strengthen their inner self and sense of being. It is this point that has led me to question my own statement whether Mode Neutral is as a justified true belief on the learners’ ability to study at a deeper level. During my application of Mode Neutral, I suspected whether
the model was reliant on my personality to inspire the learners, to acquire and make sense of shared knowledge. Smith et al.’s initial belief was to create a balanced curriculum between content, the role of the tutor and the sharing of information among the community of learners which lead to active and deep learning. To a certain extent, this correlation between the curriculum and the learner’s achievements were justified by the results. Although this belief may have been right when I facilitated the learning experience, it was not okay to believe every time the model was applied it would have the same outcome. While my application of the model did provide the same result, this may not have been the case for others using Mode Neutral. Although Smith et al. believed Mode Neutral led to deep learning, the question I wish to explore was, did every instance of Mode Neutral conclude with the same results. I have questioned if all Mode Neutral experiences are valid and justified in the co-creation of knowledge with the learners.

My own belief is true: when I use Mode Neutral in a learning context, I believe I will get deep learner engagement. In the examples where I have facilitated learning and witnessed the learner success, I would naturally say this is justified. However, I recognise there could be a degree of unconscious bias from myself or perhaps across all Mode Neutral authors. Therefore, I have explored how other academics have integrated the model to their teaching and reported on similar or not so similar outcomes to my studies. I realised there was merit in believing the model had transferability to other disciplines, subjects or contexts, but to accept this notional a true, it was necessary to gather evidence on whether Mode Neutral can produce the same useful learning experiences every time it was applied in higher and professional education.
An extension of the original grounded theory study undertaken by Smith (2008), a series of case examples was undertaken to investigate the real-life experience (Yin 1983) in Mode Neutral. There were three stages to each of the examples undertaken. Stage one focused on setting up the exploratory study of the learner's experience, and Stage two involved a structured questionnaire and focus groups based on the five thematic elements arising from previous Mode Neutral study data: identity, presence, co-presence, emotional intelligence and immersion. Analysis followed in stage three with the overarching findings reported in the following narrative.

**Ethical Considerations**

Ethical approved was granted and classified as an evaluation of impact. Informed consent was obtained from each participant in his or her action to continue to complete the online questionnaire. Verbal consent obtained from the participants before recording the focus groups interviews. The Data Protection Act and corporate governance were adhered to in all case examples.

**4.1 Identity**

The UK healthcare sector raises important issues about how to educate and train staff to embrace new knowledge and ways of working. Despite this known activity, there is a lack of awareness and appreciation of how constant change affects the mindset of healthcare individuals. We need to appreciate what equips them to handle the rapid pace of change (Price, 2008). Coping with change in the workplace is mentally and physically demanding. Change is an inevitable part of life, yet not
everyone can cope with this, and this causes inflexions in how change is cognitively processed. Without acknowledging feelings, change can cause counterproductive behaviour and increase workplace stress and cognitive overload (Khalil et al., 2005). In isolated cases, a person may begin to lose their internally perceived 'identity' and feel less valued in the workplace. This particular theme emerged in Portfolio - paper 5.1, 5.2 5.3 during the interviews with health professionals. They reported that they were unsure of their boundaries and role when asked to undertake duties that were previously undertaken by medical colleagues.

Erikson (1968) was fascinated by the term identity, where individuals’ would incessantly internally ask themselves, ‘Who am I?’ This core aspect of themselves is often reconciled through attempts to individualise ourselves from internal and external attributes. For example, internal attributes may include values and belief systems, compared with external attributes as to how we present ourselves to the outside world through our behaviour. Jung (1934) believed the unconscious masculine characteristic within a female, the animus and the unconscious feminine element of a man, the anima - gave greater definition to our identity as human beings. These pre-existing and perhaps pre-determined arrangements contribute to the shaping of personality and identity.

4.1.1 Case example – Healthcare students.

In this example, I attempt to remove any conscious or unconscious bias by not advising educators in how to apply Mode Neutral; I left it to their interpretation of Smith et al.’s (2008) publication. The findings from the case example were identified
and compared with previously published data on each of the themes. One hundred nursing students in their second year of studies were asked to complete a questionnaire relating to their learning experience.

The nursing students participated in a Mode Neutral experience from different geographical locations. On average 23% of the student group attended on-the-ground classroom sessions at their university, while 47% remotely contributed from the workplace and 30% varied their attendance between classroom, online and remote workplace. At the commencement of a twelve-week period of study, learners were invited to complete the online questionnaire (Appendix 2). One hundred nursing students returned the completed questionnaires to their module lead. The data were analysed and plotted on a scale of 0 to 5 points to show the individual profile. A recorded group profile showed the mean average to be between 2.7 with a tolerance of + or – 0.2 on the scale. Blue anchor points were plotted on all five theme areas and joined up.

![Image of a graph demonstrating initial 'anchor' points before learner engagement.]

Figure 6. Demonstrates the initial ‘anchor’ points before the learner engagement.
In this example, and in all the case examples, the same questionnaire was used at the pre-module and post-module completion stage. At the post-module stage papers, the participants who provided qualitative comments on the questionnaire, and attended classroom sessions spoke freely about attempting to work together as a cohesive group. A small group of learners with strong healthcare identities took a passive role in the classroom space but had a more significant presence in the online space. The evidence indicated the learners were more reflective and considerate towards others when asked to contribute to the discussions. In the follow-up focus groups, participants talked freely about their identity through a shared code, such as sharing the same registration body - Nursing and Midwifery Council. When asked about their perceived identity in the Mode Neutral learning experience they emphasised they were nurses acquiring new knowledge.

Three learners saw their identity as constructs of their credentials, achievements and how their extrinsic items, such as studying when wearing their healthcare uniform reinforced their perceived and internalised identity (Peachey and Withnail, 2011). For some, a matured crossing down construct (Isdale et al., 2002) helped them quickly form an online identity through their profile in the cyberspace compared with their attire in the physical space. In this module, the healthcare staff strongly indicated their identity in the real world was well established and supported the division of labour between the workforce (Morgan, 2010).

Mennecke et al. (2011) described this association between identity and presence as Embodied Social Presence (ESP), a phenomenon that creates that being there
feeling. When the nursing students were invited to comment on their current experience to previous studies, they remarked they found greater connections with people in the group. One student remarked:

“…..when {name removed} said she was unable to attend [sic] next week, I gathered my thoughts after the session and wrote a reflective post in the coffee room to help her catch up.” (Participant TT_{2A})

In this particular group, students would often comment on how much they enjoyed being online and seeing people in class. While the commentary suggests there is a focused connection between the students, it is not clear if the social glue is emergent from personalities, technology or the use of communication across the learning experience (Churchill and Bly, 1999; Herring et al., 2004; Harrison, 2009). However, the student comment “something is different in this module, we seem to be much closer” (Participant X_{6A}) perhaps was attributed to the design of Mode Neutral (Portfolio – chapter 2.2).

The ESP theory helps us understand how identity and immersive tendency theory can or has played an integral part of collaborative, active engagement designed in this Mode Neutral module. This is not dissimilar to Lave and Wenger’s (1991) narrative on Community of Practice (COP). CoP contains three components, the domain, the community and the practice where the activity can be achieved in different settings and online environments. Communities of Practice are often attributed to classroom teaching where the three components can be controlled and nurtured to deliver an outcome. This is evidenced in the Portfolio – endorsement 4.3 where I mentored colleagues at Birmingham City University in their design of online

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modules. Appleton et al. (2006) believe there are multiple components to engagement in a classroom environment, which include the learner’s behaviour, sense of belonging, and role within the gathering.

In the Mode Neutral experience, students sensed they had a common identity, with a profound sense of connection with one another that led to the formation of a group that supported each other in their knowledge acquisition. Whilst this outcome is what every academic would strive to create, it was unclear if the connection between the two themes of identity and immersive theory were simply attributed to the Mode Neutral. The results from the post-module stage questionnaire were recorded to show the group profile below.

![Diagram showing 'anchor' points after learner engagement in Mode Neutral – nursing students](image)

Figure 7. Demonstrates the 'anchor' points after learner engagement in Mode Neutral – nursing students

The results suggest the group identity remained consistent throughout with inferences on becoming immersive in the experience. The common identity, and the flexibility to decide when and how they attended contributed to the ‘glue’ between the
nursing students. The groups’ emotional intelligence appeared to be uplifted and was attributed to comments such as:

“Online you can see what other people are thinking. And just have more time to think about it, and if you actually want to make a comment, you can leave a couple of hours and think about what you want to say and then write it. In the classroom you cannot do that; you just come out and say it. Sometimes it is not the right thing and upsets others” (Participant Y3 A)

This particular group emphasised how they believed they were more confident in their practice because they were able to exert their identity. This manifested from the ongoing digital interaction between the group using Facebook and SMS text messaging. A follow-up discussion with the employer group who were involved in the design of this programme indicated learners had different behaviours and attitudes in the workplace. Learners were more engaging and with a calm, professional disposition in practice (Portfolio – endorsement 4.6).

4.1.2 Case example - Biomedical science graduates

In this case example, I advised academic colleagues on how to design and use Mode Neutral in their practice. The secondary role I played in this example was to collect and interpret the data from the completed questionnaires.

Concurrently, twenty-one biomedical science graduates working in the pharmaceutical sector undertook further learning at their employer's request through
the Science Industry Partnership initiative. All students were enrolled on a postgraduate chemical formulation module in a UK University. All students were invited to complete and returned the pre-module and post-module online questionnaire. 2 post-module focus groups took place in 2016. Biomedical science graduates took part in a Mode Neutral module tailored to meet their employment competencies (Kenyon & Hase, 2010). This module was partially delivered online with occasional study days at a UK University.

The students in this twelve-week period of study completed the same questionnaire issued to the nursing students. Results were plotted against the same 0 to 5 rating scale and compared to the nursing profile. The pre-study questionnaire illustrated low identity for this particular group, and when discussed further in the focus group, students commented on how they had not been part of the decision process to undertake this module. In the figure below, there is a strong presence, but this does not necessarily suggest someone has a strong identity due to the forced nature of attendance.

Figure 8. Demonstrates the initial group ‘anchor’ points before the learner engagement – biomedical science graduates
One participant commented:

“*My employer has sent me to do this course. I cannot attend all the time, so I will have to do some online in my own time. I don’t know where I am going to find the time. They should give me more support, but we don’t have the staff.*”

(Biomedical science participant A\textsubscript{11}B)

Therefore the starting point for the biomedical students compared to the healthcare students was different. In the qualitative narrative, in particular, the biomedical students believed they had no control over what was taking place.

At the end of the 12-week period, all participants were invited to complete the same questionnaire based on their learning experience. Sixteen biomedical science graduates attended the focus groups. In contrast to the nursing students, twenty-one biomedical science graduates were unsure of their identity because of the employer-driven desire for them to undertake the educational experience (Portfolio – endorsement 4.5).

On average 68% (n= 11) attended the university-led workshops, while 31% (n= 5) did not. A total of 13 learners participated online at different times during the 24 hour day. No interaction was recorded on any given day between 3 am and 5am. Biomedical science graduates profile witnessed a remarkable rise in their identity formation (figure 9). Participants in the online activities commented on how there was a respectful culture among them all. The acquisition of new knowledge also helped one
participant make sense of what he was doing in the workplace. He appeared to internalise his self-value and worth when he stated: “I have been doing it the correct way for years without realising why.” (Biomedical science participant S₄B)

![Figure 9](image)

Figure 9. Demonstrates the ‘anchor’ points after learner engagement in Mode Neutral – biomedical science graduates

In the Mode Neutral experience, biomedical students started with lack of control and autonomy over why they were participating in the learning. Interactive elements and sharing experience supported the students to find their common ground and develop in-group values (Maio, 2016). The affiliation between identity formation and emotional intelligence uplifted the positive mood expressed in a student comment, “I am glad I have participated in this group, I have learnt so much from all my friends in this group.” (Participant E₂B)

It seems in both these case studies that the design and application of the Mode Neutral style module draws on the dominant principles of identity to act as a catalyst for developing human values. Perceived identity in the second example appears to influence reality and therefore has an adverse effect on ‘thing’ formation when a
learner has no control of their reason for learning. If pedagogical models are designed to encourage the reshaping of the pre-module views or reinforce identity formation, then this creates a chain reaction on presence and willingness to engage and build a sense of being.

4.2 Presence

A single definition of Presence does not exist. However, there are several useful descriptions of the work of Heeter (1992), Sheridan (1992), Slater (1999), Witmer and Singer (1998) and others. In this paper, Presence is referred to in the way we exercise our identity by voicing our thoughts outwardly to others. Proximity to others and time spent ‘being there’ engaging with one another creates both a physiological and psychological ‘feeling’ of being present or existence. Schubert et al. (2001) believed presence is connected to the concept of immersion best described by Slater and Wilbur (1997) where good experiences can stimulate the vivid illusion of reality (Brett, 2004). It is best described as an important sensing element of human cognition that arouses curiosity in any space as well as those which are technology enhanced. Moreover, presence is the constant exercising and shaping of one's identity based on the returning feedback we receive from a community of practice. This was evident in the biomedical science group in particular how they discussed their profession and how they felt their mode neutral cohort had extended their insight into knowledge sharing as a community. Data collated from the healthcare case examples highlighted the learner's desire to be there and exercise their presence in their studies.
4.2.1 Case example – healthcare students

Looking back at the 100 nursing students, one participant commented on their previous experience of higher education study;

‘As a mature adult studying to be a nurse, I felt I was spoken down to by the tutors. This left me feeling uncomfortable and frustrated to be treated like a child again’. (Healthcare student T21A)

From this comment, we can assume the individual’s identity has been compromised by the unwanted human values exerted upon them by others. The mature in their narrative suggests they know who they, and their lifewide experiences shared their identity. Nevertheless, their recent experience has introduced a disruptive element causing them to question what is taking place (reality) and who are they in this experience (thing characteristics), perhaps this is a Mezirow’s disorientation to transform their identity.

