DProf thesis

An exploration of the interaction between professional identity formation and the campus built environment in health professions education

Gilroy, J.

Full bibliographic citation: Gilroy, J. 2024. An exploration of the interaction between professional identity formation and the campus built environment in health professions education. DProf thesis Middlesex University

Year: 2024

Publisher: Middlesex University Research Repository

Available online: https://repository.mdx.ac.uk/item/148z1q

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address: repository@mdx.ac.uk

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: https://libguides.mdx.ac.uk/repository

An exploration of the interaction between professional identity formation and the campus built environment in health professions education

A thesis submitted to Middlesex University in partial fulfilment of the requirements for the degree of Doctor of Professional Studies (Health)

IPL 5240

Word count: 63,016

Judith Mary Gilroy M00657862

Faculty of Health, Social Care and Education

Middlesex University

London, England

Date of Submission: March 2024

Abstract

Background: Professional identity formation has been proposed as the backbone of medical education (Cooke et al., 2010a, pg. 7). Educators develop curricula delivering knowledge, skills, and attributes, assisting learners' transition towards becoming healthcare professionals, through dynamic individual and social processes (Sarraf-Yazdi et al., 2021). In parallel, universities have invested in campus facilities, driven by a range of objectives including improving learning spaces; technology; student social space; and enhancing sense of attachment with the institution. **Methods:** This qualitative ethnographically informed research explored how students in one higher education institution's health professional programmes develop professional identity through interactions with each other and the built environment. Pharmacy and medical students' lived experiences were shared in facilitated focus groups. Observations on campus outside of formal teaching hours were completed. Data was interpreted through a social constructivist lens using reflexive thematic analysis (Braun and Clarke, 2021). Conceptually, symbolic interactionism was used as a framework. **Results:** The data collection methods generated rich descriptions, insights and understandings of participants, resulting in eight themes and three subthemes. Connections to each other and society were optimised through transparency, inside and outside views, and campus permeability. Lecture Theatres provided opportunities for professional socialisation, inter-professional understanding and reinforced the power of communal learning. Welcoming and accessible places for students to linger and connect facilitated reflection, decompression and support from others in the community of practice. Spaces equipped for authentic learning helped students envisage themselves as future practitioners. This development was further supported through the use of art and artefacts which act as navigational aids. Exertion of agency matters to learners and is facilitated or inhibited through changes in how the built environment is conceived and managed. **Conclusion:** Physical spaces should be aligned to pedagogical and institutional

philosophy to assist in the harmonious development of professional identity cognisant of the needs of society. **Impact:** Recommendations are made to stakeholders that may foster identity formation through the built environment, along with suggestions for further research in this area.

Keywords

Professional Identity formation, built environment, community of practice, professional socialisation.

Statement of authorship

This thesis is written by Judith M Gilroy and has ethical clearance from the School of Health and Education, Middlesex University and the University of Health (UoH).

It is submitted in partial fulfilment of the requirements of the School of Health and Education of Middlesex University for the Degree of Doctor in Professional Studies (Health).

Acknowledgements

Richard and Travis, thank you for your love, patience and support during my doctoral adventure. We did it!

Mum and Dad, you started all this. Thank you for giving me a love of learning and for always encouraging me.

Hannah, I am profoundly grateful for your mentorship and friendship. Thank you for facilitating this degree. Your unwavering support has been a crucial anchor during the last few years.

Thank you to the team in the Office of the Deputy Vice Chancellor for Academic Affairs, who assisted me with the many and varied administrative tasks involved in this doctoral

programme, as the insider-researcher and as the employee. You enable me to deliver every day.

Thank you to Margaret McCarthy, Colm Healey and Anne Hickey for your help and support.

Sinead and Cormac, thank you for keeping me plied with books and in particular the hard-to-find paperback copy of HAROUN AND THE SEA OF STORIES. Much appreciated.

To my supervisors, Dr Gordon Weller and Professor Michael Traynor, whose wise words and guidance throughout a tumultuous COVID period and beyond kept me on track. Your expertise, encouragement and feedback have been instrumental in shaping my approach to this study. Thank you for all the time, energy and effort you have invested in me.

Finally, to the research participants who gave willingly of their time, to whom I express my deepest gratitude and appreciation. Without you, there would be no stories, no insights. Your individual and collective perspectives and interactions have enriched the outcomes and contribute to making your journey better. Thank you for the trust you placed in me and for your help in my own doctoral journey. It has been my privilege.

Disclaimer

The views expressed in this document are mine and are not necessarily the views of my supervisory team, examiners, Middlesex University or my employer.

Contents

Abstract ii

Keywords iii

Statement of authorship iii

Acknowledgements iii

Disclaimer iv

Contents v

List of Figures .... Error! Bookmark not defined.

List of Tables xiv

Definitions, Glossary and List of Abbreviations xv

1. Introduction 1

1.1. Background 1

Insider-researcher perspective 3

External perspectives 5

Study Setting 7

Investments in campus buildings 13

1.2. Research Question, Aims and Objectives 15

1.3. Structure 17

2. Review of the literatures 19

2.1. Introduction 19

2.2. Search strategy 19

2.3. Approaching the review 21
2.4. A definition of learning 21
2.5. Curriculum Development in Health Professions Education 23
Drivers of change 23
From Professionalism to Identity Formation and Development 29
2.6. Professionalism 31
Identity formation 32
The Learning Environment 44
Other Health Professions 49
Professional identity and socialisation during a pandemic 52
2.7. Summary so far: Curriculum, Professionalism and PIF developments 56
2.8. Campus development in Higher Education 57
2.9. Chapter Summary and Conclusions 64
3. Design and Methodology 66
3.1. Introduction 66
3.2. Explorations of Ontology and Epistemology 66
3.3. Conceptual framework and methodological considerations 70
Symbolic Interactionism 72
3.4. Summary so far: stories 76
3.5. Methodology 78
From Ethnography to Ethnographically informed research 80
3.6. Methods: Focus Groups 83

Designing and running the focus groups 85
Sampling and recruitment 87
3.7. Methods: Observations 89
3.8. Data Analysis 92
Focus Groups 93
Observations 93
Combining the data sets 94
3.9. Ethical Considerations 96
Informed Consent 97
Anonymity and Confidentiality 98
Other Ethical Considerations 99
3.10. Summary 100
4. Project Activity 101
4.1. Introduction 101
The Setting 103
COVID-19 103
Revised proposal 108
4.2. Focus Groups 115
Nationality and domicile / location 117
Data collection by means of a facilitator 118
Designing, piloting, and implementing the topic guide 121
Selection and recruitment of participants 122

Activities involved in the Focus Groups 124

Post Focus Group activity 125

4.3. Activity in carrying out the Observations 127

Designing, piloting, and implementing the observations 128

Scheduling of Observations 131

During the Observations 131

Post Observations activity 134

4.4. Ethical considerations arising during the project activity 134

Data collection 134

Anonymity and Gender 134

4.5. Data Analysis 135

Focus Groups 136

Observations 140

Reviewing, developing, describing and naming themes 142

4.6. Role of Supervisory Team 142

4.7. Utilising my tacit knowledge 144

4.8. Chapter Summary 146

5. Project Findings: "A race we're all running together"? 147

5.1. Introduction 147

5.2. Presenting the findings 149

5.3. Generating Themes from the Focus Groups 150

Insider researcher reflexivity 150

FG Theme 1: The Destination …. and the Journey 153

FG Theme 2: Building Connections for Now and For the Future 159

FG Theme 3: Part of Something Bigger 165

FG Theme 4: Authenticity and Experientiality 173

FG Theme 5: Reasons to Linger 178

Situational Theme: Lemons and lemonade 183

5.4. Summary of themes from the focus groups 185

5.5. Themes generated from the Observations 186

Observation Theme 1: Communication and Control 188

Observation Theme 2: See you at the Blue Couches 189

Observation Theme 3: Studying “together-apart” 194

Observation Theme 4: Collaborations 197

Observation Theme 5: Food 199

Observation Theme 6: My Space 200

Observation Theme 7: Arrive “ta-da” - or Escape, my choice 200

5.6. Consolidating the Findings 203

5.7. The Final Themes 206

5.8. Chapter Summary 209

6. Discussion 211

6.1. Introduction 211

6.2. Interpreting the findings 213

Objective 1 214

Objective 2 222

Objective 3 226

Objective 4 235

6.3. Opportunities for further research 242

6.4. Limitations 244

6.5. Summary 245

7. Conclusions and Recommendations 247

7.1. Introduction 247

7.2. Answering the Research question 247

7.3. Recommendations 249

Implications for Practice: Practical Recommendations 249

Implications for Practice: Internal impact 251

7.4. Defined Contribution: The “A” Framework 252

7.5. Conclusions 254

7.6. The making of a doctor …. 255

7.7. Summary and concluding comments 257

References 258

Appendices 281

1. Ethics Approval - MDX 282

2. Ethics Approval - UoH 284

3. Consent – Qualtrics Survey 285

4. Gatekeeper Agreement 290

5. Focus Group Guide 291
6. Emails to participants 295
7. Observation Template 297
8. Focus group coding and themes 298
9. Additional Images of the Campus 300
10. Awards and Accolades for N-Building 317
11. White Coat Ceremony Declaration 318

List of Figures

Figure 1 Architects cut-through drawing of N-Building 10
Figure 2 Aerial view of the Time Capsule Installation 12
Figure 3 View from my office window November 2021 14
Figure 4 ConnectedPapers using Goldie 2012 as the origin paper 20
Figure 5 Mapping the Literature 21
Figure 6 CanMEDs 2015 Framework 25
Figure 7 Graduate Attribute profile for Pharmacy degree programme. 25
Figure 8 Transformative education for distinctive practice. Adapted from Frenk et al. 2010 27
Figure 9 An Approach to Learning, Teaching and Assessment. Adapted from Frenk et al. (2010) and Shulman (2005) 29
Figure 10 Multiple factors involved in the process of socialisation in medicine. Cruess et al. 2015 39

Figure 11 Integration of personal and professional identity entails a longitudinal developmental process. Sarraf–Yazdi et al. 2021 43

Figure 12 SAPLING Model. Moseley et al. 2021 51

Figure 13 Overview of identified themes related to Sense of Community. van der Meer et al 2021 54

Figure 14 Final Conceptual Model. Consorti and Consorti 2023 55

Figure 15 A generalised representation of learning space. Ellis and Goodyear 2016 ... 61

Figure 16 Places for learning spectrum (Wilson, 2009) cited by Ellis and Goodyear 2016 61

Figure 17 The interrelationship between the building blocks of research. Grix 2002. .. 68

Figure 18 Three Step Data Analysis. Hanson et al 2011 93

Figure 19 Diagrammatic Timeline of Project Activities 102

Figure 20 Daily Deaths in Ireland from COVID-19 during the study (Source: Government of Ireland, 2023: online) 114

Figure 21 Age profile of eligible students 116

Figure 22 Distribution of eligible students and FG Participants by programme 124

Figure 23 Participant notice displayed on building screens 132

Figure 24 Notices to occupants 132

Figure 25 Focus Group packs 136

Figure 26 Total COVID-19 related Deaths during data collection periods (Source: Government of Ireland, 2023: online) 148

Figure 27 Asserting control through non-human means 188

Figure 28 See you at the Blue Couches: views from inside and out 190

Figure 29 Street View - see and be seen......193

Figure 30 Looking Out.... 195

Figure 31 Studying Together......195

Figure 32 Under - occupancy 196

Figure 33 Collaborating in the study pods 197

Figure 34 Somewhere to eat ... .199

Figure 35 Leaving my stuff 200

Figure 36 Stairway to ..... arrive or escape......201

Figure 37 Stairs to the blue couches......202

Figure 38 The "A" Framework:......253

Figure 39 3D Section of N-Building with Guide......300

Figure 40 Students at the blue couches, Ground floor Learning Commons......301

Figure 41 Views from the blues: Learning Commons, Ground Floor, N-Building......302

Figure 42 The Study Pods, Ground Floor Learning Commons N-Building 303

Figure 43 View from the Dispensary café back through the Study Pods......304

Figure 44 The Dispensary café, Ground Floor N-Building 305

Figure 45 The Pods: Dispensary café behind and views through to the courtyard......305

Figure 46 Red line boundary of the city centre campus, showing key buildings and relationship to city centre park and ponds. Source: Google Maps 306

Figure 47 Evening view from the city street – see and be seen at the blue couches...307

Figure 48 N-Building main entrance: blue couches round to the left 308

Figure 49 Views from the 2nd floor stairs out to the street......309

Figure 50 Views: inside and out: students working pre COVID-19 310

Figure 51 Historical artefacts and Prize boards in the original 1810 building walkways 311

Figure 52 Students in a teaching scenario in the Mock Operating Theatre, being observed through one-way glass 312

Figure 53 “Mock” Pharmacy: creating the mise-en-scène 312

Figure 54 Student using a task trainer to practice laparoscopic surgical skills.............313

Figure 55 Students using blood pressure monitors on each other 313

Figure 56 Students sitting underneath the portrait of Dr Mary Somerville Parker Strangman (1872 – 1943) by Mick O’ Dea. 314

Figure 57 Pods and learning commons being used to celebrate Lunar New Year February 2022...315

Figure 58 Class of 2017 at the launch of the Time Capsule Installation.......................316

List of Tables

Table 1 Average Ages (years) of eligible participants by programme 117

Table 2 Initial Themes from Focus Groups 138

Table 3 Focus Group Participants 149

Table 4 Themes from Focus Groups 152

Table 5 Quote utilisation by participant by Focus Group 185

Table 6 Connecting the Themes...204

Table 7 Final Themes..207

Table 8 Reminder of final Themes 213

Table 9 Props and stagecraft: examples 240

Table 10 Aspects of the Built Environment impacting on PIF.....................................248