Considering their answers in the post-module questionnaire, the student had an average identity (n=2.4) with a strong presence (n=3). This was later, evidenced by the higher number of online discussions she was involved in. Given this person was continuously engaged in the discourse, it can be suggested they have a strong sense of presence. However, the negative experiences exerted by someone’s co-presence, caused the learner to self-question their autonomy and control in their learning. This disruption created a pause moment where the learner began a self-analysis of their identity. This was evident in the narrative where they had expressed “I have been a
healthcare assistant for 12 years and brought up two children, and in my experience I have never…” (Healthcare student T22A)

Presence in an on-campus education experience is rarely discussed in the pedagogical design of the curriculum. Bloom, Maslow, Gagne and Biggs’ theoretical models, have paid little attention to the importance of Presence in a learning experience and how Presence alters in a hybrid model of learning in physical and online experiences (Garrison & Cleveland–Innes, 2005). A concerted effort was made by the group to balance the views and remove any disruption. An interesting comment shared by one student was, “…we are all different, and our thoughts help us understand things better. Respect is part of my NMC code and applied anywhere at any time....” (Participant L3A).

This dictum is a reinforcement of an individuals’ values and their sense of being, formed on them making sense of what has taken place, what they believe in and why they wish to continue to be part of the group identity (Buy in).

Sheridan (1992) believed in three sets of ‘sense of being’; (1) A sense of physical being – physical engagement in space and place; (2) A sense of cognitive being – ability to construct meaning through constructionism (Papert, 1991) and (3) A sense of emotional being – emotional response to stimuli. Heeter (1992), Sheridan (1992), Slater (1999), Witmer and Singer (1998) and others. Shroeder (2006) believed presence is a cognitive sense of being inside the virtual world where the learner interacts and conducts activities as they would in the real world. Participant L3A
demonstrated this in their online narrative and reinforced it when they participated in the follow-up focus groups.

Like Schroeder (2006), Schubert et al. (2001) believed presence is connected to the concept of immersion. Slater and Wilbur (1997) stated technology could stimulate the vivid illusion of reality (Brett, 2004) and is an essential sensing element of human cognition arousing curiosity in the virtual space. According to Shea et al. (2006: 177) ‘teaching presence’ does have a direct correlation to the higher levels of online community engagement and outcomes that occur from an ‘effective design, facilitation and direction of cognitive and social processes.’

4.2.2 Case example – Professional bodies

As a practising Operating Department Practitioner working alongside medical, nursing and support service colleagues, I continue to explore the impact of Mode Neutral as a social pedagogy in where it could build inter-disciplinary relationships within the healthcare fraternity. In this example, I spoke at several conferences about Mode Neutral pedagogy (Portfolio – presentation 6.1, 6.2, 6.3 & 6.4) and then later embedded the model into clinical practice through presentations, nurturing behaviour and leading from the front in hospital settings. The principle message in each of the presentations was that Mode Neutral appeared to create a scaffold for individuals to develop their sense of reality leading to learner buy-in. Attendees adopting Mode Neutral frequently commented that once ‘buy-in’ was established then individuals irrespective of where learning took place were more likely to be pragmatically engaged.
In the educational context, I advocated that Mode Neutral’s ‘pool of reflection’ reinforced Biggs constructive alignment while encouraging the learner to own the learning experience (Lefoe, 1998). I took this notion of reflection, and the dominant principles I believed were emerging from the other case examples and tested them across a sample of professionals. In my Trustee role of the professional body, the Association for Perioperative Practice, and their Perioperative consultancy role, I delivered leadership workshops to healthcare colleagues (Portfolio – presentation 6.4). Each workshop and presentation delivered to the NHS and Private sector health providers were constructed in a Mode Neutral design using identity, presence, co-presence, emotional intelligence and immersion as a tool to build the social glue among the participants and intelligence (Mayer et al., 1999). From each of the evaluated sessions, participants highlighted I gave encouragement and respect for the complexity of perioperative practitioner’s work. A comment from Participant F_2C_x
drew attention to how the pro-active use of the dominant principles can be used to build learner’s buy-in; “I was surprised that I was part of the discussion during the day because I am normally TALKED AT, rather than asked how can we prevent Never Events taking place”.

Participant G₁C₇ from another workshop said, “Writing our morning thoughts on the post-it note and placing [sic] them in the locked cupboard was really helpful because I could focus on working with patients, rather than other distractions in my head.”

The workshops led to several participants asking if they could try the dominant principles – Five Levers™ – in their practice. Adopting the Pool of Reflection model, the follow-up sessions with participants in different London hospitals, brought about anecdotal evidence that “people seemed more motivated and engaged because they had worked out why they were there” (Theatre Manager, South London).

In this regard, the Five Levers™ questionnaire completed by perioperative staff provided initial diagnostics on whether people felt they were consciously present in their department’s activities. They reported back that they had more control over their activities which medical staff reflected staff appeared more confident at work.

4.3 Co-Presence

Emotional being is an integral element to Co-Presence. Co-Presence is the third theme that is necessary to reinforce the participant’s emotive view of being there and their maintenance of buy-in to the activity or event. Co-presence in this critical commentary is perceived as a cognitive element where connectedness presents itself with ebb and flow of communication back and forth the community of practice.
participants. Feedback is the predominant element in the communication, and desirable to the evolution of identity (Kosmala, 2007). Johnson and Levine (2008) believed that people interacting with social groups led to community interaction and increasing skill levels.

4.3.1 Case example – Co-presence in healthcare students

Co-presence is fundamental to healthcare groups where a community of inquiry with a common desire to resolve the problem can form (Shields, 2003: Dewey, 1938a). More specifically, patients entering into the operating department environment are extraordinarily vulnerable and potentially face complications or adverse reactions to anaesthesia or surgical intervention. When incidents occur, the community of inquiry naturally forms due to the skills and knowledge identification among the perioperative team (Bleakley, 2006). For example, the colour-coding of garments make it much easier for the clinicians to visually identify what skills are available within the perioperative team and promote safer surgery for the patient (Aubusson, 2017). Co-presence is not limited to either the online or physical environment (Temple, 2007; Temple, 2008). Moreover, co-presence is both cognitive and behavioural in the health setting where closeness to others gives confidence and incites collective reasoning in decision making (Colman et al. 2007). Self-awareness of feelings and building of relationships in a clinical context is essential to recognise. Equally, shared values and principles within the knowledge communities’ form as a direct influence of the dominant principles of the Five Levers™. In my Portfolio - paper 5.4, they found reflecting on one’s experience using Kolb’s (1984) experiential learning cycles became a baseline for understanding how attitudes and behaviours affected others in the healthcare culture and climate (NHS Leadership Academy, 2013). In the
previously mentioned case examples, the nursing students and biomedical science graduates demonstrated sharing of information and respectful challenging of each other’s views. Several students remarked how the friendliness in the online discussion reminded them about sharing information with their friends. One participant asked if the nursing group would allow her to add them as ‘Facebook friends.’ Close proximity to others in the same space is felt through a depth of field created in the sense of reality supported by the ‘thing’ characteristics of shared values, behaviours and expressions. In an online learning environment, the perception of the avatar creates the cognitive belief a real person is standing next to them rather than a façade (Sheridan, 1992; Slater, 1999; Biocca et al. 2003). In clinical practice, the healthcare professional’s identity is evolving despite the stereotypes created through colour-coded attire. In the inter-disciplinary team, the nursing students narrative suggests individuals seek to continually re-establish their co-presence by redefining their identity voice or engagement.

One participant described how they felt a higher emotional awareness when a patient gave birth to their child. The participant E3A remarked, “when seeing a child born in theatre through C-section, I realised the enormous responsibility I have for caring for mum, dad and baby.”

This acute awareness of a new-born appeared to re-calibrate the participant’s self-identity and their co-presence responsibilities for the care of three people.
4.3.2 Case example – Biomedical Science graduates

In my first paper (Portfolio - paper 5.1), I wrote about how healthcare professionals should continue to be aware of their emotional reactions when self-regulating their professional identity. Complex birthing scenarios such as the one described earlier require cognitive processing and intact buy-in to influence the outcome (Portfolio – citation 3.2). Simulation, role-play and online learning assist the acquisition of knowledge, and behaviours (Ginsburg et al. 2003, Brannan et al., 2008) The integrity of a practitioner’s co-presence is dependent on their initial formation of buy-in and formation of their identity and presence within their praxis.

In the study involving the biomedical science graduates, one person wrote: “I strongly disagree with your view on how the Nano cells react to stimuli, do you have any scientific evidence …” (Participant D9B). This individual is taking a power stance against their co-learner and re-freshens their own identity during the learning experience. The same participant uses the end of note sign off, ‘I do respect we all have opinions, I may have misunderstood your point’(Participant D9B). This is an exciting dialogue as it may have been an initial exertion to refute to an external locus of control by another. The participant may have felt they were not as autonomous as others in their learning and were projecting their frustration of not being in control. However, the end signs of comment suggest there has been some reflection in the narrative where the individual may have self-questioned their belief or previous understanding of the subject. In the follow-up focus group a participant avowed, “I felt I could develop my engagement more with the group, because of the respect for shared views.” (Participant F4B). In this regard, the graduate students buy-in led
them to develop the first two internal stages of their identity, and willingness to be present in the learning experience. This led to altruistic behaviour for somewhere they were willing to share information not expecting to receive, shared feedback helped them continue to maintain their identity and build on their knowledge and understanding.

4.4 Emotional Intelligence

Emotional Intelligence is perhaps the most complex element in the dominant principles of the Five Levers™. Emotional Intelligence (EI) is the awareness of self-emotions and innate abilities on how to control behavioural responses in any situation (Mayer et al., 1999). Different EI models exist and are applied to different learning contexts. This thesis is focused on the Goleman (1998) mixed model of behavioural traits in the health sciences. Emotional Intelligence is often argued as a learned behaviour rather than acquired from human genetics. EI requires reflexivity, critical thought, and congruent foundation of an individual’s sense of reality, thing and being before they can be useful in their actions. Careful analysis of behaviour in healthcare affords practitioners the opportunity to create schemas required when dealing with complex or challenging situations. Authenticity in healthcare practice is also essential because consistent messages expressing clear meaning and values, without emotive responses are effective in reducing risks for patients (Birks and Watt, 2007). The Rogerian theory would describe EI as the approach to the creation of self-determined behaviour; however in the Five Levers™ it is the conscious awareness of how the other dominant principles influence your EI and how you perceive the situation you are in.
4.4.1 Case example – Healthcare students

In this case example, I declare I was the designer and tutor on the anaesthesia module. In this example, I attempted to remove any conscious or unconscious bias by inviting the students to complete the Emotional Intelligence questionnaire as part of their studies. The findings from the questionnaire were then contrasted to the observed activities in the classroom and online discourse. Thirty-five participants, 17 qualified nurses and 18 Operating Department Practitioners working in the Operating Department enrolled on a Continuing Professional Development module.

All students participated in a Mode Neutral experience, with eight selecting to interact online from enrolment. The remaining 27 opted for on-the-ground classroom attendance. The emotional intelligence question was scheduled in the programme of study during week two (Unit of learning 2). Each student saw their responses whilst the tutor saw all the responses.

Following completion of the questionnaire and during week 3, a significant change occurred witnessing 15 of the 27 classroom attendees choosing to study online. Twelve students continued to attend the classroom sessions for the duration of the module. Sampling those who selected a different mode of learning highlighted when they completed the emotional intelligence questionnaire, they felt more in-tune with their identity and confident to learn at a distance. Participant H5C remarked, “When I first started I was nervous about joining a new group. Looking at the EI questionnaire, I realised that I had fitted into the group and could still do the study online with them.”

A comment from another student showed their heightened awareness of the difference between online and classroom education:
“if you want to make a comment you can leave a couple of hours and think about what you want to say and then write it. In the classroom, you cannot do that you just come out and say it.” (Participant P96C)

Their emotional intelligence profile encouraged them to look at the situation and determine if an immediate response was required. One student expressed they were unsure if they were contributing enough to the online discussion. The comment “I am contributing to each unit, but we have no idea if we are contributing enough” (Participant I21C), hints at the student may be trying to calibrate what the group's acceptable amount of contribution to the discussion. This is an exciting group norm being instigated by the student to create a buy-in status for all subconsciously.

4.4.2 Case example – Biomedical science graduates

Group norms were also visible in the biomedical science graduates. Their responses and behaviours, albeit tainted by their lack of autonomy in the choice to study the module, they showed a willingness to try and establish what acceptable levels of engagement were. The participants discussed their emotional responses to ‘being sent’ on the course, which consumed the learning time of the first two weeks. During my observation of the sessions, there were visible signs that the learners were unaware of emotional intelligence and expressed negative views and attitudes towards the course. The tutor continued to deliver the subject material and over three weeks they showed less negativity towards their employer and greater engagement in the learning process. This indicates the students had not developed their buy-in to the learning experience and their sense of reality was impacted and consumed by ill-
thoughts towards their employer sending them to the course. During week three, once the students had become exposed to content, they started to reshape their thoughts and identity towards ‘getting on with it’ (Biomedical science participant F3B student).