Definitions, Glossary and List of Abbreviations

Agency	*"The intentional actions that constitute learners' participation in the social experience of learning"*. (Watling et al., 2021, pg. 943) Agency emphasises autonomy and the power of the individual to shape society through the choices made. Even though individuals may have agency, their choices and actions can be constrained and influenced by overarching patterns, institutions and norms, attributed to structure. Agency and structure are differing but complementary perspectives, helpful in understanding human behaviour.
AMEE	Association for Medical Education in Europe
BE	Built Environment: *"the constructed surroundings that provide the setting for human activity, ranging in scale from personal shelter to neighbourhoods to the large-scale civic surroundings……it includes the fit-out of personal and shared spaces. It also extends to the site of a building, its outdoor areas, and its wider location within a neighbourhood."* (Carnemolla et al., 2021, pg. 3)
CAO	Chief Academic Officer
CCAT	COVID Control Admin Team
CoP	*"A community of practice is a persistent, sustaining social network of individuals who share and develop an overlapping knowledge*

	base, set of beliefs, values, history and experiences focused on a common practice and/or mutual enterprise" (Barab et al. 2002, cited by Cruess et al., 2018, pg. 186)
CPD	Continuing (or Continuous) Professional Development. Healthcare practitioners are required by regulators to maintain professional competence through engaging in continuous professional development.
DEM	Direct Entry Medicine
E.U.	European Union. For the purposes of this study this includes countries in the EEA and the UK.
EIB	European Investment Bank
Empiricist	Using experiments or experience as the basis for ideas. Oxford English Dictionary (online)
Epistemology	The nature of knowledge and how we come to know about the world. Concerned with theories of knowing. What counts as knowledge.
Ethnography	*"A form of social research that emphasises the importance of studying at first-hand what people do and say in particular contexts"*. (Mannay and Morgan, 2015, pg. 169)
Flexner Report	"Medical Education in the United States and Canada" was a report to The Carnegie Foundation for the Advancement of Teaching by Abraham Flexner, published in 1910, which became known as the Flexner Report.
Formal Learning Spaces	*"Physical learning spaces in which the teacher and students are typically co-present and in which the activities are either teacher-centred or teacher-supervised"*.

	(Ellis and Goodyear, 2016, pg. 164)
GCC	Gulf Cooperation Council comprised of six-member states.
GEM	Graduate Entry Medicine
GMC	General Medical Council The regulator in the U.K.: to protect patients and improve medical education and practice in the UK by setting standards for students and doctors. The GMC support them in achieving and exceeding those standards and act when they are not met.
HEA	Higher Education Authority The HEA leads the strategic development of the Irish higher education and research system with the objective of creating a coherent system of diverse institutions with distinct missions, which is responsive to the social, cultural and economic development of Ireland and its people and supports the achievement of national objectives.
HEI	A higher education institution.
HEPI	Higher Education Policy Institute The UK's only independent think tank devoted to higher education.
Hidden Curriculum	The fundamental values and messaging being created and transmitted within policy development, evaluation, resource allocation and institutional nomenclature. (Hafferty, 1998)
Informal learning space	*"Physical spaces in which students engage in learning activities without direct supervision".* (Ellis and Goodyear, 2016, pg. 164)
LE	The Learning Environment. It comprises the physical, social, and psychological contexts in which students learn and grow professionally. It influences how

	students develop behaviours and form identities as future professionals. It encompasses the curriculum, facilities and all interactions with faculty, staff, and peers; and the formal, informal and hidden curricula. (Shochet et al., 2013, Shochet et al., 2015) And *"Learning environment refers to the social interactions, organizational cultures and structures, and physical and virtual spaces that surround and shape participants' experiences, perceptions and learning"* (Irby, 2018)
LTA	Learning, Teaching, and Assessment (strategy)
Method	How we collect the data.
Methodology	How we gain knowledge about the world.
MU	Middlesex University
Ontology	Ontology is the starting point of all research, after which one's epistemological and methodological positions logically follow. (Grix, 2002)
PCR	Polymerase Chain Reaction
PI	Professional Identity: "*A representation of self, achieved in stages over time during which the characteristics, values, and norms of the medical profession are internalised, resulting in an individual thinking, acting, and feeling like a physician*". (Cruess et al., 2014, pg. 1447)
PIF	Professional Identity Formation: "*An adaptive, developmental process that happens simultaneously at two levels: (1) at the level of the individual, which involves the*

	psychological development of the person and (2) at the collective level, which involves the socialisation of the person into appropriate roles and forms of participation in the community's work.” (Jarvis-Selinger et al., 2012, pg. 1185-1186) And The backbone of medical education. (Cooke et al., 2010a)
Place	“*Place is created by people using space for particular purposes: place, then, is space which has meaning for its users; it is special space.*” (Temple, 2018, pg. 136)
Purposive Sampling	“*Sometimes used interchangeably with ‘theoretical sampling’, this refers to utilizing prior knowledge to guide the selection of participants. This is done through anticipating the characteristics of potential respondents likely to give rise to differing perspectives and accounts of their experiences and using this to inform decisions about who to approach and invite to take part in a research project.*” (Barbour, 2018, pg. 172)
RAL	Recognition and Accreditation of Learning
RIAI	The Royal Institute of the Architects of Ireland
RoW	Rest of the World: countries outside of the EU and the UK.
SAES	Student Academic Experience Survey An annual Advance HE-HEPI survey showing how full-time undergraduate students rate their time in higher education and their attitudes towards policy issues that impact upon them.

Socialisation	The process by which a person learns to function within a particular society or group by internalising its values and norms. Oxford English Dictionary "*Socialization is the process of becoming a part of the (medical) community and developing a sense of professional identity through shared knowledge and skills. This process is individualised, non-linear and heavily influenced by formal, informal and hidden curricula*". (Sarraf-Yazdi et al., 2021, pg. 3515)
SI	Symbolic Interactionism
Third Places	Spaces, situated between office and home where people rest, socialise and work in a comfortable environment. *"Informal learning spaces also promote social connection and creative collaboration between students, or simply a "third place" on campus in which they can study and relax"* (Berman, 2020, pg. 129)
UoH	University of Health. University of Health is a pseudonym assigned to my employer and home higher education university.
WCC	White Coat Ceremony

1. Introduction

Grain upon grain,

one by one,

and one day, suddenly,

there's a heap, a little heap,

the impossible heap.

Endgame, Samuel Beckett, 1957

Both my parents were teachers, and I owe to them a love of learning, reading and a deep belief in the transformative power of education. In my earlier career, I worked successfully in the commercial sector, leading business units and creating shareholder value. Originally qualified as a pharmacist, reconnecting with my core values resulted in a switch to healthcare education to make a contribution to wider society. I am now a higher-education senior administrator at a health sciences university, headquartered in Dublin, Ireland.

At the simplest level, my purpose is providing the conditions for development and delivery of progressive, positive education, and it was this that led me to want to pursue a professional doctorate.

1.1. Background

The University of Health[1] (UoH), my employer and setting for this research study, is an unique institution in the higher education landscape, as it is both a Royal College

[1] University of Health is a pseudonym assigned to my employer and home higher education university.

responsible for setting and supporting postgraduate professional standards, and a single-faculty university focused on medicine and health sciences. It was created by Royal Charter in 1784, although its predecessor body was in existence from 1446. Shaped by its founding principles, which included equity and non-sectarian right of entry, it was the first royal college to admit women to membership and fellowship levels in the British Isles, and the first surgical college anywhere in the world to elect a female president. This progressive culture continues today, and creates a deep professional responsibility to enhance human health through education, research and service. It is currently the highest ranked[2] university in the world for its contribution to good health and well-being, the third UN Sustainable Development Goal [3].

There is a wide portfolio of undergraduate and postgraduate academic degrees accredited up to level 10 on the Irish National Framework of Qualifications, delivered through 7 schools: three primarily focussed on undergraduate or programmes leading to first professional registration – Schools of Medicine; Pharmacy and Biomolecular Sciences; and Physiotherapy; and four focused on postgraduate taught and research degrees: Population Health; Postgraduate Studies; Nursing and Midwifery; and a Graduate School of Healthcare Management.

It is also the national postgraduate surgery and healthcare training institution, delivering accredited national training programmes in all surgical specialties, emergency medicine and radiology. Postgraduate professional training is also delivered through its faculties of Radiologists; Sports and Exercise Medicine; Dentistry; Nursing and Midwifery; and the Irish Institute of Pharmacy.

---

[2] Times Higher Education Impact Rankings 2023

[3] https://sdgs.un.org/goals

It is a not for profit institution and reinvests all surplus income in education, research and service.

Insider-researcher perspective

My institution's strategy is committed to leading the world to better health through transforming healthcare education and research.

The scope and autonomy of my employee role at the start of this doctoral programme was as a senior administrator at the University of Health (UoH), encompassing the management of a wide range of strategic initiatives and projects, alongside delivery of day-to-day services to students from registration through to graduation and beyond.

I led teams who were responsible for the delivery of core registry, academic administrative, and assessment activities, for the institution, and sought to deliver on three distinct yet interdependent facets:

- Provision of high-quality administrative support to create an unrivalled student academic experience
- Assuring transnational and national governance of academic programmes and
- Strategic initiatives to deliver on the institution's mission.

I had direct line management responsibility for a team of forty-four expert professional staff across a mixture of traditional academic and clinical sites in Ireland and dotted-line responsibility for staff in the Middle East and Far East across multiple time zones. This included teams directly student-facing involved with developing and delivering services in: career guidance and planning; access and facilitation for students with learning adjustment needs; student development and wellbeing; welfare, counselling and psychiatric services for students in difficulties; timetabling and programme coordination (some programmes); assessments and examinations planning and delivery; managing the internal process leading to police clearance for undergraduate students in medicine,

pharmacy and physiotherapy; prize giving ceremonies celebrating student achievements; and conferring ceremonies.

I supported the Chief Academic Officer’s engagement with Student Unions and Class Representatives, meeting regularly throughout the academic year, and sitting on university level boards. My offices were responsible for reviewing and refining university-wide student policies and regulations, including for example exceptional circumstances, leave-of-absence, appeals, fitness to study, and discipline. I oversee all, and personally manage a small number of highly complex and sensitive, student academic progression processes particularly when significant disciplinary or health issues arise.

My responsibilities included upholding academic and professional registration standards while balancing learner needs. Additionally, the student mix at the UoH has students from more than 100 nationalities, many of whom are in receipt of academic sponsorship from their national governments, facilitating their enrolment and living expenses. My role required liaison with these Sponsors on students’ academic progression.

Prior to the pandemic, most students would probably have been aware that the functions listed above existed within the UoH, but my role was likely only visible to the student leadership, or when I was gowned and involved in official UoH proceedings. When the pandemic arrived, that changed and this is discussed further in Chapter 4 (pg. 103).

In addition to those listed above, my responsibilities also included being the custodian of the educational brief in a major campus development, which opened in 2017. In the period after this building opened, I became curious as to its wider role in supporting the student experience – but more of that later.

Chapter 1 Introduction

My organisation's strategy 2018 – 2022 included projects on curriculum transformation and further campus infrastructure expansion. This presented a unique opportunity as a doctoral student and researcher-practitioner to study past-campus expansion within the context of the development of new curricula for health professions, specifically programmes of study for undergraduate medicine, pharmacy and physiotherapy students, with the aim of influencing future activities.

External perspectives

Health professional education is evolving but is still influenced by a model developed by Abraham Flexner in 1910 (Flexner, 1910). Flexner was instrumental in introducing a scientific and evidence base to medicine, where students would receive foundational training in scientific and laboratory investigations prior to their clinical training based in hospital settings, supplementing the apprenticeship model and creating "clinician-investigators" (Cooke et al., 2006). Flexner's report accelerated change in America, bringing benefits to students and patients in a system that had many for-profit schools with inadequate facilities. However, it had a number of negative impacts as funding flowed to fewer institutions and many schools educating women, working-class, or black students closed (Barkin et al., 2010). To mark the centenary of the report's publication, reviews of the impact of Flexner highlighted the challenges of current-day curricula focussed on scientific learning without a balance of professional ethos, caring and compassion (Cooke et al., 2006, Duffy, 2011).

The Flexner report still manifests in courses as "basic science" or "pre-clinical", followed by clinical attachments organised into rotational "blocks" or clerkships, and an inference that in the first phase, students must acquire the scientific knowledge needed to underpin clinical training. The acquisition of knowledge, because it is a highly valuable form of capital, is no longer enough to confer expertise. The production of scientific and

medical information continues apace with the corpus growing exponentially, creating challenges for healthcare practitioners to stay up to date and evidence based as they deliver patient care. One study estimated the doubling time of medical information would change from every 50 years in 1950 to just 73 days (0.2 years) by 2020 (Densen, 2011). Since then, the advent of Artificial Intelligence is further changing how the knowledge landscape is accessed in ways that are only beginning to be understood (Kundu, 2021). This requires us as educators to move from teaching students what we know, to creating ways for learners to participate (Ellis and Goodyear, 2016), find and interpret information, and a more experiential and inquisitive way of creating learning. This move away from knowledge being a primary basis of expertise has implications on what society thinks makes a "good" doctor and by extension a good curriculum.