Besides, the findings from my previously published papers, participants did show awareness of their emotional intelligence when talked over. One participant believed this action of another to “take away their right to express their opinion” (Healthcare SS4A). This is an EI misalignment between the sender and the receiver of the communication. The sender appeared to be unaware of how they were projecting themselves; the receiver assumed the action of the other participant was to dampen their identity. The data captured suggests this individual contributed less to the classroom and the online community. I argued here that harnessing the collective intelligence from the group is a critical element in the pedagogic design of learning, but equally as important is the dominant principle to create a space where all can learn together. Acquisition of knowledge is not discrete and separate from the emotions; values encased in the message or transferred knowledge. Race (2005) advocates that we may think we have acquired the know-how, but it is when we apply it to a given situation then we can appreciate how much or little we actually know or perhaps can do. Kolb encourages us to reflect on what we do, to make sense of the experience and how active we were in the activity (Teekman, 2000). These are all elements of emotional intelligence in our praxis; self-control of learning, willingness to engage and share the experience is critical in not only our identity formation but in our motivational levels (Block, 2007).
4.5 Immersion

Immersion according to Witmer and Singer (1998: 2) ‘it is the psychological state characterised by perceiving oneself to be enveloped by, included in, and interacting with an environment that provides a continuous stream of stimuli and experiences.’ Similarly, Slater and Wilbur (1997) describe it as “being there” in an online environment over the real world existence (Heeter, 1992). In child psychological development, immersion is the ultimate goal of creating playful learning environments to engage the child in meaningful and purposeful activities shaping their knowledge and understanding. Careful consideration of play therapy is inherent through all critical stages in the Early Years Foundation Scheme, as it is the bedrock of the child learning experience (Fisher 2013). Differentials between play and work led activity mapped against a learning outcome. While play is an exploratory self-driven (child) activity, work led activity is remarkably opposed to it on the immersion scale. In adult learning (Canning, 2010; Canning and Callan, 2010), in healthcare, immersion is an important concept in building the “bricks and mortar” of the support culture to bring about positive interprofessional learning (Morton, 2012). Similarly, Engstrom et al. (2016) found that immersion can be essential to enhance learning in a given context. In short, immersion is viewed, as the ultimate state of mind that educators strive to create for adult learning, yet I wonder how the dominant principles interconnect to support the immersive state?
4.5.1 Case example – Immersion of Higher Education learners

In the follow-up to the health studies, immersion was measured by gathering data on physical attendance, online engagement and questions raised during the focus groups. While the literature continues to show a direct correlation between classroom attendance and learning gain, it has also been shown in flipped classroom design learning (Foldnes, 2017), but not across multiple modes of learning.

A Mode Neutral design has similarities to the flipped classroom in that it creates social learning opportunities from its central tenet of social-construct theory. The discovery of the dominant principles lends themselves to building interaction with peers, tutors and sophisticated content. The claim Mode Neutral encourages ‘learner buy-in’ is, in fact, correct because the data gathered from the Healthcare students indicated learners were spending on average 4hrs 05 minutes per week on their learning. The multi-format design went beyond educational experience and became more of a social space where free speech could be exercised. Social media users found similarities and liked the approach because they ‘always felt connected.’ Others considered and reflected on their new knowledge while working in the clinical setting. They were able to show Mode Neutral’s structure of Units of Learning containing activity and discourse’ led to the workplace reflections using somatic memory to recall information helping them make decisions about their praxis (Mottaghy, 2006). Nursing students commented on how discerning they had become and considered patient information more thoroughly before making any decision about their care. Prospection in their thinking assisted in their conceptual awareness of self but more importantly in how they viewed the world around them. In a secondary healthcare module where Mode Neutral was applied, and the application of the dominant
principles led to students spending 38.25 hours over a ten week period. The time spent in the learning space was compared and contrasted with another Mode Neutral course in a different university. Data sets from both courses were identical showing students were immersed in their learning throughout.

4.5.2 Case example – Immersion of the Biomedical science students
In the study with the biomedical science students who had been ‘sent’ on the education programme, there was an altered immersive state for some learners. The figure showing their starting point to the education experience illustrated a high immersive state. During the analysis of the initial data, it was noted the learner’s interpretation of being sent by the employer created a negative state for them, and they became consumed by the lack of control and their autonomy being removed. The immersive state of negativity showed a 2.9 on the immersive state by a downward turn on their emotional intelligence. This was evidential in the qualitative narrative shared with peers, some learners frequently spoke in the first person ‘I’, or ‘me’ and showed less awareness of how others were feeling (Portfolio – 8.3).

![Figure 11. Demonstrates the initial group ‘anchor’ points before the learner engagement – biomedical science graduates](image-url)
It is suggested that if a learner does not make a choice when they wish to learn, then their readiness to learn is not intact and it may take them longer to engage in a socially constructivist model of the learning.

4.6 Chapter Summary
This chapter has explored the additional thematic areas that emerged in the early studies of Mode Neutral. The five dominant principles that appeared in my further application of Mode Neutral pedagogy in health care education and professional practice alongside the common themes explored in many Mode Neutral citations (Portfolio – citations 3.1 to 3.27) led to the identification of associated links between identity, presence, co-presence, emotional intelligence and immersion for learners. The deployment of Mode Neutral in the learning experiences supported the learner's quest to acquire information from different avenues (LaFayette Toles 2009). Generating a strong learner-centric locus of control supported the formation of learner identity among their peers.

The development of a pre and post-questionnaire to any Mode Neutral experience arises from the common themes in previous studies. The questionnaires were able to plot the learners' responses to each set of ten optional questions relating to each theme. There were no mandatory questions. Moreover, the learners were given a choice of what to respond to. This information was plotted on each of the themed axes to demonstrate their dominant principles. Observed associations between the principles were then used to shape the learner's experience and measured following the Mode Neutral experience. Notably, each axis was interlinked and levered against or for each other when the learning experience promoted active learning and student engagement – this phenomenon is referred to as Five Levers™.

Chapter 5 – Five Levers™
Dewey (1938b) believed learners acquire knowledge and meaning from being active in conversations, practical elements, or engaged with other sources of information. The principle belief was that if the person (the subject) spent time exploring and storing knowledge about the object, then they were more likely to build a comprehensive understanding of its existence (Piaget, 1964). Assimilation of sensory information provides learners with the opportunity to think and act upon information where their sense of reality was validated. Furthermore, Piaget (1964) believed situations or external stimuli initiated learning. So, tutor-led activities, social experiences or other events triggered the commencement of learning. He also differentiated a person’s development as a natural mental function that built upon previous stimuli and was an iterative process over time. Vygotsky (1986) stated learners build layers of knowledge as they encounter them and make sense of the object. Observation, communication, and engagement with the object can lead to further stimuli or individual development. It appears a fundamental ideology in understanding learning is deep-rooted in cognition, how we react to stimuli, how the knowledge is acquired, processed and found within the skill enacted. Cognition is the mental computation of information acquired through experience, sensory perception or external stimuli. The neurological processing of the acquired information is further re-tuned through additional information from other sources, such as speech and cognitive awareness of the world around us. If cognition is vital to understanding, then learning is not complete until the brain has initiated and ran its cycle of involved processing and checking for truth and belief. Arguably learning is more of an active and purposeful behaviour as opposed to unconscious reactive and reflexive to stimuli. Mises (1949) also commented on the role of modern societies and the importance of knowledge exchange among one another. Contributions from those around us play
a significant part in the cognitive processing of information, in part to check meaning before individuals act on the information. Social Learning draws on the wider contextual aspects including social norms and how others behaviour towards the learning experience. Vygotsky (1978) believed this type of social learning comes before development. If social learning is plotted on a continuum, then it appears to be a sequential path to human praxeology of the learning, knowledge, and exertion of the skills development.

As previously suggested in this thesis, learning is an outcome following the acquisition of knowledge and cognitive processing, but more importantly, it is driven from a purposeful perspective for more in-depth understanding and meaning of things around us. If learning has a direct association with purposeful engagement, then it can be argued prospection builds on previously acquired knowledge and learning (Gilbert & Wilson, 2007). Learning that affords prospection allows for new mental representations to emerge by theorising on possibilities. In turn, this shapes our human thinking, belief and future contribution to the body of knowledge. Prospection is at the other end of the learning continuum where purposeful engagement triggers the chain of events. One needs to question how do learners establish and maintain...
their purposeful engagement along the continuum. Pedagogy is often viewed as an external activity done to learners where teaching practice stimulates the components of the learning continuum. In purposeful engagement, there is an internal dimension independent from pedagogy, where the behaviour of a self-fulfilling prophecy can lead to successful learning and development. Still, disruption in the learning journey does occur from cognitive barriers of expectations of self and others (Bandura, 1997). Likewise, unresolved personality traits, repressed human internal conflicts and others can lead to the oppression of the learner. Friere (1970) discussed the societal influence on how learners were learning during this decade. The knowledge power firmly sat with those who were delivering education to ‘empty vessels’, thus placing the learner in a less purposeful role in acquiring knowledge. Mutual approaches to education were in keeping with Vygotsky’s (1962) belief that learning works best in a community where conscientization arises (Friere, 1970). Indeed, the general expectancies both internal and external can be understood and acted upon as a social movement. Language too plays a key role in developing one’s sense of reality in the social and communicative experience. The use of language and functional communication assists learners of all ages in developing an internal self where confidence, identity and a sense of purpose transpire (Barrett, 1999). Rotter (1966) believed that the locus of control is essential in society but also in a purposeful and pragmatic behaviour of the learner. Having greater internal locus of control is more likely to generate behaviour of self-efficacy and witness learners taking necessary steps towards their future development. Kolb (1984) also suggested that deep-rooted engagement by the learner is more likely to develop long-lasting experiences that shape future development.
The questionnaire (Appendix 2) was issued to the healthcare studies, and biomedical science graduates at the start of their learning experience (within three weeks). It became apparent that learners do enter a pre-learning stage where they first create a sense of reality, development of the ‘thing’ characteristic before they feel part of the experience (being). This is critical to the building up of buy-in, and the preservation of learner engagement throughout the experience using the dominant principles of Five Levers™.

Moreover, it was noted that learners would not be at the same stage in their buy-in and learners may take more or less time to develop their buy-in to the learning process. In Figure 13, the deviations in the time the health care learners invested in this Mode Neutral pedagogical design showed they were becoming ready for learning. Gathered data and anecdotal comments from other educators suggested learners were investing more time in their learning and getting to know those in the community of practice.

![Figure 13 – Development of learner ‘buy-in’ leads to engagement.](chart.png)
Five Levers™ are not restricted to the design element, or technological affordances or the individual’s attributes; moreover, their interconnectivity is significant in allowing the learner to perceive reality and promote an existence within the temporary community of practice. An excellent pedagogical model/framework is one that encourages the choreography between identity, presence, co-presence, emotional intelligence, and immersion, with a positive result of sharing knowledge and building human cognition (JISC, 2007).

<table>
<thead>
<tr>
<th>Stage 6</th>
<th>Outcome</th>
<th>Immersive learning experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 5</td>
<td>Community of practice</td>
<td>High engagement, sharing of practice, reflection-in-action, reflection-on-action</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Lifewide learning</td>
<td>Online Classroom Social media Clinical area</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Social-Constructivism/Community of Inquiry</td>
<td>Interconnections between classroom delivery, clinical and remote areas. (Web broadcasting of information, Social Media responding)</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Dimensions</td>
<td>Role of the Teacher (TR) Curriculum Design (CD) Communication for Learning (CL)</td>
</tr>
<tr>
<td>Stage 1 Mode Neutral</td>
<td>Conditions</td>
<td>Promote communication, intimacy between learners, shift in ownership for learning. Chunking of content, Pool of reflection. Anchored instruction, Promote behaviour-modelling, Intelligent dialogue among learners,</td>
</tr>
<tr>
<td>Pre-learning stage</td>
<td>Buy-in</td>
<td>Being Thing Development Sense of reality</td>
</tr>
</tbody>
</table>

Table 4. Illustrates the Dominant principles (Five Levers™) in Mode Neutral learner experience.
Although the Five Levers™ commence in the pre-learning stage, they also run throughout the learning experience across all stages when the learner's buy-in is achieved (Table 4). There appears to be a hierarchy of human engagement, not dissimilar to Maslow’s Hierarchy of Needs. However, the pre-learning stage is present and encouraged to form through the covert application of promoting the learner’s Five Levers™. Their visibility in the Mode Neutral experience is a “turnkey” to the human ontological readiness and progression through learning development and sustains the individual’s profusion of lifewide and life-long occurrences.

Presented in Table 5 are the measurable associations found in the data set of the case examples. It is recommended that these associations are representational of the participant’s sense of reality in Mode Neutral design courses. The testing of transferability of those associations to other Mode Neutral courses is incomplete, and further studies are required.

**Key**

- **Identity**
- **Presence**
- **Co-Presence**
- **Emotional Intelligence**
- **Immersion**
Table 5. Illustrates the Five Levers™ associations in the case studies

<table>
<thead>
<tr>
<th>Colour code</th>
<th>Associations</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><strong>Identity + Presence + Co-Presence + Emotional Intelligence + Immersion</strong></td>
<td>Score on all Five Levers™ is above 2.7; the individual feels they can control life events in a positive manner. This is referred to as the <strong>Benchmark level</strong>.</td>
</tr>
<tr>
<td><img src="image2" alt="Image" /></td>
<td><strong>Identity + Presence</strong></td>
<td>The association between Identity and Presence is closely linked and born from the individual's awareness of how they wish to portray themselves and the value they bring to the experience. A Presence occurs where an individual demonstrates their identity in an active manner offering views, suggestions or opinions.</td>
</tr>
<tr>
<td><img src="image3" alt="Image" /></td>
<td><strong>Presence + Co-Presence</strong></td>
<td>Presence and Co-Presence are unified characteristics when open channels allow information to be shared with others. They are easily disconnected when communication becomes fragmented when the messages/feedback is misunderstood.</td>
</tr>
<tr>
<td><img src="image4" alt="Image" /></td>
<td><strong>Identity + Presence + Co-Presence</strong></td>
<td>Alignment of Identity, Presence and Co-Presence often results in an individual showing an active involvement in the experience. Individuals at ease with expressing their views will be receptive to other diverse views.</td>
</tr>
<tr>
<td><img src="image5" alt="Image" /></td>
<td><strong>Identity + Presence + Co-Presence + Emotional Intelligence</strong></td>
<td>Emotional Intelligence coupled with Identity, Presence and Co-Presence affords the individual to influence or impact on the composite outcome from experience. An Emotional Intelligence score of 2.7 and above suggests the person is highly aware of their influencing abilities.</td>
</tr>
<tr>
<td><img src="image6" alt="Image" /></td>
<td><strong>Presence + Co-Presence + Emotional Intelligence + Immersion</strong></td>
<td>In this association, if Emotional Intelligence is below 2.7 despite the other levers above the benchmark, individuals may not be aware of how they are affecting others. Focusing only on their view of the world may result in their loss of Identity within the group membership.</td>
</tr>
</tbody>
</table>

While this thesis is primarily focused on dominant principles, it is also wise to discuss the role of technology within the individual's sense of reality or existence in a ubiquitous digital society. Technology in education has risen dramatically in the last two decades. In UK primary education technology is an essential element in developing the learner's ability to interact with knowledge (Neild, 2015). Given technology is an integral element of the global knowledge economy (Rutkauskas et
al., 2014), the adoption of it, is intended to stimulate learning and on-going development of learners from childhood, adolescence and into adult life. Watt (2010) argued that the current use of technology is causing an extensive divided reality with learners less engaged in physical activities and with more introspective domination of cyberspace. Palmer (2006) concurred with the social ineptness humans display when digital devices consume them. Subrahmanyam et al. (2000) believed the increased amount of time children, especially, spend using technology will produce future generations of isolated individuals with poor relationships.

Contrary to the published author’s view about the negative impact of technology on human development and impact on cultural patterns in society, there is also a balanced view that technology can amplify the generation of new knowledge, form relationships and increase cultural intelligence (Earley & Ang, 2003). To facilitate this external activity with the world around us, which is likely to include technology, the individual continues to develop their self-concept. Baumeister (1999) suggested it is essential for individuals to create a belief about how they viewed themselves. This self-appraisal of attributes and distinctiveness is a concept often discussed in social psychology. Self-image, personal traits, and purpose are evident in human identity development (Erikson, 1993). Identity development is an internalised and explicitly displayed trait associated with learning about oneself. Ryeng et al. (2013) attempted to measure the link between an individual’s identity status and self-esteem. The outcome of their study highlighted the variable relationship between human attributes, which were also subject to additional influences. While they were unable to categorically state identity status correlates positively with a person’s self-esteem, Lillevoll et al. (2013) did show the relational aspect of identity and locus of control.
The critical relationship between an individual with control helped to develop their identity and in turn supported confidence building to share knowledge externally. Identity formation is a consideration in Mode Neutral pedagogy as an intrinsic factor in developing a community of unique individuals to form a social learning community. The theory of identity emerged with Erikson (1963) and had continued to be explored by many authors’ studies finding relationships between different aspects of human beliefs and achievements. In some circumstances, the findings are inconclusive and stand in isolation to the psychosocial development of adult learners in the 21st Century.

I believe, the Five Levers™ and their respective associations can lead to cognition enhancement and embellishment of knowledge, skills and behavioural attributes. Their nature of existence or ‘being’ was heightened when all Five Levers™ were above the benchmark threshold of 2.7. In this regard, one’s eudaimonia was under the learner’s control and conscious existence in the learning experience. In the critical analysis of the data, the alignment of the Five Levers™ demonstrated the learner’s readiness to learn. The published Mode Neutral papers and the follow-up case examples support the claim that the Five Levers™ (dominant principles) form the bedrock of immersive learning. If all five were integral to the design, then an emerging pedagogy would be designed purposefully for the learner-led experience. Eradicating restrictions such as a classroom or technology-centric curricula draw out the importance of an active social-constructive pedagogy that harnesses the collective intelligence based on the philosophical domain of distributed cognition.
Chapter 6 – Critical reflection and contribution to knowledge

In the last decade, I have challenged orthodox approaches to pedagogy and subsequently questioned my own Mode Neutral pedagogy. The flexibility of the Mode Neutral learning method was innovative and radical at the same time (Tickle, 2008). In the delivery of Mode Neutral style education through traditional on-the-ground or campus-based required greater coordination of information flow. The English Dictionary refers to the term Education as ‘the process of receiving or giving systematic information referred to as ‘knowledge,’ especially at a school or university’. The terms school and university are referred to in this statement as physical places or locations where a manufactured building hosts educational activities. The Latin definition of education – ēducātiō – approaches education through a human perspective of nurturing child development. No physical location is referred to or considered in this definition. As time has elapsed, other mutational meanings of Education have emerged reflecting the evolving nature of Education. Inherently, educators still believe learning occurs in a physical location. I disagree!

In my studies and testimonies where I have adopted Mode Neutral (Portfolio – endorsements 4.1, 4.2, 4.3, 4.4), education and learning have been cited as taking place anywhere and at any time. In Mode Neutral style courses, learners cognitively process information in different lifewide contexts which are less reliant on the physical location.

Schofield (2010) believes Mode Neutral encourages learner autonomy and directly promotes differentiation in the learning experience with the learning bringing
distinctive things to the experience. The less reliance on physical, educational space also affords the learner the ability to balance multiple life demands with their learning. At the heart of healthcare, education is deployed to promote active learning through higher cognitive reasoning (Biggs 1996). Arguably, this does not always take place in healthcare education since the educator often focuses on discipline-based content over a student’s cognitive ability (Yorke, 2001). Incorporation of Vygotsky’s zone of proximal development (ZPD) model in Mode Neutral nurtures cognitive ability, which is unusual and not visible in other pedagogical models (Berk and Winsler, 1995: 24). In essence, ZPD considers what an individual can achieve through varying support from others. The direct correlation between acquired knowledge and cognitive learning is essential to developing knowledgeable doers in patient care. Despite these methods of supporting the learner, I argue that the learner’s self-concept and unconditional regard by the tutor allows the learner to flex their cognition over time.

Epistemological studies continue to challenge Plato’s original thoughts that knowledge involves three conditions; belief, true, and justified (Bird, 2007). I believe knowledge is an essential element in the learner’s sense of reality. If they first believe the information captured is meaningful and has a correlation to the situation or event, then the learners are more likely to seek truth and explore further to validate or justify their learning (Pastin, 1978). Empirical and Rational philosophical perspectives of knowledge are opposed to one another. Empirical perspectives uphold the view that knowledge is acquired through sensory and direct perceptions, while rational perspectives are more scientific and measured through reason (Chisholm, 1997). According to Lemos (2007), we must differentiate between knowing how and the ability to apply such knowledge. They suggest propositional knowledge and
acquaintance knowledge in daily activities. Propositional knowledge is the relationship between the subject and the proposition. This is particularly important when the subject draws upon lifewide experience in Mode Neutral and believes the propositional knowledge to be real and justified to the subject. However, there are occurrences where the subject believes the propositional knowledge to be real, but the justification is false with the subject still acting upon the knowledge that is inaccurate or non-related to the situation. Mode Neutral pedagogy uses community validation of the acquired knowledge rather than the individual’s self-authentication, this, in turn, fosters the assimilation of knowledge through sensory, and critical reasoning. Indeed, the engagement of learners in on-the-ground learning is in principle to stimulate and provide a high-quality learning experience (Mohamad, 2014). In this particular context, they draw on Mode Neutral to explicitly demonstrate the importance of linking knowledge to real-life issues through debate, critical reflection and problem-solving. This is represented in figure 14 showing the learner’s experience comes from different modes of learning and their social norms, values and beliefs systems.
Figure 14. Different life-wide context drawn on in Mode Neutral.

The seamless connection between the modes assists with the formation of an educational ecosystem where knowledge, skills and behaviour can be transferred from one context to another. Exploiting technology as a vehicle for accessing, sharing and checking meaning has a positive impact on the learner’s cognition of the knowledge applied to their practice. Mode Neutral assists education providers with limited classroom space to continue to meet the growing demands from employers, in particular, the healthcare system faces pressures in releasing staff from the workplace, while Higher Education Institutions make the decision to explore new solutions that integrate technology into their curriculum design. Central to this ecosystem is the free movement allowing information flow across the modes driven by the learner’s motivation. Through the educator’s overt application of the Five Levers™ the learner’s intrinsic motivation increases and amplifies through social networking with others across the different modes of learning. The learner benefits from drawing on the life-wide and technology-enabled experiences to make sense of
the subject, the culture and the context of learning. This acts as a catalyst and stimulus to continuous promotion of identity and presence with a balanced curriculum. The benefit here to higher education practice is Mode Neutral designed content and scaffold encourages the learner to occupy a place, place and mode of learning (Higher Education Academy [HEA], 2014). The learner’s extrinsic motivation in Mode Neutral is in their action and reactions to what occurs when sharing experiences. This transactional engagement heightens the learner’s presence among co-learners and provides them with the control to make a choice in how they wish to learn or personalise the learning experience.

In a similar vein, the UK Shropshire Council, Education Technology Services adopted Mode Neutral’s ability to deliver customised learning for both online and face to face domains. The ‘Mode Neutral way’ has become an adopted vision and value of the differentiating learning for all in acquiring knowledge that aligns to life-wide accounts (Shropshire Council, 2017).

In the health context, the Mid Staffordshire NHS Foundation Trust Public Inquiry (Francis, 2013) highlighted the importance of educating the workforce to ensure patient safety; moreover, they highlighted severe incidents where lack of education among staff was the cause of ill-treatment and patient death (Cooper et al., 2002). In most of these circumstances, it has been the compilation of errors and fragmented way of working that caused the catastrophes. Potentially, degrees of poor justification of propositional knowledge may have been a cause. Given that NHS workforce numbers are less than a decade ago, one might argue that education alone will not prevent unfortunate incidents (Department of Health, 2003). Principally, education is
not just about delivering and receiving information; it is also a propos for the way we learn and shape our behaviour and cognition. Teigland et al. (2013) discuss the importance of considering attitudes, behaviours and learning preferences relating not only to patient safety but also to other discipline-based content. They further comment that considering the learners’ preferences among other factors will support the academics in selecting the correct pedagogical approach to transfer knowledge, skills and consummate the correct behaviour for learning (Schofield, 2003). Moreover, we must remember, one individual does not single handily achieve patient care. It is through the combined efforts of those who form a community of practice and continually share their nascent knowledge, skills and behaviour in the care setting (Wenger, 1998) that addresses the health needs of our nation. It is this very reason Mode Neutral was developed to encourage healthcare staff to acquire know-how from their community.

In 2012, the Department of Health published a new approach to planning and commissioning healthcare education. Liberating the NHS: Developing the Healthcare Workforce: from Design to Delivery (Department of Health [DH], 2012) outlining a new model that would assist the National Health Service in aligning education and learning to improvements in patient care and health outcomes. The Education Outcomes Framework (EOF) was outlined in this document and later published in 2014 demonstrating the aims, domains and quality indicators of effective healthcare education (DH, 2013a). The EOF’s primary aim was to “ensure the health workforce has the right skills, behaviours, and training, available in the right numbers, to support the delivery of excellent healthcare and health improvement” (DH, 2013a:12). Whilst this occurred, it did not necessarily play out in the educational context. Pedagogical
designs became outdated but used continuously to build a new workforce for future care needs.

Adequate health and social-care education is vital for health professionals, educationalists and service commissioners to ensure patient safety is paramount (Edmondson, 2004a). In recent times, the provision of education for health professionals: Medical colleagues, Allied Health Professionals, Nursing and Managerial co-workers, has not been straightforward as political, social and economic agendas command more from the healthcare service, thus making it more difficult to release staff from the workplace to “up-skill” their “know-how”. Health Education England, a UK government organisation with the sole remit to procure high-value and high-quality, meaningful education (knowledge, performance, and behaviour) that shapes healthcare staff know-how, have stated that educating the workforce can be achieved through a range of educational experiences but must meet the EOF standards.

Healthcare education delivered over the last quarter of a century has been an on-the-ground classroom activity away from the healthcare workplace. On-the-ground or on-campus teaching has predominately followed a didactic approach to systematically share information with rows of attendees scribing notes from the oral lecture. Many expert teachers are seen as the ‘sage on the stage’ (King, 1993) and their respective university employers have started to explore new approaches to the delivery of higher education curricula. Growing difficulties in releasing healthcare professionals from the workplace to attend the on-campus education drove the need for alternative modes of delivery. The UK education reforms (Department for Business, Innovation
and Skills [BIS], 2015) raised the importance of education and training in the UK for increasing the level of skills in the economy. The political moves to increase the number of apprenticeships was deliberate to draw the employers and training providers together. According to Her Majesty’s Government (2015), the majority of employers will become satisfied with current apprenticeship programmes because of the direct correlation between employing former employee-apprentices and quality of their product/service.