Old style apprenticeship models woven into many modern clerkships and rotations for skills, knowledge and values acquisition and development, have been under pressure (Dornan, 2005, Rassie, 2017): working-time directives limit time spent in clinical environments; patient safety and ethical considerations challenge learning on patients; increases in day-cases and decreases in the average length of stay mean only the very sickest remain in hospital, creating fast paced and high-stake learning environments for the most junior learners; all resulting in conversations about changing the way health professionals are trained.

There is a growing movement that medical curricula should balance learning "things" with assisting students "becoming" health professionals including the development of attributes such as professionalism, compassion and resilience (Cruess and Cruess, 1997, Dornan et al., 2007, Goldie, 2012, Hickey, 2022, Ryan et al., 2022, Healy et al., 2023).

Many programmes recognised these drivers and the need to change. They have been revising their curricula with some receiving grant support (American Medical Association, 2017, American Medical Association, 2019). On the centenary of the Flexner

report, the Carnegie Foundation published a new study, *Educating Physicians*: *a call for reform of medical school and residency*, (Cooke et al., 2010b). In a supplementary published summary, the authors highlighted

> *"Professional Identity Formation—the development of professional values, actions, and aspirations—should be the backbone of medical education"* (Cooke et al., 2010a, pg. 6)

This work contained four key recommendations later presented as:

1. Standardise on Learning Outcomes and Individualise Learning Processes
2. Promote Multiple Forms of Integration
3. Prepare Physicians Who Are Committed to Excellence by Cultivating Habits of Inquiry, Innovation, and Improvement
4. Address Professional Identity Formation

(O'Brien and Irby, 2013)

Study Setting

The UoH is located in the heart of Dublin, with a number of international campuses; a student community of over 100 nationalities; and alumni in 98 countries, generating an international perspective on how to train tomorrow's clinical professionals today.

It is the Dublin city centre campus which is the locus of this research study. Campus buildings have existed on this same city-centre site since 1810, creating a strong sense of place and presence in the heart of the city.

The original city centre building is steeped in history having played a key role during times of national unrest and political change. During the Irish Easter Rising in 1916, it housed a garrison of the Irish Citizen Army, and came under sustained attack by the British Army across the city centre park it faces, and which separated the building from

where the British had taken up their position. The architecture of the original 1810 building played a key role, as a completely internal room illuminated by vaulted ceiling sky-lights, and hence protected from gunfire, was converted to a field hospital, and helped provide sleeping quarters for the volunteers. A bullet hole to this day is preserved in a brass plate on a door in the room that sustained most damage as a reminder of the past. Other elements, visible in photographs of the time, such as light fittings and furniture, were restored and are still used today. All the spaces, including the internal room which was used as a field hospital in the 1916 Rising, are in use today for teaching, learning, assessments, general student life and social functions. The tales and achievements of former staff and alumni are shared through honour boards and portraits hanging from walls (Figure 51, pg. 311, and Figure 56, pg. 314).

Since then, the UoH has become a modern, research-intensive university coupled with responsibility for postgraduate professional training in surgery, radiology, pharmacy, nursing and midwifery. Learners from all schools and faculties can attend and use the historical and more recent campus buildings, although the most frequent and regular users are full-time university students studying for primary degrees in medicine, pharmacy and physiotherapy.

It is within this context the UoH chose to situate itself as it redeveloped it's learning, teaching and assessment (LTA) strategy for the benefit of students and patients, while leveraging +€100m investments, which had created the flagship N-Building [4], during the previous strategic period.

The development of N-Building was the first major campus development by the UoH in the city-centre since the 1970's. The site was acquired in 2005 and had previously been occupied by a homeless hostel and city council flats, which had been deemed

[4] For the purposes of this thesis, the flagship building will be referred to as N-Building.

"*substandard units*" (RTE, 2005), and subsequently demolished. The city council built new social housing apartments further down the street, which opened in 2009, whilst the hostel relocated to a new modern facility around the corner. The UoH's own redevelopment of the site stalled due to the global financial crisis, and the site became known colloquially as "the hole in the ground". Consultations began again in 2012 with students, faculty and professional staff, and local residents, to compile a brief that would meet the needs of future generations of learners. Building work commenced in 2014 and it was opened in 2017. I was the educational lead on the Project Design Team and through close collaboration with the architects, the building was designed around the learner, in recognition of different learning styles and stages of learning in the institution: undergraduate programmes in medicine, pharmacy and physiotherapy, through to qualified healthcare professionals such as pharmacists, nurses, surgeons, radiologists, dentists, physicians, paediatricians, obstetricians and paramedics, completing postgraduate training and continuous professional development (CPD).

During the building design phase, the project team (institution and architects) were conscious of the implicit messages that could be embodied in the building, endeavouring to keep the institutions mission to "*educate, nurture and discover for the benefit of human health*" at the core of decision making. This is best illustrated through the investment in a deep basement to create sports facilities on two basement floors enabling self-care and wellbeing, being true to and demonstrably about "nurture". Additionally, although the campus buildings are located in a busy part of the city, right by a tram stop, many of them are made from stone and granite, with high-up windows, and as a result, it is difficult for passers-by to see in. When designing N-Building a key part of the brief was to allow the city to see in to the UoH, and in that way would animate and bring life to the streetscape. This influenced the choice of materials, including

selecting glass with a light frit to bring a luminescence to the north-facing side, on grey winter days.

N-Building has been recognised with many accolades since it opened (Appendix 10 pg. 317). It is a ten-storey building, (Figure 1 pg. 10 and Appendix 9, Figure 39, pg. 300) with

FIGURE 1 ARCHITECTS CUT-THROUGH DRAWING OF N-BUILDING

two basement floors for sports (-4 and -3); two floors dedicated to formal and instructional learning in the shape of a large lecture theatre; three as a modern academic library including a learning commons and Dispensary café (G, 1 and 2); and three (3, 4 and 5) devoted to simulation and clinical experiential learning (see Appendix 9, Additional Images of the Campus pg. 300).

Chapter 1 Introduction

Whilst at first glance the building appears entirely of the present, and there are no remnants of the houses, tenements and hostel that stood there before, on behalf of the UoH, I led the commissioning of an artwork[5], to show future generations of students and visitors to the building, that we both cherished our long history and celebrated our students' potential.

The chosen project, by artist Vanessa Donoso López and curated by Clodagh Kenny, consisted of clay bullae, with each one representing an individual time capsule, unique and personalised to each student. A bulla was historically a vessel for information and knowledge carried from one place to the next, and this was considered very applicable to both a time capsule project and the UoH as a place of learning through the centuries. The project involved the making of 448 clay bulla, each one unique and personalised for every graduate from 2017 with the inscription of their student registration number on a bulla.

As part of the process, the artist collected soil from three different locations relevant to the origins of the UoH to make the clay used: The site of the first ever meeting in 1780; the Hospital where UoH officially set up their first location; and finally, the Street and site where the new building is located. The artist decided to dig her own clay as she was cognisant of "biological, cultural and climatic" records contained in soil. Workshops to make each bulla were run with students and then they had the opportunity to place a message inside through a small hole where it will remain, until 2057. During the 2057 class reunion the bullae will be broken to reveal the text (Figure 58 pg. 316)

[5] UoH Time Capsule Project

Each bulla was then individually placed in an acrylic box and all of them installed on a triple-height interior wall in N-Building, outside the large lecture theatre and visible from every level above.

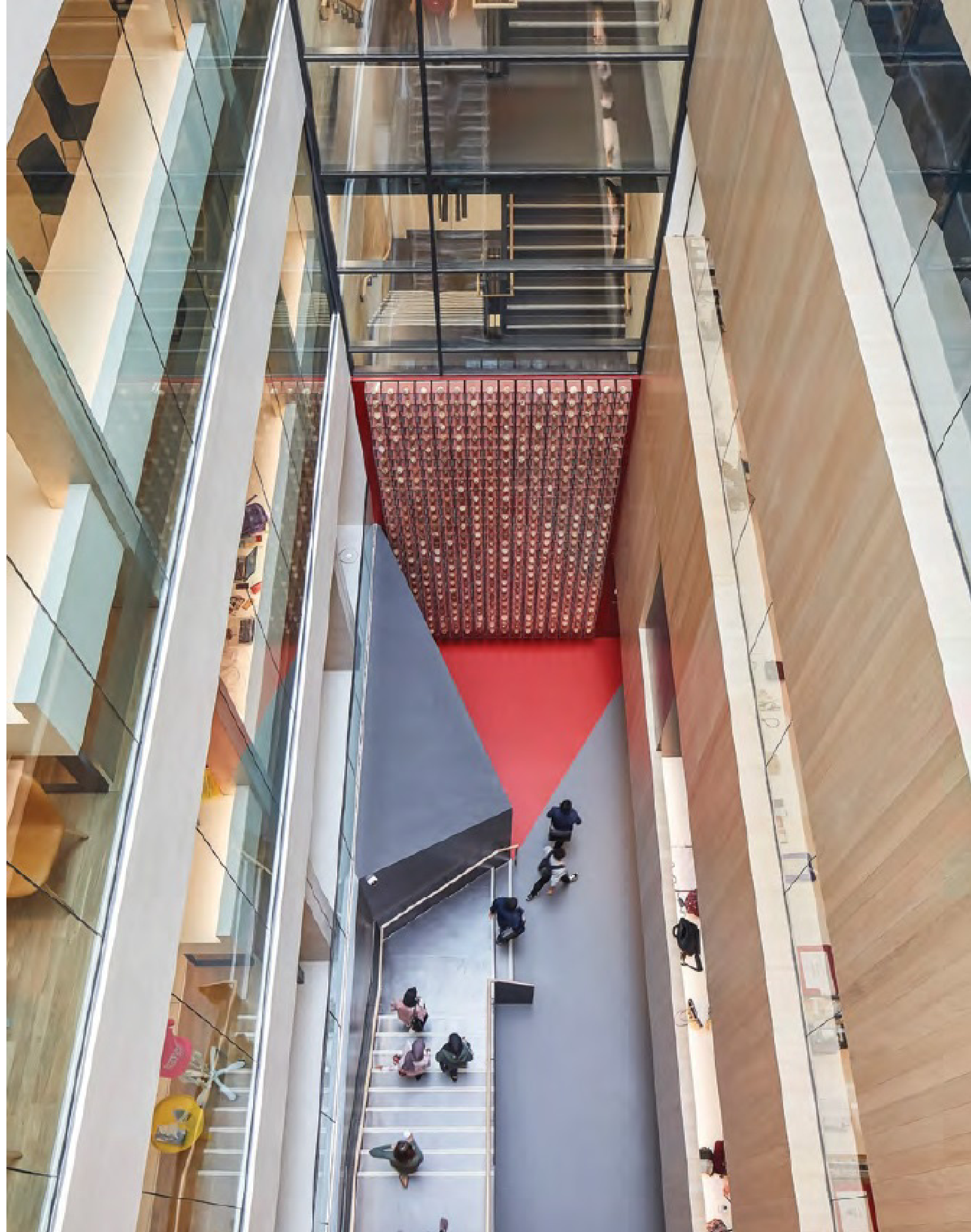


FIGURE 2 AERIAL VIEW OF THE TIME CAPSULE INSTALLATION

Investments in campus buildings

Many higher education institutions' (HEI) have made significant investments in their campuses, spending billions every year (Ellis and Goodyear, 2016) seeking to create appealing 21st century campuses, aid retention, improve learner engagement and incorporate new technology, (Acker and Miller, 2005, Kuntz et al., 2012, Zhang, 2014, Strange and Banning, 2015, Jones et al., 2016, Temple, 2018, Berman, 2020, Higgs, 2021). The European Investment Bank's (EIB) total lending for education projects, in the twenty years to 2020, was +€48bn, of which +€15bn was for physical infrastructure (European Investment Bank, 2018, European Investment Bank, 2021). Capital expenditure on estates in U.K. universities exceeded £3bn per annum for the three consecutive years since 2015/16 (AUDE, 2019) prior to the disruption caused by COVID-19.

It is unclear from these reports how much of this investment is driven by pedagogy, operational or marketing considerations (Jones et al., 2016) – a "build it and they will come" view of the world - or combinations of all three. With the lifespan of campus buildings estimated to be +75 years and furniture lasting +15 years (Oblinger, 2006, pg. 14.1) buildings and their design impact multiple generations of students and faculty, and space can enhance or limit what the university hopes to achieve.

Chapter 1 Introduction

This research project as part of my doctoral studies, stemmed from a personal curiosity driven by observations since N-Building opened in 2017. My office window is directly

FIGURE 3 VIEW FROM MY OFFICE WINDOW NOVEMBER 2021

across the street from the building, and whilst not quite movie material worthy of “Rear Window”[6], seeing the comings and goings, social interactions, formal and informal activities inside and outside the building, sparked my curiosity (Figure 5).

From my vantage point and during frequent forays over to the building in my official capacity as employee, I could see senior students on clinical rotations coming to the building, making them visible to juniors; qualified clinicians attending CPD mixing at the coffee areas; PhD scholars writing up; and world-class Principal Investigators sitting and reflecting in the library alongside undergraduates.

What made them come, especially after core hours or when they weren’t scheduled for formal learning? Why did they linger? Why did staff leave their offices to sit in public

---

[6] An 1954 Alfred Hitchcock movie in which a temporarily wheelchair bound photographer observes his neighbours and draws conclusions https://www.imdb.com/title/tt0047396/

areas? What could this mean for future campus developments and institutional investment?

Having been a stakeholder in the design of N-Building, and then during the actual build helping ensure the project stayed informed by pedagogy, I could see many of the concepts seemed to be working and seemed to support desired activities (Temple, 2018).

In parallel, the UoH had been reviewing its LTA strategy with the ambition to deliver a transformative learning experience (Frenk et al., 2010). I was involved in a number of developmental discussions, workshops, meetings and conferences, which helped crystallise the importance of professional identity formation. I started to wonder if N-Building contributed to more than just the acquisition of "skills" and "knowledge", and in particular if it contributed to the formation of professional identify which had been postulated as the "backbone" (Cooke et al., 2010a).

1.2. Research Question, Aims and Objectives

This research project therefore aimed to explore the interplay between these two strategic strands in higher education: i) improving the built environment on campus through capital investment and ii) developing curricula to support learners' professional identity formation as well as acquisition of knowledge and skills.

I sought to explore if the formation of professional identity, emerging as the backbone of modern medical education (Cooke et al., 2010a), is influenced by the built environment, to inform future campus developments. I wanted to do this as our role as educators is to prepare students to care for their future patients. Helping to create an enhanced learning environment, generating even marginal gains in learner attainment and professional identity formation development could make a difference. Our Alumni office have estimated the average medical graduate treats over 20,000 individual

patients across their working lives, impacting thousands more families, friends, employers and society in general. With hundreds of graduates every year within my institution alone, the potential impact of any improvement upon future healthcare delivery is clear, prior to further dissemination.

My research question solidified and became: *(How) Is professional identify formation in health professionals' education influenced by the built environment on campus?*

The study was designed with the ambition to generate knowledge which would enhance the overall learning environment for students. The outcomes could affect policy and practice in curriculum development and design and management of the built environment on campuses, in support of identity formation.

My research **aim** was to:

- Investigate the development of professional identity through the voices of the students.

My **objectives** were to:

- Examine how variations in the built environment influence professional identity formation and development.
- Explore the interactions of diverse multi-national learners with the built environment.
- Based on insights from existing literature explore how learners interact with the built environment in relation to Professional Socialisation.
- Assess the impact the built-environment design may have on reinforcing or disrupting pre-existing personal identities.

1.3. Structure

In the remainder of this thesis, I chronicle the activity involved in addressing this research question and the challenges faced in carrying out the research itself. I explore the findings, discuss them in relation to the literature, and share implications for theory and practice, before finally reflecting on my learnings from this whole doctoral adventure.

Chapter 2 maps the field of what is currently known in the literature on professional identity formation, campus developments and the intersection of these areas.

When considering the appropriate research design and methodology, detailed in Chapter 3, I had a few false starts, highlighting the challenges of the novice researcher. I knew I wanted to capture the lived experiences of the students and to ensure their voices were heard through the work. Having that clarity and unpicking my own ontology and epistemology allowed the methodology and methods to crystallise.

In Chapter 4, I share the trials and tribulations of data collection: the impact of COVID-19 and subsequent limits imposed on access and usage of the campus as we lived through and then emerged from the pandemic; hearing the students albeit via proxy; and the realisation that through this natural experiment (Breen et al., 2010) insights could be gleaned about what was “lost” and the role spaces, places and socialisation play in the learner journey towards becoming a health professional.

Having finally been able to collect and analyse the data, I immersed myself in their stories and worlds, enabling me to interpret and make meaning from the observations and focus groups (FG), to present my findings in Chapter 5.

In Chapter 6, I take these findings and linking back to the seminal articles and theories shared in Chapter 2, demonstrate what I have learned and hence contributed to the dialogue and practice. I illustrate how my findings respond to my research aim and objectives, before exploring the limitations of the study and suggest areas of future research.

Finally, in Chapter 7, in setting out my recommendations, practical applications and considerations, and through the creation of a conceptualised framework, I suggest a way to support integration of curricula and the campus built-environment development. I also include a reflexive account of my personal learning and professional journey, on my own way to becoming a doctor.

2. Review of the literatures

2.1. Introduction

The purpose of this chapter is to review the literatures in the context of my research question, aims and objectives. Key strands are explored to assess the interplay between 1) curricula initiatives to support learners' formation of professional identity and 2) the campus built environment. This frames my study and response to: *(How) Is professional identify formation in health professionals' education influenced by the built environment on campus?*

2.2. Search strategy

As a health professions educator my starting point included foundational articles known to me as an employee (Shulman, 2005, Frenk et al., 2010, Royal College of Physicians and Surgeons of Canada, 2011, Goldie, 2012, Cruess et al., 2014) now reviewed as an insider-researcher (Mercer, 2007, Floyd and Arthur, 2012, Costley et al., 2013). Utilising MU Library search and Google Scholar I tracked down who they cited and who cited them, unearthing further papers and reports. The tool Connected Papers[7] was utilised, and an example is presented (Figure 4) by way of illustration. Within the vast array of peer reviewed literature on medical and health professions education, my focus was principally on undergraduate education of pharmacy, medicine and physiotherapy students, as these were the primary users of the campus in my research study.

[7] https://www.connectedpapers.com/ "*a visual tool to help researchers and applied scientist find academic papers relevant to their field of work*". The size of dots indicates citations, while darker dots are more recent.

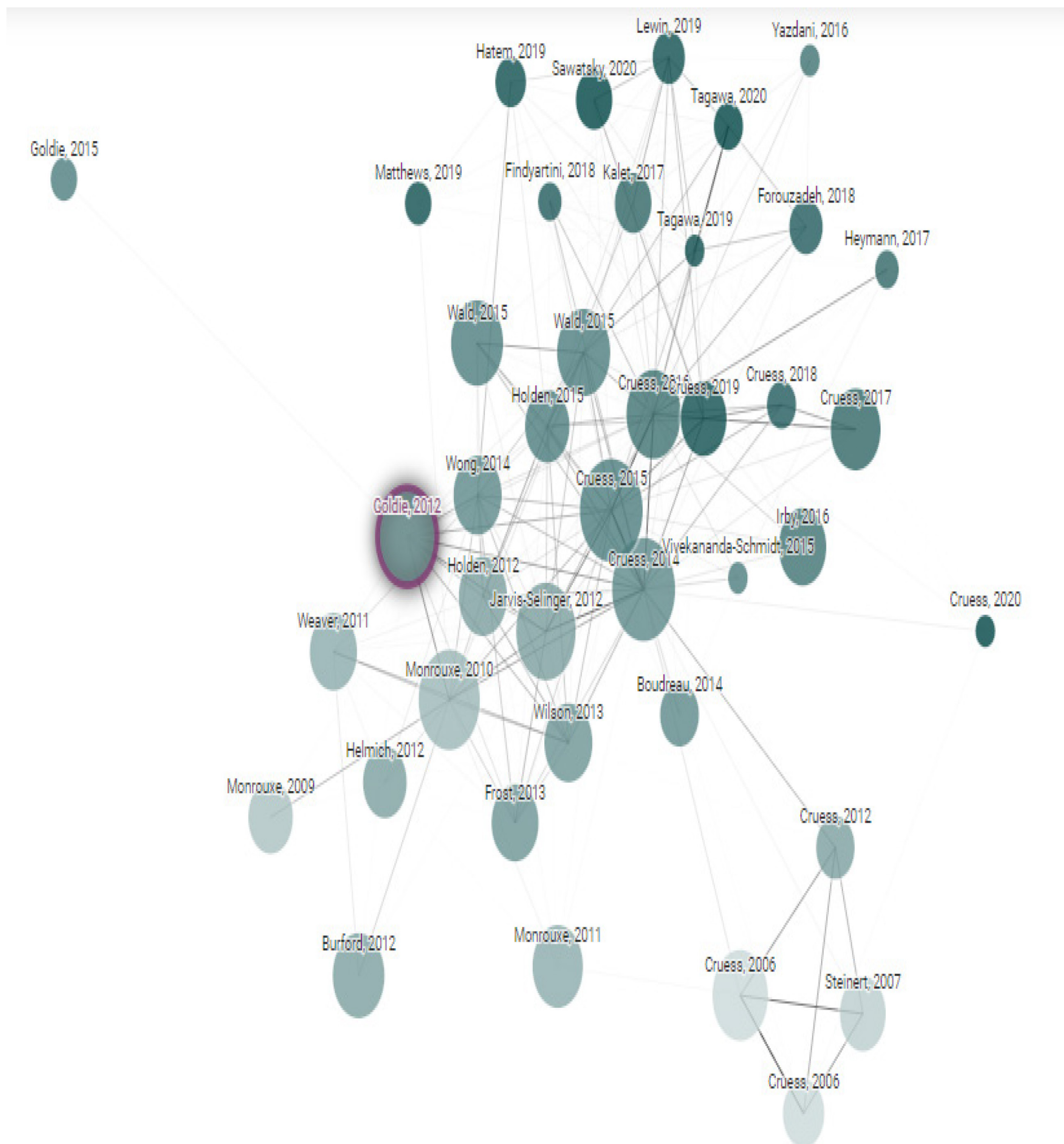


FIGURE 4 CONNECTEDPAPERS USING GOLDIE 2012 AS THE ORIGIN PAPER

The key words and criteria used in the search were undergraduate medical and / or health professions education or curricula; “professional identity formation” or professionalism; campus or built environment; “learning environment”; informal and formal spaces or places.

2.3. Approaching the review

In my review of the literatures there were two purposes: a) to assist in mapping out and articulating my own "intellectual heritage" and in so doing becoming clearer on my positionality; and b) to map the field through assessing and understanding pre-existing concepts, knowledge generated by others, and appreciation of the methodologies used to generate this knowledge, so as to "*locate the place for the research and decide which conversation the research is joining*"(Somekh and Lewin, 2011 pg.18).

In my selection and mapping of the literatures, I am including:

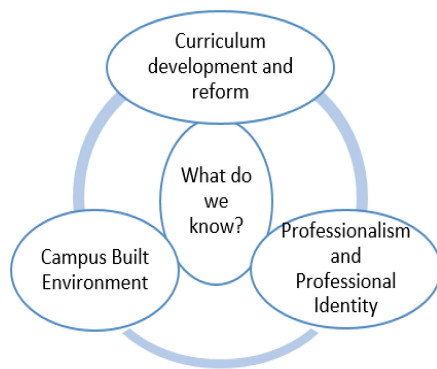


FIGURE 5 MAPPING THE LITERATURE

1. A review of the developments in health professions giving rise to the discourse on
2. Professionalism and professional identity formation and
3. The campus built-environments' impact on users.

From the beginning my study of the literatures added to my own professional identity, assisting my progression from novice to a more authoritative position, capable of defending and promoting ideas, working with and recognising those already in the field and increasingly reflexive. The impact of this on my ontological and epistemological position is discussed further in Chapter 3.

2.4. A definition of learning

As my research is situated within the broad field of "learning", it is helpful to consider what I understand by "learning". Moving mid-career to HE, I completed modules on how to plan curricula, deliver a high-quality learning experience and design effective

assessments (see accompanying Advisory Note). I was introduced to pedagogy, taxonomies of learning (Anderson, 2000); spiral curricula (Harden and Stamper, 1999); integrated curricula seeking balance of knowledge, skills and attitudes in health professionals' education (Harden et al., 1997); and curricula that sought to "SPICE[8]" things up, facilitate students' agency and play an active role in their learning (O'Connell, 2009). Responsible for in-practice pharmacy placements, I explored the literature supporting early exposure to clinical practice, authentic experiences to help students learn "professionalism" and why work-based learning helped create life-long learning skills (Carter et al., 2000, Hammer, 2006).

Illeris' work describes learning as "*any process that … leads to permanent capacity change and which is not solely due to biological maturation or ageing"* (Illeris, 2009 Introduction, pg. 3). I liked its breadth, and the recognition that change occurs. Framed by Illeris, I thought about Jarvis' work, which considered learning throughout a person's lifetime by encompassing how the "*whole person …. experiences social situations*" to internalise and convert these to learn, grow and in the process **becoming** more experienced and a changed person (Jarvis, 2018 pg. 25). Jarvis views learning as a complex process, recognising learning does not always happen after an experience when we might think it should, and within his nine-step model (or routes to learn) he has three groups: non-learning, non-reflective learning and reflexive learning, across "*doing and thinking – and feeling*" (Jarvis, 2012 pg. 6).

Fink (2013) identified six types of learning, fundamentally believing if there was no change in the learner, then no learning occurred. His focus is on creating significant learning experiences, which "*increase …. capability for living life fully and meaningfully"* (2013 pg. 7). He asserts that in order for students to derive significant learning,

[8] SPICES: **S**tudent centred; **P**roblem based learning; **I**ntegrated curriculum; **C**ommunity based teaching; **E**lectives with a core; and **S**ystematic methods (O'Connell, 2009).

educators' must help students' assimilate their past and current personal and professional learnings to link to their *"possible future life experiences".*

Thus, for the purposes of this thesis, I consider learning as individual socially occurring processes resulting in the person changing and becoming, achieved across a range of settings. The detailed modalities, frameworks and educational constructs that support learners in these processes, and those used to test acquisition, are not the focus of this research.

2.5. Curriculum Development in Health Professions Education

Having framed learning, I now move on to review curriculum developments. In this next section I explore the key drivers of change and how reviews of historical perspectives influence current practice. I focus on professionalism and professional identity formation: can "it" be taught, can "it" be assessed? I review the literatures in relation to my research question seeking out **where** "it" happened and looking for discussion of the learning environment amongst learners.

Drivers of change

A consistent theme has been the drive for change, both from within HE and externally. Health professions regulators brought in new training and accreditation standards, sometimes in the wake of terrible scandals, deaths of patients, and systemic failures impacting patients and their families (Field and Scotland, 2004).