Today, in 2018, amongst the political and social drivers to deliver adequate education that ultimately safeguards patients, one significant driver to consider is the role of the apprentice and technology in contemporary healthcare education. The rise in ubiquitous digital technologies and the rapid uptake of flexible computing among healthcare professionals, both in their work and social lives, has led to a new demand for technology-centric health education. Indeed, Information Communication and Technology (ICT) skills among healthcare professional are ‘on the up’ (Frymier, 2004), using their ICT skills for interpretation of on-screen blood results, x-rays, and patient notes demonstrates how healthcare is changing.

There is much judicious use of digital technologies in the healthcare sector allowing professionals to collaborate online to discuss work-related activities; for example, Tele-medicine, Telehealth and the use of social media have become the norm in sharing information and experiences in how best to treat their patients. In 2011, the Department of Health (DH), produced A Framework for Technology Enhanced Learning containing their passionate embracing of innovative educational technologies. They state that e-learning, simulation, and Internet-enabled devices
afford excellent opportunities to acquire and “maintain the essential knowledge, skills, values, and behaviours needed for safe and effective patient care” (DH, 2011:6). This is a six principle framework:

1. Patient-centred and service driven
2. Educationally coherent
3. Innovative and evidence-based
4. Deliver high-quality educational outcomes
5. Deliver value for money
6. Ensure equity of access and quality of provision.

The framework recommends that healthcare professionals should develop their clinical skills through simulation and other digital technologies before applying them in clinical practice (Brindley et al. 2010). Supervised practice must take place until their know-how has been refined and ratified in the workplace. Also, the report states the use of technology should afford equity of access and demonstrable benefits to patients and service.

In 2018, the NHS guidance on the commissioning of digital learning technologies to assist with the development of staff skills, and knowledge leading to patient benefits builds on the Department of Health’s framework for Technology Enhanced Learning and specifies a cautious approach should be taken to develop educational coherence towards outcomes that promote good patient care (NHS England, 2018). They focused on the three aspects of flexible pedagogies; pace, place and mode of learning (Higher Education Academy, 2018). Quality is at the heart of their statement.
especially towards the deployment of technology in a sound pedagogical manner for workforce development. NHS England believes this can be achieved through consideration of multiple influences (De Bruyckere et al., 2015) including where, when and how learning could be gained through the use of digital solutions. The NHS also took cognizance of Mayer (2014) and Chandler & Sweller’s (1991) cognitive load theory and advised curriculum designers to develop smaller sized learning rather than overloaded lengthy educational assets. Running in parallel to the consideration of digital education is the NHS investment in technology to improve the quality of care and promote greater patient safety (NHS England, 2014). Moreover, embracing technology within the NHS and in the professional development of the workforce will lead to a reshaping of care to meet the future needs of service users.

The introduction of Academic Health Science Networks (AHSNs) encouraged key stakeholders in developing the future healthcare delivery by inviting educational providers, innovators, commercial entities and clinical research to work together on how to improve patient care. Harnessing the collective intelligence from contrasting groups provides pragmatic approaches to exploratory new concepts to service demands or ‘wicked’ problems (NHS England, 2019).

Rittel (in Buchanan, 1982) described “wicked” problems as the collection of confusing elements that may be ill-formulated and have a direct correlation to the dysfunctional social system or service being provided. “Wicked” problems are often associated with the complex issues faced within the NHS, and many look to the use of technology to streamline processes for the patient’s benefit (Thomas et al. 2018). Indeed, the National Collaboration for Integrated Care and Support (2013) stated flexible
approaches would lead to staff confidence and acquisition of new skills that would promote greater use of telehealth and telemedicine via technology-enabled patient services.

The UK Higher Education is changing too with an increasing focus on the quality of education matched to the evolving requirements in healthcare. This requires HE to consider the consumer’s needs and align education to the knowledge, skills and behaviour required in the health care domain. The Higher Education and Research Act (2017) gave impetus to establishing the Office for Students and a high degree of regulation over the quality of teaching, assessment and the use of innovation for learning gain within Higher Education. Given this increased level of responsibility within Higher Education Institutions and within the NHS sector it is important digital transformation is carefully designed to allow flexible fit for purpose learning (JISC, 2017).

The exploitation of technology within Higher Education healthcare curricula remains in its infancy stage compared with the healthcare sector’s adoption. There has been no real call to integrate technology into university teaching until now. Beforehand manikins were used to simulate life and death experiences for students to gain a sense of those suffering from heart or respiratory failure. The deployment of those simulation aids was helpful to provide a systematic approach to dealing with life-threatening cardiac scenarios – heart attacks. Moreover, emergency situations require managing carefully through a cohesive understanding of one another’s roles in saving the patient. In the DH (2011) recommendation 5, the use of simulation, e-learning, and other technologies should be openly mapped across the curriculum and
facilitate multi-disciplinary and interprofessional learning. Higher Education has attempted to use Technology Enhanced Learning in healthcare education using a virtual learning environment (VLE). Since 1992, the Internet and computing devices have warily created a space where academic content can be housed and accessed by their students. Universities have primarily used the VLE as a repository for information storage despite the ‘learning environment’ term implying it is a place where one can gather knowledge and progress a more profound sense of understanding. Nevertheless, the system provides a place for managing, recording and evaluating learning experiences, which suggest the use of a VLE, is more two dimensional with a focus on delivery and evaluation of learning. The Joint Information System Council ([JISC], 2005) believe state VLE may not be pedagogically orientated and more of an information repository. If VLE is one of many digital technologies that could contribute to learning but does not self-claim to be a pedagogical sound learning space, this raises the question of how real is this experience for the learner. In the Portfolio – evaluation 8.1, Mode Neutral pedagogy was used to compare the learning experience and make recommendations to the employer on how to create immersive learning. The recommendations highlighted weaknesses in key areas that diminished the learning experience. Similarly, learner differentiation was lost in the Portfolio - evaluation 8.2 showing learner identity was irrelevant and caused a lack of community identity. Instead, the VLE and the housed content became an employer compliance tool opposed to building individual and community identity.

The application of technology within the learning journey can make it possible to dissolve potential barriers preventing learning across the modes within an educational ecosystem. Mode Neutral is designed to encourage personalised
learning to equip learners with transferrable skills and attributes for working professionals. Allowing for transient ‘free’ movement across the modes draws upon social norms, values and beliefs to build transactional interaction, self-reflective and social immersive learning.

Ball and Owen (2012) believed the adoption of Mode Neutral in their mental health curriculum provided learners with a transmodal platform allowing online and classroom discourse to take place among a cohesive social identity. Learners shared good practice freely and actively in their seamless transition across the learning spaces. Mode Neutral has become a realistic and comparative model to others in the pedagogical family such as social-constructivist, conversational model, cognitive perspectives (Riedmann, 2014; Campbell, 1999). This positioning of the model is of utmost importance as the see-saw political views as to where health education should take place, with or without certain technologies, and the advent of the new horizon of health apprenticeships will place even greater demand on pedagogic design. Apprentices will undertake 80% on-the-job training, and 20% off-the-job learning – this is a significant shift away from previous models of 50% in clinical practice and 50% in university on-the-ground education.

Mode Neutral is a socially immersive approach to human development drawing on the various cultural backgrounds of learners to widen subject discourse and feel they are connected to the experience. Smith et al. (2008) are backers of psychosocial development in healthcare education and believe this can only occur through the deployment of correct theories, frameworks, models, taxonomies to generate a specific pedagogical approach that encompasses both the discipline-based and
cognitive reasoning alongside the human needs (Bloom in Anderson and Krathwohl, 2001). Moreover, the pedagogical approach must constructively align all the teaching, learning and assessment components affording students every opportunity to demonstrate their more profound understanding of the subject matter (Sawyer, 2006). According to Biggs (1996), this is not the case in higher education. Academic teaching staff tend to adapt their traditional teaching style and ‘transmission theories,’ which in turn overlook the need for alignment. Adoption of pre-digital era theories is a helpful starting point in educational delivery, constantly pushing and pulling factors by the learner. Employers and others require us to consider different approaches to meet human needs in a post-desktop computing era. A new pedagogy is especially essential where digital technologies act as a catalyst for off-campus delivery and also for the fundamental change in educational apprenticeship policies. Alignment of all the educational components is imperative in a constructivist model for the creation of a vibrant knowledge community (Jaleel & Verghis, 2015).

Bloom’s Taxonomy of Educational Objectives (1956) is a well-adopted framework within education. It offers a step-by-step account of how the learner processes information and builds up each learned aspect. The ordering of knowledge and skills provides a blueprint for educators to structure their content in a manner that aligns all components of the learning process; learning outcomes, content, collaborative engagement, assessment and the role of cyberspace. The principal aim behind this taxonomy is to encourage higher forms of thinking as opposed to the learner merely absorbing facts from the information provided. Bloom’s taxonomy has been refined over time by Anderson (2001) to draw educator’s attention to the ‘higher order’ level; yet, it is still questionable whether the model has applicability in today’s approach to
facilitating learning. According to Adams (2015), the taxonomy is still applicable in two particular ways. The first is that it encourages the educator to consider behavioural objectives alongside skill acquisition. The second is to consider the higher levels of the taxonomy to promote greater cognition and deeper learning.

Liyanage (2013) too has adopted Smith et al. ’s (2008) belief that Mode Neutral invites the learners to play a key role in developing knowledge and understanding through interactive resources rather than passive linear methods of knowledge transference. The recognition technology can play an equal role as the educator to develop critical and creative thinking among 21st Century learners, is paramount in Khan’s (2015) look at Mode Neutral and the teacher’s effectiveness.

It is very much about working and re-working to make sense of the content so that one can apply it to a given activity and strengthen individual and community identity. Bloom’s taxonomy focuses more on a pre-determined academic view of reality. The taxonomy provides a structure to influence learner level of understanding about a particular concept, or skills and significant values, and attitudes challenged. Choosing the level and the taxonomy objectives from knowledge-based, skills-based or affective-based goals do presume the learner is ready and perhaps motivated to learn. Bloom later described the Cognitive, Affective and Psychomotor domains in his taxonomy of learning domains, which guides the teacher in the application of a framework and set of classification principles and instructional objectives when designing a curriculum (Gronlund, 1991). In the application of Mode Neutral and the dominant principles within my leadership work through the Association for Perioperative Practice, the notable difference in the information sharing seminar with
health professionals concludes every time with learners reporting how they felt their identity had been respected and encouraged to develop a community spirit. Alongside the longstanding adoption of Mode Neutral into health education, health practitioners have actively adopted the dominant principles – Five Levers™ – to strengthen their professional identity and co-presence among the multi-disciplinary team. Their internal view of themselves is expressed through considered dialogue via Bloom’s taxonomy. This is akin to the pedagogic use of the five dominant principles in my leadership and communitive engagement with others. A purposeful approach influences and inspires others to question how they learn and whether their differentiated learning is facilitated more using the dominant principles.

Comparably, Maslow Hierarchy of Needs (1943) framework continues to be used in healthcare. The five layers of Maslow’s pyramid describe the human survival elements of his theory. They range from physiological up to self-actualisation where increased motivation and morality exudes. His hierarchy of needs is not concerned with education but of human motivation beyond Aristotle’s teleology of human acts. The theory is habitually used in healthcare education only because it has an affiliation with the healthcare context of treating patients and promoting their psychological well-being. Again, this is an invaluable framework that tutors should consider when designing and constructively aligning the learning experience. Nonetheless, the framework has limitations where healthcare learners are using computer-aided devices or occupancy of cyberspace. Moreover, Trong (2016) challenges Aristotle and Maslow’s concept of human motivation. He believes the human acts at each stage in Maslow’s theory are not fixed or localised to the natural human cognitive and affective domains.
In numerous citations of Mode Neutral, there is a lack of discourse about Maslow’s hierarchy and its role within the educational experience. This omission suggests Maslow is a secondary stage to gaining the learner’s buy-in to the experience, rather than the mistaken assumption it is fundamental for motivating individuals. In the case of the examples presented in the previous chapter, the learner’s motivation was not attributed to the hierarchy of needs; moreover, it was attributed to understanding the bedrock to learning. The claim here is the presence of the dominant principles that have appeared in every Mode Neutral instance have formed a bedrock to pedagogy. The bedrock encourages individuals to surpass the three cognitive stages to ‘buy-in’
and continue under their own volition scaffolded overtly by the five dominant principles. The continuous presence of the principles reinforces buy-in causing learner transition and transformative learning. Maslow’s Hierarchy of needs is serendipitous in this active process.

Gagne (1962), a pre-digital era theorist talked about ‘conditions for learning’ as different types of levels of learning. Not unlike, Maslow and Bloom, he too attempted to deconstruct human psychology by showing a systematic learning process. Their five categories with different internal and external conditions; Verbal Information, Intellectual Skills, Cognitive strategies, Motor Skills, and Attitudes. Gagne and Driscoll (1988) argued that all nine instructional events apply to all of Gagne’s Domains. This is another attempt to encourage the common sense approach to alignment. It remains an untested theory where healthcare learning occurs in an online or distance format. However, it does attempt to meet the human psychological needs by structuring the knowledge delivery mechanism of teaching and aligning to the ideology that learning does not solely occur in one place but across both the intrinsic and extrinsic activities (Leont’ev, 1981). His concept of distributed cognition encouraged the paradoxical belief that learning takes place in different locations and with others. A central assumption to distributed cognition was Moon’s (2008) belief that critical thinking is inherent to the formation of understanding of knowledge. Brookfield (1995) argues we can assume different lenses at different times to acquire knowledge and understanding of a particular situation. One of those lenses is the self-view where the learner acknowledges their emotions in their reflective thoughts. This is fundamental to the learner’s filtering process and making sense of their reflexivity of emotions, reactions and motives in any given situation. I have found
reflective views influence the presence of the five dominant principles for the learner. As identity is often fluid in nature and constantly evolving, the human being searches constantly for information that asserts their innate identity. Negative feedback can impact on the learner’s identity when emotional thoughts become destructive. Equally, validation of the contributions in a community of practice can result in a positive validation of oneself and belonging.

Vygotsky’s (1962, 1978, 1986) historical perception was to promote engagement as a social interaction associated with discourse between the participants. Moreover, associations between interaction patterns and identity construction areas are essential elements in classroom conversations that lead to learning. In my published papers, they describe the importance of individual identity, especially in healthcare settings. Research studies have shown how collectively, nursing, medical and allied health professionals’ know-how when making decisions, for instance on how to manage the patient with cancer. Moreover, Hesse et al. (2011), talk in finer detail about the importance of engaging community intelligence to guide Health 2.0 in a digitally driven culture. In 1999, the Department of Health wished to expand on nursing and other health colleague’s abilities to make an informed clinical decision. The pre-defined nursing identity as a support role to the physician made it more difficult for the nurse to establish their new identity among the medical staff. They would often hide their identity behind the mask of silence. According to Davies (1995) nurses applying their critical reasoning to come up with an informed decision, were sometimes viewed as ‘feminine, emotional and intuitive’ by the medical staff. Despite both groups of staff co-existing in the same clinical environment with different
identities, medical staff remain reluctant to shift knowledge and skills across the traditional demarcation lines (Crowther, 2002).

The differentiated elements learners bring to the learning experience has been central to the development of Mode Neutral. However, there were several encounters that I faced during the early days of devising a flexible curriculum. The concept of allowing learners to access information through creative routes was novel and challenging for many traditional educators to come to terms with. The ideology of shifting the locus of control to the learner from the academic/lecturer was perceived as giving away academic autonomy. Academic colleagues were reticent for their curriculum being developed and driven by the learners. In some circumstances, this was viewed as an erosion of the lecturer’s identity. In hindsight, the term lecturer is primordial and not fitting in a digital learning society. However, academic/educator terms are more contemporary identities nurturing the inclusive and diverse nature of learners within education. To overcome some of the challenges, my work alongside academic colleagues when constructing Mode Neutral courses gave them an opportunity to question my thinking behind the pedagogic design. This formation of critical thinking through their view of the world slowly refocused the academic identity to become a facilitator of learning. Modelling the Mode Neutral approach afforded academic colleagues to witness higher student engagement in my transmodal classroom with learners present in both learning spaces at the same time, classroom on-the-ground and online via Blackboard. Observing the learners active engagement and considered behaviour enabled academic colleagues to build their confidence and retain their identity in the different pedagogical construction.
Instructional challenges were equally present in the additional classroom digital resources required to run a Mode Neutral class. A web camera and handset with a microphone on every classroom or office computer was required at a time when the University was considering the new “Bring Your Own Device” approach to university. Gaining sufficient funds through a small research grant allowed for three classrooms and one office to be equipped with adjacent digital devices. No additional equipment was purchased for the learners; moreover, when learners selected to study a Mode Neutral course, they were advised they would require a web camera and headset with microphone. No complaints were received by students over the additional expenditure.

Mode Neutral sessions became popular at Edge Hill University with academic colleagues from different disciplines trying out this new approach. Some of those who did not require any coaching or support in setting up, running and evaluating their Mode Neutral style course, identified they were spending more time in the online classroom than they would normally do. To overcome this situation, I wrote a policy for the university to highlight the time spent in the online classroom is the same time as in the actual classroom (Portfolio – other 10.2). This alleviated the immediate concern over staff duplicating academic hours; 550hrs a year for online learning and 550hrs for classroom learning. Revisiting the concept of Mode Neutral as a convergence of the modes of delivery clarified misunderstanding.

Mode Neutral in part uses social learning theory to encourage learners to learn from each other, and the facilitator of learning in a co-learner relationship. As many HEIs currently pay little focus on metacognition of ‘how to learn’ effectively, rather what
they are learning. Given Mode Neutral allows for movement across the modes, a learner’s observation of others is likely to encourage modelling of socially acceptable behaviour and technical skills in their discipline. The strong relational aspects between the learners become more prominent than the remoteness of the academic provider. While existing approaches to education perhaps focus on knowledge first, skill second and behaviour third; Mode Neutral encourages a reverse sequence of establishing behaviour first in the socially constructive place as learners continue to understand each other their Identity and Presence forms as a result of built rapport and shared social etiquette. This phenomenon exists in face-to-face interactions and is transferable to other modes when no restrictions are in place. Mode Neutral encourages greater peer to peer support buildup of shared community knowledge which in turn fosters connections to resolve the wicked problem. Strong emphasis on “wicked” problems or problem-based learning in the health context which encourages the unification of the learners in how they might find a solution. The combinatory effect of the positive associations between Identity, Presence and Co-Presence within the early stages of learning launch the Community of Inquiry under the learner’s volition.

Figure 16 below depicts the alignment of the learner ‘buy-in’ and the emergence of the learner’s Five Levers™ through the learning experience.
While traditional learning spaces within Higher Education and the workplace are tangible entities, Mode Neutral provides a combined space where all modes, physical and virtual can contribute to the learning experience. The Five Levers™ have a role in encouraging the pace of learning through individual development via social engagement. The technology has the potential to isolate learners if the experience is not set within an educational ecosystem. Mode Neutral naturally forms an ecosystem where the learner can connect to the community from anywhere at any time. The creative interaction across the physical and virtual spaces coupled with the academic/facilitator’s unconditional positive regard, empathy and congruence lead to professional authenticity for the learners. Such communities can be transient. However, the natural evolution of the community of inquiry in Mode Neutral is a community of practice with a higher degree of permanence where learners continue to collaborate across the modes for common goals.
6.1 Multi-User Virtual Environments

In 2003, Second Life entered into Higher Education, a half-decade later Mode Neutral was explored in the Multi-User Virtual Environment (MUVE). Second Life Virtual World is a three-dimensional online space that invited users to explore, be creative and engage in another existence to enhance their first life. Many mistook this virtual world as ‘gaming software’; however, the virtual world was intended to create a place and space for interconnectivity and collaborative learning (Konstantinidis et al. 2010). Individuals populated Second Life for different reasons, some to construct buildings, objects, relationship, business activities, and educational experience – the sole purpose was to immerse the user in an educational experience. In higher education, colleagues have explored Second Life with their students on virtual global field trips to other countries, engaged students in problem-solving activities, practised in simulated scenarios of safe approaches in treating patients, others include holding virtual conference and exhibitions of their student artwork. Despite Virtual Worlds being given a considerable amount of attention over the last decade and a half, there are not many Higher Education projects that have attempted to use the simulated platform to promote systematic patient assessment.

In 2014, I was the data researcher supporting two academic colleagues who wished to use Second Life and Mode Neutral for teaching, learning and assessment of postgraduate mental health nursing students’ practice. This case example originated from negative module evaluation comments made by a particular cohort of postgraduate students describing their experience of classroom-based summative Objective Structured Clinical Examination (OSCE) activity. The OSCEs did not
simulate an accurate experience of assessment in clinical practice. Students felt the experience should afford them the chance to be immersed in a realistic learning experience parallel to learning in practice at the patient’s bedside (Zayyan, 2011). Hansen and Erdley (2009) and Godwin-Jones (2003) stated that introducing computer technology enhances learning, at the same time as Ferdig and Trammell (2004) highlighted the benefits of using online resources, especially where they are relevant to the learning context as they arise and encourage curiosity in the subject area. Furthermore, Sykes et al. (2008) concluded that technology supports the formation of a vibrant community of practice which invites the quieter students to engage in discourse.

Central to the learning experience was the apparent application of the Five Levers™ by the two academics facilitating learning. On-boarding the learner to the Second Life environment invited the learner to shape their avatar identity. They were given virtual money to purchase healthcare uniforms from a Second Life store developed by other residents. Formation of their identity encouraged the rapport between themselves and the virtual patients they assessed in this space. In this case example, the students often referred to the environment as a social networking place and supported their problem-based learning. Students would often express themselves through their in-world avatar by changing shape, colours and human biological structures. Warburton (2009) believed all residents were likely to project themselves in the environment for the successful learning experience. The architectural representation created by Second Life benefited from the transfer of real-world social norms from clinical practice into this pervasive immersive environment.
In essence, the deeper engagement of students and staff in Second Life led to a connected student group. Arguably, a virtual world stimulating the sharing and reuse of content provides greater access to immersive contact and learning (Salmon et al. 2010).

From a health care viewpoint, providing students with real-life learning experiences in a clinical setting is often difficult in higher education. Nevertheless, it is fundamental to the development of competency in clinical practice. In an ideal situation, real-life clinical experiences would facilitate more in-depth learning and opportunities for students to acquire the underpinning knowledge and skills required to promote safe and competent clinical practice (Scholes et al., 2004). Real life clinical experiences are often difficult to facilitate in a classroom setting; however, they can be established in a well-constructed virtual world or within a dedicated simulation suite.

6.2 Virtual Reality

In this case example, I was invited to participate in virtual reality experience by two American universities who witnessed an increase in Science, Technology, Engineering and Maths (STEM) student numbers. Cary (2017) claims American educational institutions have a fundamental role to play in preparing graduates for STEM careers. The continuation of school and college education is vital when the study of STEM in Higher Education requires new ways of thinking and expediting learning. Both American Universities worked from this premise and wished to develop industry-ready individuals for STEM careers. The complex, “wicked” problem both universities experienced was the rise in student numbers at a time when the physical resources were limited. A virtual reality space was explored and designed to allow
the student an opportunity to practice their laboratory techniques. The academic facilitators of learning had no technical on-boarding issues that impede the student's sense of presence within the environment. Students initially were invited to adjust their avatar to how they wanted others to view themselves. Although Mode Neutral was not deliberately applied in both university scenarios, evidence of the Five Levers™ emerged from the connectivity between the students and their academics. The experience was strengthened further by the community willing to coexist in space by discussing elements of classroom learning while in the virtual reality space. Presence and co-presence in this collaborative environment enabled the sharing of information and development of cognition across a range of laboratory sampling exercises (Casanueva & Blake, 2000). Those students demonstrated the transferability of virtual skills, knowledge and behaviour across the mode when re-entering the physical laboratory. This transferability was attributed to their ‘buy-in’ and exercising of their sense of being within the virtual reality space.

6.3 Artificial intelligence (AI) & Augmented Reality (AR)

AI powered-robots or devices that respond to human requests is something new in the field of Higher Education. While ‘bots’ have been used in Second Life and other Multi-User Virtual Environments to answer simple questions, the development of AI in Higher Education is still to be explored. However, Augmented Reality (AR) is the interactive overlay of artificial assets to the real world environment and continues to evolve alongside Virtual Reality (Cipresso et al., 2018). AR in the military training setting shows users become readily engaged with the integration of numerous overlays in the real world environment (He, 2017). While they may not adopt an alternative-identity in a virtual space, their real-world identity continues to evolve
through the additionality of information that can be communicated to others of the same AR system. Currently, there has been no Mode Neutral application in an AR scenario. However, the associations between each of the Five Levers™ are still prevalent in AR to encourage the users ‘buy-in’, and demonstrative shaping of their presence in an AR-enabled setting. This thesis author wishes to explore this further by undertaking collaborative research with others using AI or AR in Higher Education practice.

6.4 Chapter summary

This chapter acknowledges Smith et al.’s (2008) intentions to create a ‘mash-up’ of theoretical perspectives to scaffolding the needs of modern learners nurturing student engagement in learning (Duffy & Cunningham, 1996). However, with further investigation into how Smith et al.’s (2008) Mode Neutral actually works, has brought about the discovery of five dominant principles that have interconnections with each other. Their associated connections can lead to the building of a learner’s identity and self-efficacy in the cognitive and physical spaces. Despite several articles discussing one or more of the principles, no papers have emerged highlighting the link between the principles or their leverage to promoting a learner’s engagement.

The University of Bolton is the latest organisation that has adopted Mode Neutral and the Five Levers™ Framework in the first UK Integrated Degree Apprenticeship Standard for Operating Department Practitioners who work in the specialised areas of the surgical team: Anaesthesia, Surgery and Post-Anaesthetic Care Unit. The University of Bolton and North West of England Hospital Theatre Managers have chosen to use Mode Neutral pedagogy to support apprentices across the virtual,
cognitive and physical spaces encouraging them to develop learner ‘buy-in’. Mode Neutral’s draw on numerous theorists is supportive of building a scaffold and personalised learning experience for those apprentices. But at its core is the learners lived experience in the monitoring and adjustment of their Five Levers™ to optimize their ability to use acquired knowledge, skills and behaviour from across the lifewide and lifelong experience in caring for their patient.