In the U.K. the General Medical Council (GMC) first published Tomorrow's Doctors in 1993 (General Medical Council, 1993). This systemised the need for medical schools to (re)develop curricula in response to changes in educational theory and practice, future healthcare needs, and promotion of professional practice (Rubin and Franchi-Christopher, 2002). In reviewing the various generations of this publication, one of the

biggest observed shifts from the first "Tomorrow's Doctors" was placing the Principles of Professional Practice at the heart of medical education, given "*the ultimate goal of medical education is to produce doctors who are fit to practise*" and the corresponding need to support the development of attitudes and behaviours suitable for a doctor. By 2018, this guidance document for medical schools had become Outcomes for graduates (Tomorrow's Doctors) which has continued to evolve so that by 2020, they are simply called Outcomes for graduates (General Medical Council, 2020) with the overarching outcome stated as:

> "*Medical students are tomorrow's doctors. In accordance with Good medical practice, newly qualified doctors must make the care of patients their first concern, applying their knowledge and skills in a competent, ethical and professional manner and taking responsibility for their own actions in complex and uncertain situations."* (General Medical Council, 2020, pg. 7).

There are three main outcomes: i) Professional values and behaviours; ii) Professional Skills and iii) Professional Knowledge, with each of these containing a number of sub-areas, a total of 26 descriptors. Arguably, the importance of professionalism is manifest from the prominence given in the titles of these sections. A review of the outcomes and of the supplementary guidance for medical schools noted no mention of the physical environment conducive to achieving them. In a separate GMC publication, there is much focus dedicated to the learning environment and culture, but physical space is mentioned only as a single footnote (General Medical Council, 2015, pg. 14) as part of an explanation of resources and facilities required by organisations.

In the 1990s a report was commissioned in Canada to enhance teaching and practice of doctors which resulted in the development of a competency framework, CanMEDS, approved by the Royal College of Physicians and Surgeons of Canada. Adopted in 1996, it has been updated a number of times and is now used across the world in medicine

and in other health care professions (Royal College of Physicians and Surgeons of Canada, 2011). The framework's overarching goal is to improve patient care through the identification and development of seven core interrelated roles which a competent practitioner seamlessly integrates to achieve medical expert status as shown in Figure 6.

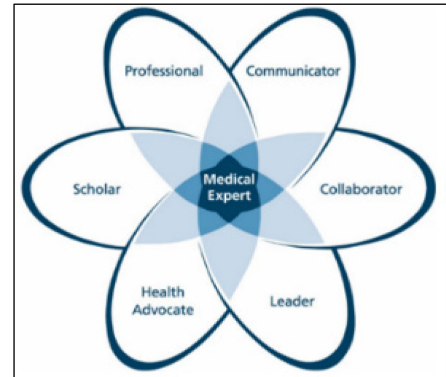
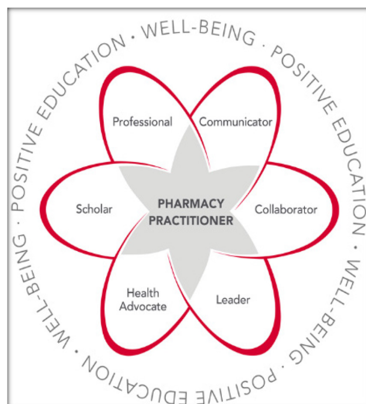


FIGURE 6 CANMEDS 2015

A consultation process to adapt the CanMEDs framework was undertaken across the Schools of the UoH, in order to create UoH specific visuals aiding the understanding and communication of these attributes for new graduates[9].



Using this framework created a commonality which assists dialogue between programmes and professions, highlighting congruence across them whilst recognising the uniqueness of each. An example from the UoH Pharmacy programme is shown in Figure 7. Devising these was an inclusive process with wide stakeholder engagement including students.

FIGURE 7 GRADUATE ATTRIBUTE PROFILE FOR PHARMACY DEGREE PROGRAMME.

In the adaptation, significant credence was given to the work of (Frenk et al., 2010), explored below, resulting in moving from CanMEDs' central role of "expert" to "practitioner".

Other strategic LTA initiatives led to the encircling of our graduate attributes with wellbeing and positive education, signifying our focus both on traditional academic

[9] Image is adapted from the CanMEDS Physician Competency Framework with Permission of the Royal College of Physicians and Surgeons of Canada, Copyright © 2015.

learning and well-being skills. This approach is informed by principles of positive psychology, in which academic and clinical excellence is taught and learned in a context promoting and nurturing physical and mental well-being (Stoffel and Cain, 2018, Hickey, 2022, Ryan et al., 2022, Healy et al., 2023).

In their paper on learning theories, Torre et al. (2006) responded to changes in the U.S. driven by new training standards from the Accreditation Council for Graduate Medical Education (ACGME), alongside advancements in healthcare delivery, by describing how learning theories could form the philosophical basis for curriculum design and evaluation. They set a challenge to medical educators to inform themselves about different learning theories and "*create appropriate learning environments and optimise learning*" (Torre et al., 2006, pg. 907) through 5 key learning theories: **behaviourism** (teacher centred to support acquisition of skills); **cognitivist** (learner centred to help develop critical thinking, reflection, "learn how to learn" and apply these in any context); **humanist** (support learners agency, desire to thrive and achieve, become a self-directed and lifelong learner); **social learning orientation** (through interaction with and observation of others, role modelling); and **constructivist** (knowledge is formed through the integration of activities and experiences into knowledge and beliefs, to uncover underlying meaning and assumptions) (Torre et al., 2006). Again, from the perspective of my research question, the learning environment is not defined, and no mention of where or what physically needs to be present to assist students or educators is discussed.

Marking the centenary anniversaries of three major reports: Flexner 1910 in medicine; Welch-Rose 1915 for public health education; and the Goldmark report 1923 in nursing; and to ignite a period of innovation, a Lancet Commission set out a common vision for health professionals (Frenk et al., 2010). As part of this fundamental review of health professions education and its interdependence with the health system and society,

Frenk and colleagues submit the acquisition of knowledge and skills, whilst important, will (only) produce experts. If educators attend to the professional socialisation of students, then learning becomes formative and helps them become the professional. Frenk et al. (2010) advocate for more to be done to address the global burden of disease and health inequalities. Educators and institutions must help learners develop

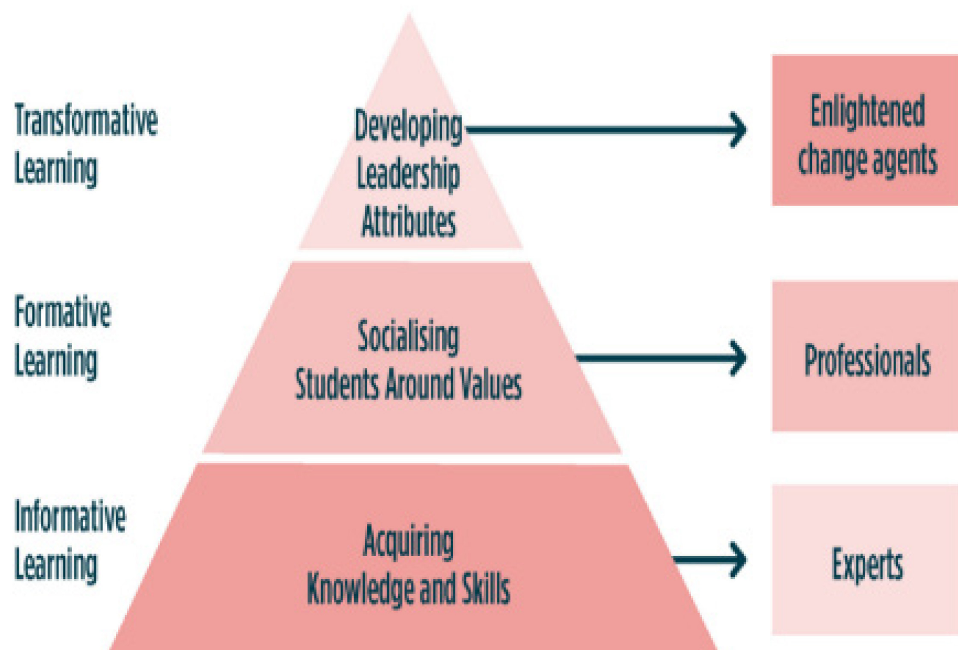


FIGURE 8 TRANSFORMATIVE EDUCATION FOR DISTINCTIVE PRACTICE. ADAPTED FROM FRENK ET AL. 2010

leadership attributes – of themselves first and then more broadly – so they go out into the world and make a difference. While Frenk et al (2010) are comprehensive in setting out a vision for transformative education, and discusses the importance of professional identity formation as a core aspect, referencing role models, interactions with peers and colleagues, hidden curriculum, and socialising students around values, they simply state the "*learning environment is made consistent with professional rhetoric and stated*

values"(2010 pg. 1946) and there is no further discussion of the built learning environment.

Since 2010, the Carnegie Foundations Report, another centenary review of Flexner, (Cooke et al., 2010b) has influenced many. It sought to bring a consistency and integration of approach across what is taught in the classroom, learned through clinical experiences, curriculum design and the learning strategies of students, and identified professional identity formation as the "backbone" (Cooke et al., 2010a). This work is cited frequently in the literature published since then and has become a cornerstone of the subsequent discourse. In response, the American Medical Association's (AMA's) 2013 Accelerating Change in Medical Education sought innovative proposals to modernise curricula in undergraduate medical programmes away from a long-standing focus on basic science content and clinical experiences (Novak et al., 2019).

Prior to professional identity being described as the "backbone", behaviours and attitudes had already been a focus in the literature, with many recognising the need for more than skills and knowledge to be / become a professional. The drive to integrate knowledge, skills and behaviours – or the three apprenticeships of learning Shulman (2005) defines as habits of the **head** (knowledge), **hands** (skills) and **heart** (what they will be), thereby "becoming" a health professional (Stern and Papadakis, 2006, Dornan et al., 2015, Sharpless et al., 2015, Bennett et al., 2017, Mylrea et al., 2017) has become an observable focus of educators.

The integration of these works became a focus within the UoH to help inform LTA principles and strategies. This resulted in UoH colleagues, as part of a curriculum design project, creating an integrated depiction of these papers, (Figure 9, 29) which became foundational in the institutions LTA strategy.

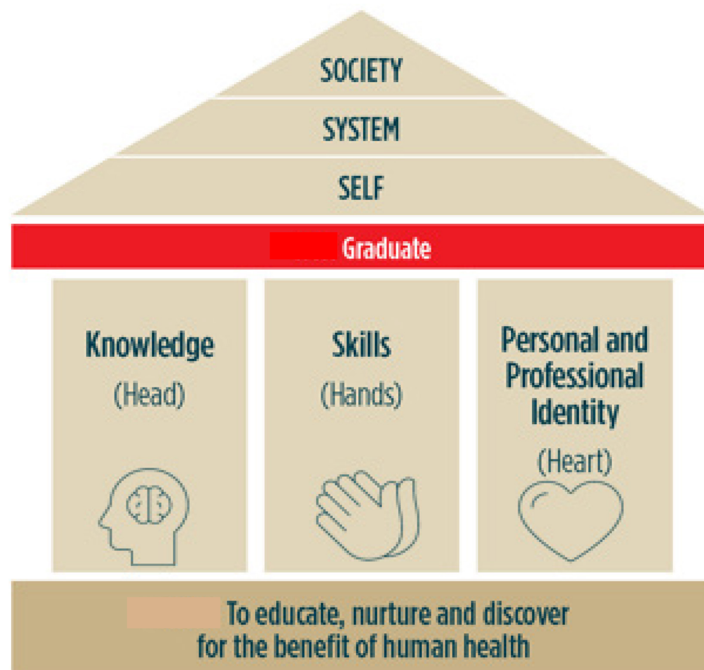


FIGURE 9 AN APPROACH TO LEARNING, TEACHING AND ASSESSMENT. ADAPTED FROM FRENK ET AL. (2010) AND SHULMAN (2005)

From Professionalism to Identity Formation and Development

The concept of "becoming" a doctor is not new. Flexner valued apprenticeship (Duffy, 2011) for the resultant transformation (Flexner, 1910), and it has appeared in many guises and studies since. An influential text was the work of Becker and colleagues (1961) who studied the student culture in a U.S. medical school from a sociological perspective: less concerned about what the students learned in relation to the proscribed curriculum, but rather *"how, whether anyone intends it or not, it is for the students"* (pg. 14) with their focus *"on the medical school as an organization in which the student acquired some basic perspectives on his later activity as a doctor"* (pg. 18). This study is seen as groundbreaking, both for methodological inventiveness of qualitative research in sociology and the light it shone on the creation of a culture within medicine (Nunes and Barros, 2014). Whilst much of this work remains informative, it is problematic in its reflection of the prevalent culture (race, gender, heteronormative)

typified by its title “boys”. Becker et al. document how at the end of first year, students had already undergone a transition: leaving behind the joy of realising their dreams and achieving a place in medical school (pg. 79); becoming “medical students” and beginning to be separate from “lay” people, through changes in language and communication styles. But little engagement with patients or clinical settings, a resultant loss of idealisation, and heavy workloads *“Its only Monday, and I’m behind already”* (pg. 97), led to feelings of pressure and stress. As they progressed, the impact of their clinical years changed them again, responsibilities becoming real due to clinical experiences and relationships with other clinicians and professors, and assimilation through socialisation into “being a doctor”.

Beagan (2001) in her study of a Canadian medical School reflects on the lack of diversity in U.S. medicine at the time of *Boys in white* and sets out what it takes to “become” a doctor in the 1990s. She finds that very little has changed in the 40 years between the publications, despite students and faculty becoming more diverse, and opines

> *“The basic processes of socializing new members into the profession of medicine remain remarkably similar, as students encounter new social norms, a new language, new thought processes, and a new world view that will eventually enable them to become full-fledged members of “the team” taking the expected role in the medical hierarchy*” (Beagan, 2001, pg. 289)

Beagan is clear, women and minority students have different experiences (than white men) during their medical training, and wonders if or how this will impact in future, “doing doctoring differently”. She postulates the process of socialisation is so strong, that despite generations of doctors between the publication of “Boys in white” and her own work, medical education has seen little real change for equity and inclusion.

2.6. Professionalism

Since Beagan's concerns were published, the body of literature on professionalism and professional identity formation in health professions education continues to grow. Formal adoption of professionalism standards by many accrediting bodies, including the U.S.A. (Liaison Committee on Medical Education, 2019), Canada (Royal College of Physicians and Surgeons of Canada, 2011), Ireland (Medical Council of Ireland, 2010) and the U.K. (General Medical Council, 2015), have been matched by institutions developing "professionalism programmes" and curricula initiatives, which I discuss next within the scope of this research project.

Building on their previous work (Cruess and Cruess, 1997), Cruess and Cruess (2006) made the argument that professionalism, which was previously "transmitted" through role modelling, apprenticeships and processes which were not well understood - almost akin to osmosis - needed to be taught explicitly. The primary driver was public dissatisfaction, wider calls for reform in medical education and growing diversity within the profession, all of which they argue rendered role-modelling, whilst still powerful, insufficient. They suggested teaching should be within a situated learning model, support the transformation of students from public to expert members of a profession in authentic ways, and that tacit knowledge is best learned away from formal instruction in lecture theatres. They go on to state:

> *"Professionalism is fundamental to the process of socialisation during which individuals acquire the values, attitudes, interests, skills and knowledge – the culture – of the groups of which they seek to become a member."* (Cruess and Cruess, 2006, pg. 206)

They discuss the importance, difficulty and challenge in creating an "environment" where this socialisation can take place. Core principles shared were the need for institutional support including the allocation of space; the cognitive base; experiential

learning including a safe environment in which to discuss issues; continuity of teaching throughout the curriculum; role modelling; faculty development; evaluation; and the environment. In this final principle, citing Hafferty, they separate the formal curriculum and the informal,

> *"consisting of unscripted, unplanned and highly interpersonal forms of teaching and learning that take place among and between faculty and students"* (pg. 207)

The discussion of the "hidden" curriculum (Hafferty, 1998), including how and when institutions decide to invest, is important but is only lightly touched upon. Their summary - professionalism must be explicitly taught, strengthened and protected through intentional experiential learning – has informed much of the subsequent work in this area. Cruess and Cruess (2006) introduces the notion of the learning environment, spaces and places, and the impact of the hidden curriculum, however there is no further discussion of the physical aspect of this environment.

Identity formation

Whilst "teaching professionalism" was a rallying call (Cruess and Cruess, 1997, Whitcomb, 2005, Cruess and Cruess, 2006), other work showed formal teaching was insufficient and teaching programmes could be undone by informal and hidden curricula (Stern, 1998, Stern and Papadakis, 2006, Cruess et al., 2016, Sternszus and Cruess, 2016) particularly in clinical years where *"idealism and reason why students have entered medicine can be undermined ….by the actual behaviour of those around the students"* (Hendelman and Byszewski, 2014 pg. 6).

Monrouxe (2010) brought the issue of identity and the development of a professional identity into mainstream medical education, arguing medical students are learning to "become doctors" across the range of social worlds and relationships presented to them. She also discusses the identities students arrive with to university and potential

dissonance as their (new) identities develop, and called for medical educationists and researchers to explore this narrative as they develop curricula. In identifying the importance of identity dissonance for growth, Monrouxe proposed conducting research utilising inductive methodologies to deepen our understanding of professional identity formation. Recognising the agency of the individual, she highlights the essential socio-cultural context required as identity development

> *"…. occurs within a social world, through interactional relationships and in the context of social institutions with established ways of doing things"* (pg. 42).

Monrouxe goes on to argue *"understanding the factors that facilitate or inhibit the development of complex and merged identities"* (pg. 44) should be fruitful areas of research for curriculum and faculty development. Her powerful description of the importance of language, narrative and the stories told and retold to make meaning from everyday life and major events superbly articulates the importance of relational settings and relationships in forming identities.

She sets out that *"identities are constructed and co-constructed within medical interactional settings as we go about our daily work, and as we recount events of our experiences to ourselves and others."*(pg. 44), arguing for the essentiality of providing pedagogical space to facilitate meaning-making through talking, discussing and retelling of experiences. She notes the formal and implicit rites of passage that act as markers along the way for students' developing identities. She argues for a broader understanding of how students develop their identities to generate insights and improve students' learning experiences, and thereby develop future doctors in keeping with the needs of society. Monrouxe (2010) centres the voice of the student and the power of talk and exposes those interested in doing research to new methods and a theoretical basis. For the perspective of my study, it strongly alludes to the importance of space for learners to share their stories, socialise and construct / deconstruct events.

Chapter 2 Review of the literatures

In “The Foundation of Physicianship” Fuks *et al*. (2012) propose fundamental traits sustaining the notion of being a doctor, despite developments in society and technology driving constant change. They discuss these through three differing philosophical lenses: Aristotelian *phronesis*; alterity framed by Levinas, and healing informed by the kabbala. Reading this paper was extremely challenging, as I have no background in philosophy, but their discussion of “Self” and “Other”, in relation to healing, was informative and their central conclusion *“To be a physician requires a transformation of the individual—one does not simply learn to be a physician, one becomes a physician”* (pg. 124), meant it had been worth persisting, as it eloquently summarised the literature. They go on to state that “*character, relationship and compassion*” are the foundations and must be attended to within curricula. This is a very theoretical paper and does not elucidate how or where curricula should be changed or aligned with space to support a transformation.

This theme of identity formation is developed by Goldie (2012) who discusses the implications for educators given the predominantly social and relational aspects to the development of professional identity. Goldie states the greatest influence on identity formation through socialisation is from informal and hidden curricula rather than formal teaching experiences. Consistent with the work of the Cruesses he also values role modelling, and echoes Monrouxe’s (2010) call for pedagogical space. Goldie proposes socialisation involves compromises, and the integration of one’s own prior, unique, experiences, but applied within the current institutional and relational context. For Goldie, meaning is created between these interactions rather than transmitted. Culture evolves continuously, resulting in everyday interactions being internalised to create social “*norms, values and roles”*, influencing becoming a doctor **and** the potential to change the socially constructed reality (my emphasis). He discusses identity capital; social identity complexity and multiple identities; challenges for women and groups underrepresented in medicine, and the impact identity dissonance can have during their studies and beyond. He suggests to develop professional identities, educators should

assist and be conscious that students "*interact with members of the medical profession*" (Goldie, 2012, pg. e646) across a range of settings and opportunities. Demonstrating desirable behaviours and ways of being is therefore paramount. I found Goldie's paper (2012) seminal in setting out the transformative nature of medical education to assist development of self into new ways of being, thinking and relating through socialisation. It challenges us to help students as they first form and then integrate new and complex identities, but in keeping with most literature there is no exploration or discussion of where or how these relational settings (outside of formal teaching and instruction) can be fostered or created within the built environment.

Given the growth in research "*about teaching medical students to think and act as professionals*" a literature review was conducted by Wilson et al. (2013) to "*… understand the factors that drive professional identity and the ways it can be shaped during a student's education*" (pg. 369). They concluded key factors influencing development are experiences had before medical school and their values; socialisation within the university and clinical settings; technology; and changing expectations of society. They note the distinction between professionalism and professional identity. There is acceptance of the sociocultural theory of professional development, the impact of socialisation on one's development of professional identity(s), and the role communities of practice (CoP) - with progression from periphery to centre – can play. The role of patients and the clinical setting is deemed "*very significant*" (pg. 371), as is the importance of role modelling, although this is insufficient on its own. The importance of providing opportunities for reflection and the role that narrative (telling and retelling) can have in making meaning of events that cumulatively create a professional identity are discussed. Wilson et al. (2013) helpfully set out a growing consensus on the importance of professional identity formation and key aspects of which educators need to be cognisant.

Frost and Regehr (2013) grappled with the inherent tension between alignment to the expected cultural norms and standardisation through competency-based learning outcomes, and the drive for diversity in the profession. Standardisation can reinforce existing rules and views and may not be in service of society or patients. In particular, they seek to challenge the notion of a "*single uniform way of being a competent, professional physician*" (Frost and Regehr, 2013, pg. 1572). As social construction of an identity is inherently a process where tensions may arise between these discourses, different identities may be constructed during which medical students experience difficulties, particularly when alignment or subjugation is not possible. They too suggest pedagogic space, with faculty mentors to "shepherd" students through struggles, asserting that becoming a doctor is "*necessarily transformative – students should expect to change – but that professional identity construction is not meant to be a process of erasure*" (pg. 1574). They call for the need to address this transformation explicitly and use the tension positively towards a discourse on new possible identities.

Hafferty et al (2016) in further recognition of this dichotomy and potential clash, review and compare this tension in the medical fraternity, organisational sociology, and military science. They assert that professional identity should form as a collective sense of physicianhood for the furtherance, rather than stagnation of the CoP. In a powerful conclusion they opine:

> *"Educators must thus strive to identify the skills, knowledge, and attitudes necessary that will allow physicians-qua-professionals to function as a quasi-subversive work force and to disrupt the very system that helped to shape their identity, so that they may fulfil their mission to their patients"* (Hafferty et al., 2016, pg. 171)

The work of Frost and Regehr (2013) and Hafferty et al. (2016) resonates through the more recent research of Watling et al. (2021), who recognised the personal effort needed to be agentic against ingrained expectations in developing effective personal

and professional identities. Taken together, it is clear that identity formation must not lead to atrophy of existing personal identities or rejection of memberships of other important CoP.

Agency features in the work of Richards et al. (2013), who consider the interplay between five factors at the transition to the clinical learning environment after a predominantly university based first two years. They propose that agency enables learners become self-directed and self-regulated and should be nurtured by educators. Billett, a co-author in the above paper, has published extensively in relation to work based learning (Billett, 2001, Billett, 2004, Billett et al., 2004) which is itself an important part of health professions education; and the impact of tacit and mimetic (Billett, 2014) processes on learners' agency and participation (Billett and Pavlova, 2005) across their working lives.

The theme of connecting students' pasts, presents and futures (Monrouxe, 2010, Goldie, 2012, Fink, 2013) is developed in Dornan and colleagues' work using Figured Worlds, stating "*we create our identities by telling the stories of our lives*" and the importance of individual students' self-authorship as they respond and develop different identities "*to all the different voices they hear in medical school*"(Dornan et al., 2015). Figured Worlds offered Bennett et al. (2017) ways to connect the importance of individuals and role models with personal agency in making meaning within the existing hegemonic structures of medical practice. Bennet also recognised the myriad ways of "becoming" situated within communities and the *"fluid, always changing nature of identity, a 'becoming' that continues through (professional) life."*(pg. 255).

All of these studies are silent on the places where learners "become" or form communities, although it appears implicit these interactions, voices, discussions and experiences are happening either on campus, in clinical settings or in the surrounding environment.

A first-person student perspective was captured in a commentary published in Academic Medicine (Sharpless et al., 2015). They recognised that arriving with their own unique ontology affects both becoming the health professional and the health professional they become; alongside the importance of peer relationships; and opportunities outside the formal teaching spaces to contextualise and reflect upon their experiences. A common theme was the recognition of "impostor-hood" and that an openness to discuss this amongst peers could lead to resilience and emotional wellbeing.

A key paper, and one of the reasons my interest crystallised around this particular doctoral project, was published in 2015 (Cruess et al.). Their schemata, for identity formation, socialisation and the role of the student, were designed to reduce the complexity inherent in the developmental psychology theories which were being rolled into medical education.

Drawing heavily on these theories, and adapting Kegan's stages of identity formation for their medical education audience, they use situated learning and communities of practice (CoP) as core concepts, citing the work of Lave and Wenger (1991) and Wenger (1999). Cruess et al. are clear on the crucial role socialisation plays in this transition and in the becoming of learners. Factors involved in the process of socialisation are introduced Figure 10 pg. 39, with particular import ascribed to mentors, role models and "*accumulation of individual experiences*" (2015, pg. 271). They go on to discuss the sense of belonging that must exist and how social norms emerge as members of groups acculturate and comply, sometimes leading to rejection or exclusion, inhibition of progress, and tension.

This is consistent with concerns expressed by Beagan (2001) that the strength of existing medical culture limits change and diversity. In the act of entering the (medical student) community of practice, the learner can leave behind or subjugate previous identities or communities. They discuss the relative isolation of students and whether outside interests – friends, families, hobbies - are supportive or prohibitive, providing a backdrop to assist in becoming a doctor (or not).