The ultimate contribution to the body of knowledge is the underpinning dominant principles - Five Levers™ - encouraging human ‘buy-in’ to their learning experience. Without the Five Levers™ fostering self-concept, positive attitudes towards learning, and self-directed behaviour in any pedagogical model, will cause disenchantment and disengagement by both the learners and academic tutors.
Chapter 7 – Conclusion

The original contribution to knowledge in this thesis is the discovery of the dominant principles and the development of the Five Levers™ framework for human sensory reality, metacognition and sense of being in a Mode Neutral experience. The aim of this chapter is to reaffirm the contribution to new knowledge and explore the journey taken to date. Limitations and recommendations for further research are a consideration and highlighted in the latter section of this chapter.

7.1 Contribution to New Knowledge

This critical commentary and portfolio of evidence have deliberated on how Mode Neutral pedagogy has changed educational and healthcare practice. Numerous theorists and pioneers of healthcare disciplines have contributed significantly to the previous provision of education. Bloom, Maslow, Piaget, Vygotsky, and Knowles are a few of the theorists who have been integral to the discourse of teaching practice for discipline-based education. Arguably the theorist’s models are historical and perhaps redundant in post-industrial and in a digital era of academic scholarship. Nevertheless, the models continue to appear in the curriculum design of healthcare courses. I believe there is a weakness in relying upon past theoretical models to facilitate learning experiences in a society where there has been much social, political, economic and digital change since the authors’ publications. Identifying new ways of the all-inclusive educational experience for the development of learners in Higher Education and the workplace supports adoption of technology while the learner draws on life-wide experiences to make sense of newly acquired information.
Today, 2019, in the on-going exploration of ‘pedagogy’ and at the height of political and public concern regarding the future of the National Health Service. Universities seek new ways to assist their health partner in upskilling the workforce and do so by re-designing how subject matter is taught on-campus or in the workplace. Smith et al., (2008) discovered a new pedagogy for health education where the convergence of modes of delivery; classroom, online, distance and clinical setting using technology as the vehicle to extend learning beyond the on-the-ground delivery. The model was coined Mode Neutral Pedagogy in 2008. Academic discussion and debate about Mode Neutral raised the question whether this was a new movement in blended or hybridised education. Between this time and the present date, the originator of the model sought to understand the cause and effort of learner success in Mode Neutral courses. Several studies were conducted to pinpoint the granular detail that explained how the Mode Neutral dimensions, conditions and philosophical position worked in practice.

Capturing learner’s views from online questionnaires and focus groups in several case examples, brought about emergent themes highlighting new characteristics educators must consider in the facilitation of learning. With technology becoming an integral part of modern existence, there is a need to consider how pedagogy that is the holistic approach to facilitating learning is designed to allow for ‘transmodal’ learning. The learner self-selects the space or mode of learning from the workplace, social, educational or other lifewide modes that enable them to develop their cognition. The multiple modes form an educational ecosystem. Healthcare learners learn in numerous ways from simulation, discourse, philosophical meaning and more, to promote the interconnection between education and patient care (Baillie & Curzio,

The latter is vital to healthcare to eradicate errors or inadequate care resulting in harm to a patient. The creation of a pedagogical model entwined with the delivery of care supports the practice of evidence-based care. The Mode Neutral model has brought about changes in the way learners learn and shape their professional behaviour. Moreover, the model was recognised by the media in 2010 which led to myself receiving the prestigious National Teaching Fellowship award from the Higher Education Academy in 2012. This validation and recognition of the model emerged from my need to understand the intricate detail of how learners learn in a Mode Neutral experience. Undertaking further evaluative studies of the model and the student experience led to the recognition that there were deeper elements to the design of Mode Neutral.

In the last five years, I have discovered the sub-element to Mode Neutral that makes it a pedagogy compared to just another way of teaching. The original contribution to knowledge in this thesis is the discovery of the dominant principles that are existent within Mode Neutral teaching and learning within Higher and Professional Education. The five principles of Identity, Presence, Co-Presence, Emotional Intelligence and Immersion were found in each of the case examples and showed a compelling connection to each other. They play a key role in the learner’s participation and perception of their learning experience. The interconnections between the principles were named ‘Five Levers™’ and have shown there is a six stages learner’s transition through which Mode Neutral is the applied pedagogical model. The fundamental aspect of the Five Levers™ is the facilitator’s open promotion of Identity, Presence,
and Co-Presence to develop and sustain the learner’s ‘buy-in’ to the educational or clinical experience. The application of Five Levers™ explains the core component of how ‘pedagogy’ can contribute to 21st Century teaching praxis. The author also believes if the Five Levers™ are absent in any learning experience learner disengagement will occur and prevent the acquisition of knowledge, skills and behaviour. The Five Levers™ framework encapsulates the principles and their association to show how learners sense of reality, sense of being or ‘buy-in’ can remain intact throughout the six stages to enable active learning across the modes in the educational ecosystem.

7.2 Reflections on my journey

In 2005 when I was studying a post-graduate qualification in education, I became perplexed by the application of the term ‘pedagogy’ in higher education and in healthcare. While I understood the term to infer the holistic approach to facilitating another’s development, I wondered if the prolific use of historical theories were fit for purpose in disseminating knowledge in a post-industrial higher and professional educational experience. Continuous questioning of my teaching practice led me to undertake a Masters in Education where I commenced a Grounded Theory (GT) study about my approach to teaching and learning. Selective and axial coding of data from questionnaires and focus groups from healthcare staff led to me explain the delivery model – later coined with the phrase Mode Neutral pedagogy.

At the time of publishing Mode Neutral, I felt something was missing from my considerations. In hindsight, was the publication premature? I should have delayed the release of the original Mode Neutral paper so I could conduct further studies to
produce the data that gave it the validity to be called a ‘pedagogy’.

In 2009, the Mode Neutral model gained media attention with many early adopters using it for flexible learning. A second look at the original data identified five universal dominant principles which encouraged a new hypothesis about the links between the principles leveraging the learners’ desire to learn and acquire knowledge from using different modes of learning.

This hypothesis became the drive to the commencement of a lifetime exploration of their connection with deep learner engagement. Two service evaluations of medical education identified the same dominant principles and their interconnections within the learning experiences. This led me to create a new questionnaire based on the principles to measure the learners’ readiness to learn. A scoring system and graphic representation of data were developed to show the interlinking aspects of the governing principles. Learners’ responses to the Five Levers™ questionnaire were captured from the onset and throughout their learning experience. The before graph revealed early indicators of educational adjustments needed during the learning period to maintain learner engagement and cognitive-development. As this discovery was being refined other academic and healthcare colleagues were exploring Mode Neutral in their teaching. Between 2009 and 2019, Mode Neutral continued to be studied by academic colleagues in the UK and other countries. In the last ten years, technology has become more prominent in both higher and professional education, alongside academic colleagues deploying Mode Neutral to address the changing landscape to learning. In those applications of Mode Neutral, the authors report similar outcomes to my own that learners need to become deeply engaged in their
cognitive and skill development. In my own testing of Mode Neutral and the Five Levers™ with different healthcare and biomedical students, I have also introduced variations to the Mode Natural design by using different Virtual Worlds, including Virtual Reality. This is early exploratory work and will take some time to come to fruition.

Although my original intention was to challenge the word ‘pedagogy’ and understand its meaning of method and practice of teaching, on reflection, I was deliberating on the previous meanings of ‘pedagogy’ and whether they were applicable in 2005. Between 2005 and 2019, I have refined my thinking and believe outdated models taint the academic discipline of ‘pedagogy’. The process of theory, experience, skill and embodiment of the dominant principles discovery in Mode Neutral, actually go beyond the method and practice of teaching. Mode Neutral naturally incorporates the principles in its design but the pro-active application of the Five Levers™ makes it more than a pedagogy, it is as an educational eco-system promoting collegial and collaborative learning among the community of learners.

7.3 What worked well and did not work?

The collaborative working nature between the three Mode Neutral authors was a very proactive experience. The like-mindedness of the three individuals encouraged their formation of a community of inquiry to query the methods and process of teaching used in my teaching of healthcare subjects. The relationships helped to establish a structured approach to explore the impact of Mode Neutral. The first publication brought about national and international interest and challenges from the wider academic community. Numerous opportunities to explore Mode Neutral in different
contexts emerged which to some degree tested its validity and transferability from health education to other sectors. Comments such as ‘Mode Neutral was ahead of its time’ was reflective of my own thinking when releasing the initial publication. One of the significant tensions with Mode Neutral was notional of transmodal learning. Academic colleagues who had not adopted Mode Neutral were concerned that learners would not turn up to the face-to-face sessions. Their unease became two-fold, with the first concern relating to what size of room to book if they did not know how many would attend their sessions? The second relates to the shifting of the power imbalance to the learner and giving them greater control on when to access the expert (academic). Both contentious points were debated in university-wide learning and teaching committees. The points were later resolved through academic opt-in or opt-out clauses. Academic colleagues who did not wish to adopt Mode Neutral did not need too. Others who did found they were in more contact with their learners and were able to predict the size of the room for each face-to-face session. There were no reported events where no learner turned up for a Mode Neutral face-to-face session, nor were any situations where there were too many learners for the size of the room. Mode Neutral’s design appears to give the academic greater control over the holistic learner experience by providing a balanced curriculum. The monitoring of engagement both online and across the modes provide a rich data set to help with providing a personalised experience. The gathered data within the virtual learning environment helped the academic monitor and supported the learner who may not have been engaged as others. The use of this learner diagnostic was evident in other applications of Mode Neutral within different universities and employment settings.
Perhaps taking another two years to study Mode Neutral thoroughly would have identified the fundamental missing element of the Five Levers™. Nevertheless, taking a decade to discover and create the Five Levers™ has proved successful in creating a model with active learner engagement and supportive towards building cognition from differing sources. I believe there is scope to undertake research work with different sectors on both Mode Neutral and the Five Levers™ either as separate entities or combined as an educational ecosystem.

7.4 Limitations

There are three limitations in this thesis. Although numerous academics have applied Mode Neutral in their field of expertise as a method for teaching practice, there is still a limited application of the Five Levers™. The late discovery of the Five Levers™ and my deliberate delay in releasing them in this thesis means there is further work to investigate the Five Levers™ in other preferred approaches to the learning experience. I wish to explore the impact of the Five Levers™ among terms such as apprentices learning, signature pedagogy, character education and HyFlex learning. Further research will establish if there is transferability of the dominant principles in other forms of developing a learner’s cognition. Equally, this may give rise to the discovery of other ‘Levers’ in the learner’s experience. At this point, the five dominant principles determined by the initial studies and were consciously sought out from other study data, which may have overlooked multiple levers.

A second limitation is in the questionnaire. The questionnaire was derived from a revisit to the Grounded Theory data and two service evaluations. Although the questionnaire has arisen out of the themed data, there is much need to work with
others on a more robust psychometric questionnaire. The new questionnaire will require validating and piloting for the broader intended population of learners. It is likely, a variant of this questionnaire will be necessary to explore the application of the Five Levers™ among children, adolescents and those with learning difficulties. These three areas are currently of particular interest to teaching colleagues who have expressed an interest in testing the questionnaire with autistic children.

The third limitation is with me. I have taken into account my influential personality and established presence in the development of Mode Neutral by working with two other colleagues on the initial peer-reviewed paper. In my teaching praxis, I have constantly been aware of my personality and the direct correlation between my facilitation and the students’ achievements. This reflexive consideration was necessary to eliminate or confirm the direct influence I had on how the learner has developed their sense of being, reality and readiness when studying in a Mode Neutral style course. Arguably it is difficult to make an accurate judgment on whether my personality created the positive outcome of the Five Levers™. Since exploring others use of Mode Neutral, the Five Levers™ have emerged in their data, experience and publications. There is much need for independent research to be undertaken by other academic colleagues to question whether they to notice the Five Levers™ in their teaching practice. Equally, it is also essential to measure the Five Levers™ across the workplace setting to identify the impact on new education and training such as apprenticeship learning.
7.5 What next?

Since 2015, I have worked part-time as an educational coach to support hospital operating staff to become high performing teams. I have overtly used the Five Levers™ to analyse the data to understand individual identity and presence within the team. With my health care knowledge, I have developed a twelve-week programme where I use the Five Levers™ to support theatre staff to perfect their leadership beyond functional skills, to high performing through Problem-Solving, Communication, Leadership styles, Environmental pressures, Interprofessional influences, Feelings, Emotive responses and Self-control. While the discovery of the Five Levers™ is critically important in healthcare to maintain patient safety, I am planning to encourage others to independently undertake research studies to determine if the Five Levers™ do have an impact on the learner’s buy-in whether that it in an education setting or in the workplace.

I wish to develop the pre and post questionnaires beyond an organic learner-centric data-driven survey to be tried and tested in the broader domain of psychometrics so that it becomes a robust measurement tool. This will assist me in measuring the on-going impact of the Five Levers™ in the higher and professional education context. I also plan to undertake new Five Levers™ research studies in the field of Law, Sports and Psychology. I hope to reinforce the combined impact of Mode Neutral and the Five Levers™ as an educational ecosystem rather than a pedagogy. Any new findings will be disseminated through peer review journals, and national and international conference presentations.

----End of Thesis----
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Green, R. (2013) *New education and training measures to improve patient care*. 140


Joint Information System Council (2017) Embracing Sector transformation. Available at: https://www.jisc.ac.uk/guides/embracing-sector-transformation Accessed 20/02/19


Routledge.


NHS England (2019) *Academic Health Science Networks*. Available at: https://www.england.nhs.uk/ourwork/part-rel/ahsn/ Accessed 20/02/19


Frontiers in Human Neuroscience, 6, (p.126).


DOI: 10.14254/2071-789X.2014/7-4/3.


Appendix 1 – Matrix of literature reviewed with ontological links in teaching and learning.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Methods</th>
<th>Results</th>
<th>Link to thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bennett, D, Rowley, J, Dunbar-Hall, P, Hitchcock, M, &amp; Blom, D. (2016) Electronic portfolios and learner identity: An e-portfolio case study in music and writing, <em>Journal Of Further And Higher Education</em>, 40, 1, pp. 107-124, ERIC, EBSCOhost, viewed 30 May 2018.</td>
<td>A mix method study conducted in Australia using a questionnaire to capture the link between e-portfolio and learner identity. 220 students from four different universities across 9 programmes of study. Qualitative and Quantitative data captured from questionnaires</td>
<td>Digital devices have a place within the learning experience. They are a vehicle for student reflection from regular tutor initiated dialogue, thus building identity, self-efficacy and resilience.</td>
<td>The consideration of online learning experience.</td>
</tr>
<tr>
<td>Briggs, A.R.J, Clark, J., and Hall, I. (2012) Building bridges: understanding student transition to university, <em>Quality in Higher Education</em>, 18:1, 3-21, DOI: 10.1080/13538322.2011.614468</td>
<td>Primary data from two studies of student transition in England collated from student and staff surveys, student focus groups, staff interviews and staff–student conferences.</td>
<td>The paper looks at the complex infrastructure required to encourage student transition into and through higher education. This paper presents a model of organisational influence on the learner’s identity.</td>
<td>The link to this thesis is the organisational structure to encourage identity formation. This is one element to the discovered in Mode Neutral.</td>
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<td>Choi, T.H. (2017) Narratives of educational transition and learner identity, <em>British Journal Of Sociology Of Education</em>, 38, 2, pp. 164-183, British Education Index, EBSCOhost, viewed 30 May 2018.</td>
<td>This article examines how educational transitions in Hong Kong are concurrently classed through the lens of learner identity associated with academic success being potentially negotiable and self-sustained through determination, self-regulation, and reflexive strategies. Twenty participants.</td>
<td>The autobiographical reflections highlighted the connection between the types of school and higher education institution leads to the student’s identity. Learner identity during the learning process was not considered.</td>
<td>Links to the Emotional Intelligence element.</td>
</tr>
<tr>
<td>Christie, M., Carey, M., Robertson, A., &amp; Grainger, P. (2015). Putting transformative learning theory into practice. <em>Australian Journal of Adult Learning, 55</em>(1), Qualitative and Quantitative survey.</td>
<td>81 PhD students at Swedish Technology University. Second group</td>
<td>Relates to the ontological element of ‘being’ and the learner’s identity.</td>
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<td>10-30</td>
<td>53 final year teacher education students in Sweden. Students acknowledge how objective they endeavour to be in the classroom, differences in values still exist and could support or distort their learning.</td>
<td>Published peer review paper</td>
<td>Learner identity needs to be considered in curriculum and educational practice to promote identity construction.</td>
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<tr>
<td>Inquiry Framework</td>
<td>Research Approach</td>
<td>Study Focus</td>
<td>Levers Link</td>
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<td>The Internet and Higher Education, 13(1–2), 31–36.</td>
<td>Qualitative approach through focus groups.</td>
<td>This study considered the ‘dimensions of affinity’ or the characteristic that supported identity and individual’s sense of belonging within the learning experience.</td>
<td>Links to the Five Levers™ principles that identity as a learner needs to be developed and shaped over time.</td>
</tr>
<tr>
<td>Reference</td>
<td>Abstract</td>
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<tr>
<td><strong>Lawson, A (2014)</strong> Learner identities in the context of undergraduates: a case study, <em>Educational Research</em>, 56, 3, pp. 343-356, Education Abstracts (H.W. Wilson), EBSCOhost, viewed 30 May 2018.</td>
<td>A mix method study conducted in the UK using a questionnaire to capture the learning experiences/attitudes administered to 99 undergraduate marketing students. Follow up semi-structured interviews with 6 students. The principle hypothesis was to measure the links between learner identities, backgrounds and subject choice. Cautionary note to previously held assumptions - students of business disciplines may not be primarily focussed on future employability and therefore learner identities to do necessarily translate into education and employment. Link to the development of identity, presence and co-presence within the learning experience.</td>
<td></td>
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<tr>
<td><strong>Moon-Heum, C., &amp; Demei, S., (2013)</strong> Self-regulation in online learning, <em>Distance Education</em>, 34:3, 290-301</td>
<td>Qualitative study focused on self-regulation in learning. 64 online students. This links to the consideration of other ‘learning spaces’ and how the learners identity can be formed among their presence and co-presence in the community of inquiry.</td>
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<tr>
<td>Authors</td>
<td>Title</td>
<td>Methodology</td>
<td>Findings</td>
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<tr>
<td>Nyström, S., Dahlgren, M., &amp; Dahlgren, L. (2008)</td>
<td>A winding road – Professional trajectories from Higher Education to working life: A case study of political science and psychology graduates. <em>Studies in Continuing Education</em> 30 (3): 215–229.</td>
<td>Longitudinal Case study of 11 graduates study political science and psychology.</td>
<td>Statement that courses not associated with accredited career paths do not encourage learner identity.</td>
</tr>
<tr>
<td>Porteous, D., and Machin, A. (2018)</td>
<td>The lived experience of first year undergraduate student nurses: A hermeneutic phenomenological study. <em>Nurse Education Today</em>. 60, 56-61</td>
<td>Qualitative and Quantitative study – 30 student nurses. Semi structured interviews.</td>
<td>This study aimed to understand how one group of 30 undergraduate nursing students perceived their experiences of the transition into higher education and nursing profession. Alignment of professional identity through social networking to participate in communities of practice.</td>
</tr>
<tr>
<td>Reay, D., Crozier, G., &amp; Clayton, J. (2009)</td>
<td>Fitting In’ or ‘Standing out’: Working-class students in UK Higher Education. <em>British Educational Research Journal</em>. 1–18.</td>
<td>Case studies of 27 working-class students</td>
<td>Believed identity was important for the learner’s belonging to either ‘feels one fits in or stands out’ in the learning experience.</td>
</tr>
<tr>
<td>Sethi, A., Schofield, S., McAleer, S., &amp; Ajjiwai, R. (2017)</td>
<td>The influence of postgraduate qualifications on educational identity formation of healthcare professionals. <em>Advances in Health Science Education</em>, 1-19</td>
<td>Semi-structured interviews were conducted with 27 graduates</td>
<td>This study adopted the Kelchertman’s (1993) conceptual model for professional identity to investigate the identity formation of healthcare professionals during their studies.</td>
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<tr>
<td>Søreide, G.E. (2016) High-skilled newcomers’ identity: Learners or experts?, <em>Journal Of Workplace Learning</em>, 28, 1, pp. 2-16, ERIC, EBSCOhost, viewed 30 May 2018.</td>
<td>Qualitative with semi-structured interviews as the main source of data.</td>
<td>The author highlighted the facilitation of job transitions and induction for high-skilled and experienced workers demonstrates the close associations between identity and learning.</td>
<td>Links clearly to the thesis that there is a close association between identity, presence and co-presence.</td>
</tr>
<tr>
<td>Young, R. (2012). Can Neds (or Chavs) be non-delinquent, educated or even middle class? <em>Sociology</em> Vol 46, Issue 6, pp. 1140 - 1160</td>
<td>Mix method approach using a structured survey.</td>
<td>3000 15-year-old pupils</td>
<td>Although this article is outside of the inclusion criteria, there are interesting elements highlighting the cultural markers for educational engagement related to self-identity.</td>
</tr>
</tbody>
</table>
Appendix 2 – Five Levers Questionnaire

Section 1 - About you (Please tick ✓ the appropriate box □)

1. Enter your discipline area:
   i.e Nurse, Biomedical Scientist

2. Select your age group
   19 – 24 years □ 25 – 34 years □ 35 – 44 years □ 45 – 54 years □ 55 + □

3. Select your gender
   Male □  Female □

4. Are you undertaking formal education
   Yes □  No □

Section 2 – Identity

Please take a moment to consider the questions on the left-side column and select online one answer in the columns to the right.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not important</th>
<th>Slightly important</th>
<th>Somewhat important</th>
<th>Very important</th>
<th>Extremely important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2.1. My social behaviour when with others.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Q2.2. My appearance when I am with others.</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Q2.3. What others think about me</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<td>Q2.4. I like to be different from others</td>
<td>□</td>
<td>□</td>
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<td>Q2.5. My self-value and what I think of myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<td>Q2.6. My status; job role, money, achievements or something else.</td>
<td>□</td>
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<td>Q2.7. Where I live and what it says about me.</td>
<td>□</td>
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Q2.8. My gender and how I express myself.

Q2.9. My social media or other online presence and what it says about who I am.

Q2.10. My ability to connect with others on personal levels.

5. When answering the above questions, did you have any reflective thoughts that you wish to share?

Please comment here____________________

**Section 3 – Presence**

Please take a moment to consider the questions on the left-side column and select online one answer in the columns to the right.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not important</th>
<th>Slightly important</th>
<th>Somewhat important</th>
<th>Very important</th>
<th>Extremely important</th>
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<tbody>
<tr>
<td>Q3.1. I like people to like me</td>
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<td>Q3.2. The way people react to my expressions, thoughts, ideas is important to me</td>
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<td>Q3.3. What others think about what I say.</td>
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<td>Q3.4. The impression I make on others</td>
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<td>Q3.5. Feeling part of a group</td>
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<td>Q3.6. Being able to talk freely and express my opinion.</td>
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<td>Q3.7. Acknowledgement on my comments</td>
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<td>Q3.8. Close friendship or connections with others</td>
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</table>
Q3.9. Feeling accepted by others.

Q3.10. Being confident enough to speak up.

6. When answering the above questions, did you have any reflective thoughts that you wish to share?

Please comment here____________________

Section 4 – Co-Presence

Please take a moment to consider the questions on the left-side column and select online one answer in the columns to the right.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>Infrequent</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4.1. Are most of your activities done with others.</td>
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<tr>
<td>Q4.2. Do you enjoy the interaction with other people.</td>
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<tr>
<td>Q4.3. Do you share information with others.</td>
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<tr>
<td>Q4.4. Do you like being part of a group.</td>
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<tr>
<td>Q4.5. Do you give feedback to others about their ideas, comments.</td>
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<tr>
<td>Q4.6. Do you comfortably accept feedback from others.</td>
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<tr>
<td>Q4.7. Do you seek others approval of your comments.</td>
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<tr>
<td>Q4.8. Are you likely to lead the conversation.</td>
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<tr>
<td>Q4.9. Do you ever get offended or upset from someone’s comments.</td>
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</tbody>
</table>
Q4.10. Do you actively engage in discussion

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Infrequent</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
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<tbody>
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</tbody>
</table>

7. When answering the above questions, did you have any reflective thoughts that you wish to share?

Please comment here____________________

**Section 5 – Emotional Intelligence**

Please take a moment to consider the questions on the left-side column and select online one answer in the columns to the right.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>Infrequent</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
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</thead>
<tbody>
<tr>
<td>Q.5.1. My emotional thoughts generally influence others.</td>
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<tr>
<td>Q5.2. People copy my behaviour or thoughts.</td>
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<tr>
<td>Q5.3. I am generally a reactive person to how I feel at the time</td>
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<td>Q5.4. I like to learn from others.</td>
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<td>Q5.5.I am a goal driven person</td>
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<tr>
<td>Q5.6. I am uncertain at times, and need others to help me make a decision.</td>
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<td>Q5.7. I rely on others for their confidence.</td>
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<td>Q5.8. Group differences cause difficulties</td>
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<tr>
<td>Q5.9. I like to keep everyone happy</td>
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<td>Q5.10. I am thoughtful towards others.</td>
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</tbody>
</table>

8. When answering the above questions, did you have any reflective thoughts that you wish to share?
Section 6 – Immersion

Please take a moment to consider the questions on the left-side column and select online one answer in the columns to the right.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>Infrequent</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>All the time</th>
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<tbody>
<tr>
<td>Q6.1. I easily get drawn in by others, movies or books</td>
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<tr>
<td>Q6.2. Do you sometimes find people say they cannot get your attention.</td>
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<td>Q6.3. Have you ever ‘zoned out’ and forgotten where you were.</td>
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<td>Q6.4. Do you ever become very focused on what you are doing.</td>
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<td>Q6.5. How easy is it for you to block out distraction when you are</td>
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<td>concentrating.</td>
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<td>Q6.6. Do you find you get lost in detail.</td>
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<tr>
<td>Q6.7. Do you lose track of time.</td>
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<td>Q6.8. Do you ever visualise the outcome before completing a task.</td>
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<tr>
<td>Q6.9. How often do you like someone because they are familiar or similar to you.</td>
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<tr>
<td>Q6.10. Has your time ever been taken up by something that has not been productive</td>
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</tbody>
</table>
9. When answering the above questions, did you have any reflective thoughts that you wish to share?

Please comment here__________________

Section 7 – Focus Group

26. Would you like to participate in a follow up focus group relating to this study?

Yes ☐ No ☐

If yes, please insert your email address _____________________ so we can send you further information regarding the focus group.
Appendix 3 – Questionnaire Calculations

A five point scale was allocated to the questions within the questionnaire. No questions in section 2 to 6 were compulsory.

Not important = 1
Slightly important = 2
Somewhat important = 3
Very important = 4
Extremely important = 5
No response given = 0

Each section contained ten questions with a possible total score of 50.
The total score was then divided by the number of questions (10)
And plotted on a 1-5 axis scale for each of the Five Levers™