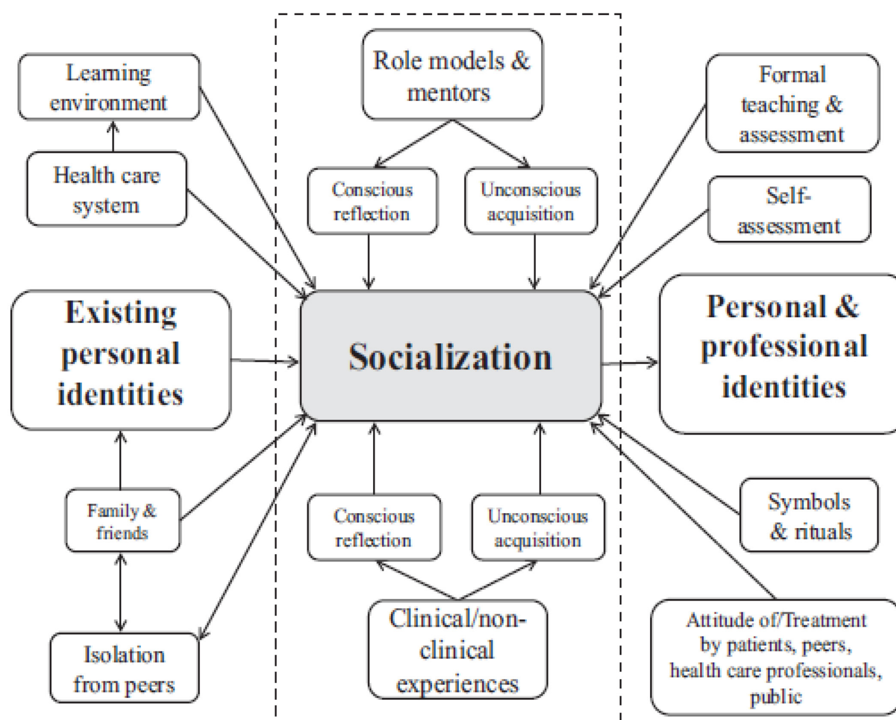


FIGURE 10 MULTIPLE FACTORS INVOLVED IN THE PROCESS OF SOCIALISATION IN MEDICINE. CRUESS ET AL. 2015

In a paper published the same year, McKimm and Wilkinson (2015), discuss the 'double-whammy' experienced by international medical graduates (IMGs) as they begin to practice with new ways of being and in a new society, where the preparation received during their medical training in one country may ill equip them for the tacit standards of "doctoring" elsewhere. They propose cultural competence and curiosity as a means of assisting new doctors. Given the majority of students in the UoH's programmes are

international, awareness of this shift on two fronts is an important insight. The recommendations in these papers, to create an environment which minimises dissonance and remembers to celebrate the joy and universality of becoming a physician, would seem a laudable ambition.

Cruess et al. (2015) are clear that the process of professional identity formation is dynamic and continuous, requiring the deconstructing of some elements of one's past and the social construction of new facets to be incorporated, so that the graduate will think, act and feel like a health professional. Whilst there is little discussion on the role the built environment plays, I suggest it is implicit in the socially constructed world presented and evocative of literature from architecture and campus studies which I will discuss later (Scott-Webber et al., 2013, Strange and Banning, 2015, Ellis and Goodyear, 2016, Leijon et al., 2022).

Cruess et al. (2019) took the body of literatures on professional identity and the processes leading to its formation and continued to push the medical education community to consider an integrated conceptual framework which recognised all aspects of learning support the development of a student's identity. Landing in support of the social constructivist theories of CoP (Cruess et al., 2018), originally proposed by Lave and Wenger (1991) they recognised professional communities have evolved to be fluid and include members of other professions. They argue that role modelling, workplace, and experiential learning theories can all sit under this umbrella concept. Whilst parts of this paper by Cruess et al. (2019) simply restate what has become the truism of professional identity formation - a dynamic, socially constructed goal of medical education - it is useful in setting out updated principles for educators and encourages us to be "*intentional in addressing issues*" (2019, pg. 643). They also make clear that institutional support, including the provision of personnel and resources, alongside strong leadership, is required. They don't specify what these resources are,

but consistent with their prior work as it relates to the learning environment and the hidden curriculum (Hafferty, 1998), it is conceivable that investments made should intentionally align.

Cruess et al. (2019) are clear that the shift from teaching professionalism to the formation of a professional identity as the objective of education, also shifts the locus of activity. Creating and maintaining a welcoming CoP is essential. They suggest that rituals, formal and informal social events, can deliver important welcoming and learning opportunities and conclude

> *"What is new is that professional identity formation has been illuminated by research and is now being addressed explicitly in medical education, with communities of practice being proposed as its theoretical basis".*
>
> (Cruess et al., 2019, pg. 647)

This conversation, seeking to address inclusivity and prevent the continued propagation of medical hierarchies and hegemony, was timely. It echoes the suggestion made by Al-Eraky and Marei (2016) in their response to McKimm and Wilkinson (2015) that there should be an onus on the existing culture and society to welcome and assist newcomers. Whilst CoP provide a way to understand learner routes from the periphery through to competence and centrality, they can be problematic. Viewing worlds in this way, particularly through rose-tinted or unrealistic lenses, may reinforce and perpetuate hierarchies and silos to the detriment of learning and patient safety (Morris and Eppich, 2021). If CoP are to be inclusive and successful, then, building on the work of Watling et al. (2021), I suggest agency and reflexivity of learners and practitioners alike is required to ensure the political dimensions implicit in cultures is considered and addressed (Eraut, 2004). Appreciating learners' past lives and current competencies (Eraut, 2004) through socialisation, discourse, blurring boundaries (Eppich and Schmutz, 2019) and sharing of experiences (Condron and Eppich, 2022), with the aim of

acculturation rather than enculturation or assimilation, to grow and evolve, rather than maintain, CoPs would be desirable. The literature is silent on the role of the built environment in supporting agency and reflexivity.

A more recent critical review of the literature on professional identity formation interventions explored the "*conceptualisations of and theoretical approaches to PIF that underlie them*" (Mount et al., 2022), concluding many of the interventions revolved around reflective writing reinforcing an individualistic perspective, while few interventions appreciated or balanced the importance of active socialisation in the formation of professional identity. The team go on to highlight the downside as:

> *"Focusing on the individual within critical pedagogical spaces deemphasizes social aspects of identity formation. In doing so, we leave learners responsible for managing their identity formation as individuals, even though we understand that they must "fit into" the professional culture, lest they face personal, social, and professional consequences"* (Mount et al., 2022 pg. 102).

Creating an onus on the individual to "fit into" does not augur well to making health professions more diverse and equitable and may even contribute to a slow rate of change.

Much of the literature reviewed so far comes from a North American or a Western perspective. This next paper from Sarraf–Yazdi and colleagues originated in Singapore (2021). They conducted a systematic review of professional identity formation in medical students and view this through the lens of ring theory personhood. They

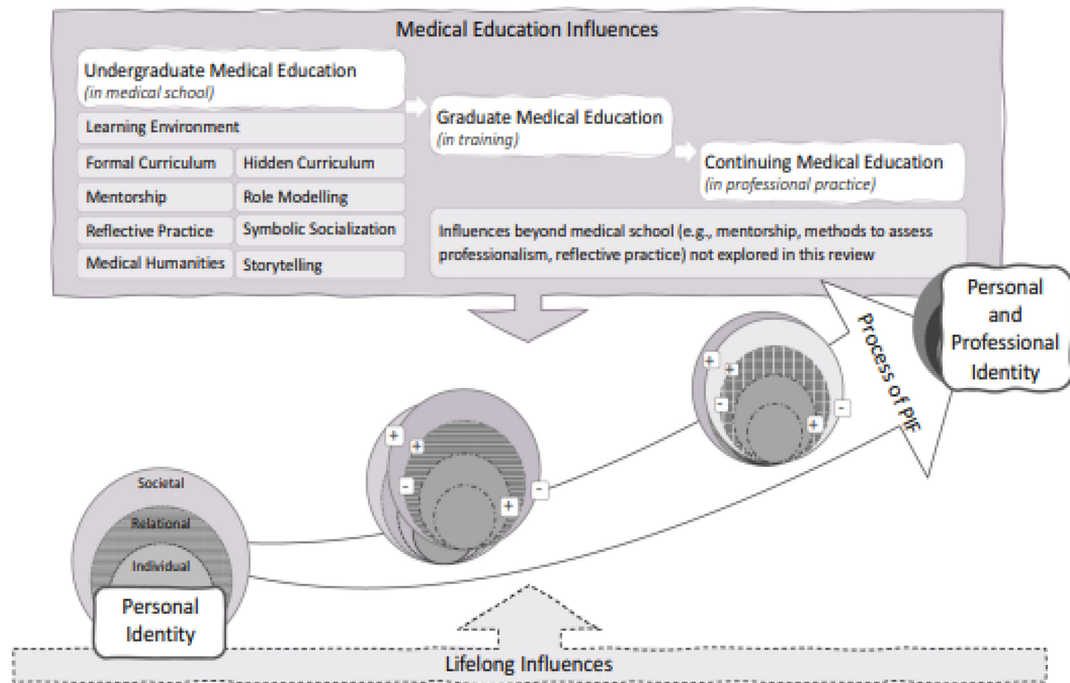


FIGURE 11 INTEGRATION OF PERSONAL AND PROFESSIONAL IDENTITY ENTAILS A LONGITUDINAL DEVELOPMENTAL PROCESS. SARRAF–YAZDI ET AL. 2021

present 10 strategies adopted to varying extent by medical schools, Figure 11, including the hidden curriculum; learning environment; symbolic socialisation; reflective practice; stories and storytelling; mentorship; role models; and non-medical influences (Sarraf-Yazdi et al., 2021, pg. 3517). The importance in assisting students, during medical school and beyond, in the harmonisation, construction and deconstruction of different identities is clearly articulated.

Amongst their conclusions, they find

> "*in the absence of effective, appropriate or adequate support, enabling factors such as reflection or socialisation may become barriers that impede the merging of students' personal and professional identities"*
>
> (Sarraf-Yazdi et al., 2021 pg. 3515)

There is no discussion on what role university spaces can play to support or remove barriers to these enabling factors.

These and other studies share explorations of the processes, mechanisms and possible interventions to support identity formation (Wald et al., 2015, Yakov et al., 2021, Bremer et al., 2022, Schrewe and Martimianakis, 2022). Whilst there is no consensus on the "best", there is a growing body of evidence to support educators on the "what" and "how" of interventions. There is little on the "where" these should happen, or on "what" the spaces and places should be to support individually and socially constructed identity and the process of becoming.

The Learning Environment

In response to changes driven by regulators and the singling out by the World Federation for Medical Education (WFME) of the "learning environment" (LE) as part of their evaluation framework of medical education programmes, AMEE published a guide (Genn, 2001a). In the guide Genn attempts to facilitate discussion by proposing a

> "*five-way perspective on medical education, with an associated consideration of meanings and connotations of five focal terms, namely Curriculum, Environment, Climate, Quality and Change, and the interrelationships and dynamics between and among these focal elements*" (pg. 337).

The guide paints a vivid picture of the medical school as a complex, vibrant "habitat" and notes that some may be surprised by the inclusion that everything and everywhere is part of the curriculum, including "*chatting over lunch….pictures on the walls,*

sculptures, landscaping, gardens ….. almost ad infinitum" (Genn, 2001a pg. 338). While Genn does include aspects of the physical realm, these are not further developed.

The growing appreciation of the learning environment's role and influence on students' professional development led to attempts to identify and measure its most significant aspects. Shochet and colleagues (2013) investigated experiences of final year medical students using an on-line questionnaire listing 55 events which might have occurred to or with medical students. Respondents rated the impact of events experienced. The top 5 highest overall rated events – working on a highly functional clinical team; encountering inspiring role models; feeling contributing positively to patient care; working with enthusiastic and motivating teachers and having your efforts appreciated by patients and their families – are positive, relational experiences with colleagues or patients. The context of this study, administered three weeks before graduation, seems particularly relevant, given the accumulation of experiences (Cruess et al., 2015) and nearness to "becoming" a certified medical practitioner. In the discussion, the authors acknowledge the importance of belonging and connection to assist learners' development and progression. Of the 55 events, only one relates explicitly to the "*physical environment where your learning occurred*" (Shochet et al., 2013, pg. 248) and is rated by these respondents as 40/55.

Upon review, at least 5 of the top 21, relate to informal opportunities to get to know others or become known, pursue interests outside medicine, or receive support from others during difficult times, although given the instrument used, there is no way of exploring how or where these events happened.

By 2015 Shochet and colleagues had further developed the tool and published the Johns Hopkins Learning Environment Scale (Shochet et al., 2015). Again, using quantitative techniques, they attempt to create a scale to understand and attend to the learning environment, believing it a "*dynamic ecosystem that generates unique patterns of*

experiential learning that influence professional identity formation" (pg. 811). The 32 learning environment items were included in a larger online survey and issued to all registered students. The final structure had seven subscales, of which physical space is one. The authors' theoretical framework is clear – social learning theory – and they focus on characterising how students construct knowledge based on their incorporation of social, relational and experiential learning. The highest rated subscale for those rating the learning environment as "exceptional" was faculty relationships; whilst for students rating the environment as "poor" or "terrible", community of peers and meaningful engagement showed the lowest scores. Student relationships, peer interdependence, and a sense of belonging have all been noted as being important in professional identity formation in studies conducted using qualitative methods (Lovell, 2015, Sharpless et al., 2015, Kay et al., 2018).

Kay et al.'s (2018) starting point was the 2010 Carnegie Foundation recommendation (Irby et al., 2010) that medical schools should provide a supportive learning environment to assist professional development of learners. Drawing on published processes - psychosocial, socialisation, (Cruess and Cruess, 2006, Jarvis-Selinger et al., 2012) or identification (Monrouxe, 2010) - they noted that whilst calls to create the pedagogical space had been made by these other authors, it was not clear in already packed programmes when interventions to assist professional identity formation can occur. Using conceptual change theory they carried out a large phenomenological study at a new U.S. medical school to gain a broad perspective of the student experience and identified four periods where disequilibrium was followed by a change in personal beliefs or / and conceptualisation of self: *"(a) transition to medical student, (b) clinical experiences in the preclinical years, (c) exposure to the business of medicine, and (d) exposure to physicians in clinical practice*" (2018, pg. 20).

The use of the student voices by Kay et al. (2018) to illustrate these periods of dissonance is compelling, particularly the losses felt – of self, friends and other relationships - and the suppression of interests to meet the perceived demands of being a medical student. Having identified four common experiences, they suggest these

> "*represent particularly vulnerable periods for adaptive professional identity formation in medical school and thus represent high yield opportunities to deploy meaningful educational interventions designed to shape students' personal conceptualizations of "self" within, and their beliefs about, their chosen profession.*" (Kay et al., 2018, pg. 23).

Where the educational interventions are to be deployed or what's required to optimise them when they do, is not included.

Nordquist has been a key voice urging medical educators and their institutions to align physical learning spaces to support curricula delivery (Nordquist et al., 2011, Kitto et al., 2013, Nordquist et al., 2013, Soro and Nordquist, 2017a) by ensuring involvement of faculty and learners in the planning and developments of the built environment. In another AMEE guide the concept of the networked learning landscape (Nordquist et al., 2016) was shared encompassing the "classroom" as a place of formal instruction; the "building" which provides a variety of interconnected spaces, social experiences and spaces for informal learning; the "campus" including the in-between spaces and as an "*expression of the university mission*" (pg. 758) and beyond the campus to the "city". They note, disappointedly, many examples of well-funded projects where the *"new buildings coming out of the ground reflect old ideas about teaching and learning"* (pg. 762). Their conclusion that "Space really matters!" challenges us as medical educators to work with colleagues to ensure alignment. They argue for making use of the spaces

in-between by designing for serendipitous learner interactions, so they are inclined to stay, work and learn together (Soro and Nordquist, 2017b).

This recognition of the whole campus as a "learning landscape" is explored by Cox (2018), who considers a wide range of activities *"from seeking information, reading, group work, assignment preparation to intense revision"* (pg. 1077). With a focus on the role of the body and hence embodiment, Cox (2018) suggests the built and physical realm where learning occurs impacts on the learning and the learner. Building on the work of Bennett et al. (2017), Cox understands the social aspect of learning through collaboration as well as communally, and discusses the environment as a multi-sensory experience. He concludes *"learning atmosphere is … constructed partly through the underlying architecture, partly by furnishing and layouts, but also actively by the students occupying the space themselves"* (pg. 1087). Cox's concept of learning does not explicitly tackle personal or professional identity formation but does speak to the role students have in creating the LE through occupancy.

Hawick and colleagues (2018) conducted research following the opening of a new medical school in the U.K. Their findings are informative and additive to the field, in that space and place have an impact on student learning experiences including the formation of professional identity. In their case study they find space is not simply the backdrop for activities. People's activities add extra dimensions to every space, and can impact positively or negatively on learners, as learners make meaning of experiences. They articulate the difference between space and place, with place *"… fundamental to a sense of belonging and provides a locus for identity*"(pg. 1017). They grasp the importance of buildings, old and new, to act as

> "*crucial contributors to students learning and social experiences and actively provide social meaning and a sense of belonging. The design of the medical*

> *school buildings and where they are situated will contribute to professional socialisation and professional development*" (Hawick et al., 2018, pg. 1017).

The situation of the building in the case study plays a role in the isolation **and** in the acculturation of students (medical and other health professionals), with some feeling they were missing out by being disconnected from the wider university whilst others felt it forged closer bonds. The role of the café, and its shared occupancy with patients, was also mentioned as being challenging. Reflective of the dissonance seen in other papers, these could be a source of vulnerability as some students struggle to adjust to the role of medical student at a pace that was too fast. Hawick et al. (2018) offers evidence that students' development of their professional identity was influenced by both the location of the building and the places within the building and goes on to raise important questions on the impact separation could have on students' ability to thrive, work inter-professionally and develop as the health professionals needed by society. A compelling case for engagement of stakeholders (Nordquist, 2016), for Hawick, meaning students, and the sensitisation of those involved in curriculum and university design to the sociocultural importance of the built environment is made (Hawick, 2018). In their conclusions, they urge others to join the discussions by reflecting and exploring how space and place influence the learning experience of students. Indeed, Hawick's thesis (pg. 203) called for research not dissimilar to this study.

My DProf project was seeking to join this research conversation.

Other Health Professions

Much of the research reviewed so far has been in medical education. Gruppen et al. (2018) completed a scoping review of interventions in the LE in health professions education (dentistry, medicine, nursing, pharmacy and veterinary medicine). They are clear the climate in the LE can be negative or positive, affecting a wide range of

outcomes including: "*burnout, depersonalisation, and emotional exhaustion; satisfaction and well-being; identity formation; performance and collaboration"* (Gruppen et al., 2018, pg. 2). The LE is reviewed through the lens of sociocultural learning theories, whilst being clear that it is "*not* '*owned' by any particular theoretical perspective*" (Gruppen et al., 2018, pg. 3). They propose four overlapping and intersecting components: i) Personal; ii) Social; iii) Organisational; and iv) Physical and Virtual. Although one of their four components was the physical environment, only a small number of papers addressed this aspect, and the authors recognised the gap citing other fields where the impact of space on learning is studied.

Donetto et al. (2017) in a review of the implementation of 'community of learning hubs' to prepare health visitors in England, considered the different ways to support students in clinical practice placements. The work started out as a review of mentoring processes – long arm vs 1-2-1 – but given the diffuse nature of the implementation of the initiative, they found the relative lack of research into space in higher education research of interest, particularly given the widespread discussion elsewhere on its impact. Their conclusions and hence focus – "*that attention to spatiality can shed light on important aspects of teaching and learning practices and on the professional identities these practices shape and support"* (pg. 75) is still relatively unusual in health professions education literature.

Mylrea et al. (2015) bring focus to pharmacy education and discuss the "professionalization" required, through socialisation and authentic activities to assist formation of student professional identity. Noble et al. (2014) reflected on the challenges faced in defining that identity within pharmacy, with a lack of clarity at the outset of what "*being a pharmacist entailed*" as for the majority of participants in their study pharmacy was a "back-up" plan. As they progressed, they reconciled this with perceived personal and professional benefits. However, students reported significant

variance between the idealised programmes taught in HEIs with the reality and disenfranchisement displayed by practicing pharmacists during placements. I was particularly struck by their participants reported need to be able to test and experiment their own new (stage appropriate) identity and role of "being a pharmacist" during their studies. This was attributed to a heavy theoretical curriculum with little authentic learning experiences. Differences were seen across the years of the programme, supporting the notion of moving from the periphery of the CoP as skills and knowledge were accrued. The need to "play at", to "feel like" and to positively identify with the profession through early authentic experiences and throughout the programme is clear.

Moseley and colleagues (2021) considered health professional students' education and the eternal, infinite and non-linear relationship between professionalism and professional identity formation. They stress the importance of faculty in the development of student professional identity and advocate for training to support delivery. In seeking to portray the process of professional identity formation, they created the "SAPLING model" (Figure 12). At the centre, is a light grey sapling, representing the learner when they first arrive. As the sapling grows, the branches and roots extend, mirroring the learner's diversity of experiences, with each learning opportunity contributing to professional development

FIGURE 12 SAPLING MODEL. MOSELEY ET AL. 2021

> *"just as the soil nourishes a tree, as students continue to grow and strengthen their PIF, they start to think, act, and feel like a professional, which is the outward display of PIF, just like a canopy on a tree"*
>
> (Moseley et al., 2021, pg. 14).

And then the pandemic arrived.

Professional identity and socialisation during a pandemic

Many modifications and adaptations were rapidly adopted across the sector: student volunteers; online learning; online assessments etc. (Findyartini et al., 2020, Daniel et al., 2021, Iglesias-Pradas et al., 2021, Slivkoff et al., 2021, Cassidy et al., 2021, Papapanou et al., 2022, Strawbridge et al., 2022). The impact or longevity of many of these initiatives is still unknown, although research outputs are beginning to be shared. McGrath and colleagues asked the question "*What is gained and what is lost*?" particularly given the known importance of developing a sense of belonging and the formation of professional identity required by health professional students (McGrath et al., 2021).

Morris and colleagues (2021) looked at students lived experiences rather than interventions and clearly noted the move online and the loss of campus places impacted their ability to weave connections with peers and faculty. They reported this displacement and lack of third places affected motivation, autonomy and ability to learn, with the greatest impact felt disproportionately amongst lower socio-economic groups (Morris et al., 2021).

Findyartini and colleagues (2020) early in the pandemic noted concerns about how professional development could be stunted, given the complexity of delivering education in clinical settings and resultant loss of learner agency to help, support, and learn, affecting the essential processes of socialisation. However, through a thematic analysis of students' reflections, they noted heightened awareness and empathy of students to others ensuring social and spiritual connections; acknowledged the changes to their education (online and reduction in patient contact) and the resultant emotions before adapting; and finally, the opportunity to serve their communities through

education and role modelling; alongside concerns about not being ready to take this on. This study sets out changes experienced at individual level allowed participants move along identification towards their role, allowing the authors to conclude the "*dynamic changes in the socialization process during the pandemic may not disrupt PIF among medical students*". Given the role of reflection in PIF, it is interesting to consider if it was the act of reflection as part of the research project which facilitated their progression or the experiences themselves. The authors address this through their recommendation that medical schools recognise the changes in socialisation processes occurring by using guided reflection and mentoring to reshape and renegotiate.

Researchers in the Netherlands sought to understand how to create a "Sense of Community" online and publish guidelines to assist medical educators (van der Meer et al., 2021). Using qualitative methods, they reviewed an eight-week course that took place during the early stages of the pandemic (April – June 2020). Five themes were identified focussing on what could be achieved on-line and what was lost Figure 13 pg. 54. Student participants clearly called out what they missed: "*social contacts made possible by the physical campus", "like to walk downstairs after a discussion group. Then the chitchat starts. …….. Normally, after a lecture you get a cup of coffee together. Then a bond is created much faster*' (pg. 927).

The use of student voices was compelling. As the pandemic recedes and university approaches to hybrid delivery settle down, van der Meer et al. (2021) sheds light on and

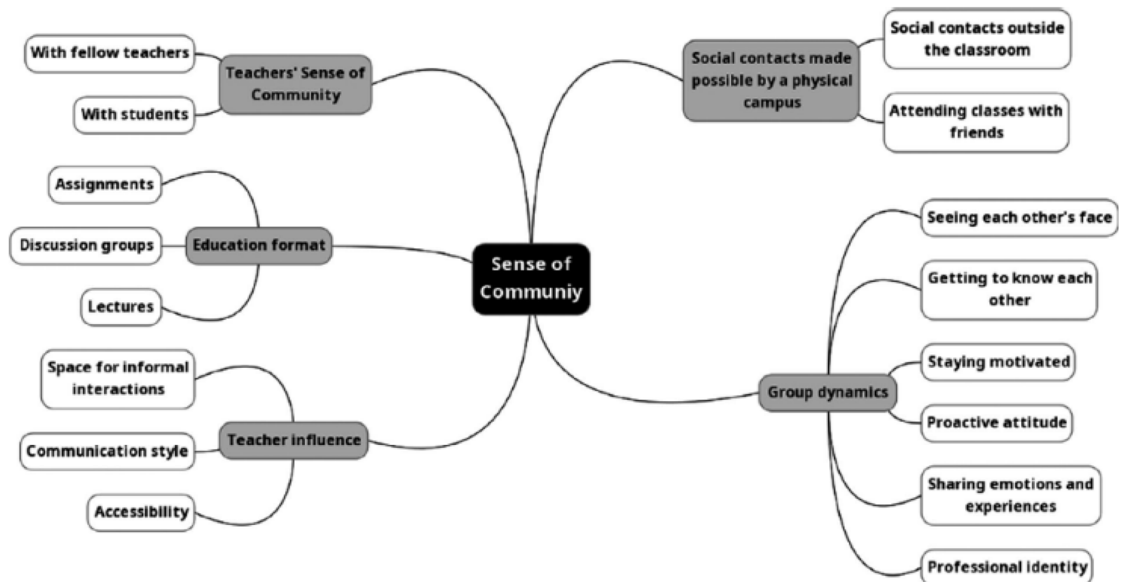


FIGURE 13 OVERVIEW OF IDENTIFIED THEMES RELATED TO SENSE OF COMMUNITY. VAN DER MEER ET AL 2021

reinforces the positive role played by the physical campus, the buildings and the spaces between the classrooms, can play in creating a sense of community and a community of practice.

The impact during the lockdown phase in Italy and how students were deprived of the associated social components allowed an unveiling of the "*elements and determinants of the developing identity*" of medical students (Consorti and Consorti, 2023). They noted that whilst there is a robust theoretical foundation, socialisation and CoP, there is little quantitative research into professional identity formation and the qualitative research to date has limited scope. Consorti and Consorti argue the development of professional identity formation is a process of socialisation, however its actual development for the individual is an internal, dynamic and fluid journey, and their work sought to explore this inherent complexity and duality.

As part of this phenomenological study, they adopted a hermeneutic approach to the analysis, resulting in four themes and determinants, which influenced identity development, Figure 14, during the pandemic. The determinant factors which

> *"influenced the identity as a medical student were living environment, learning spaces and architectures, the social networks, the attendance of the healthcare facilities, the relationship with teachers, the social acknowledgement as a medical student, and as a doctor"* (Consorti and Consorti, 2023, pg. 1).

This study also demonstrates the importance of a "place" in which health professional students can "become" and develop their professional identity, with participants identifying the physical act of attending lectures and clinical sites helping them to "be" students, and specifically "medical students".

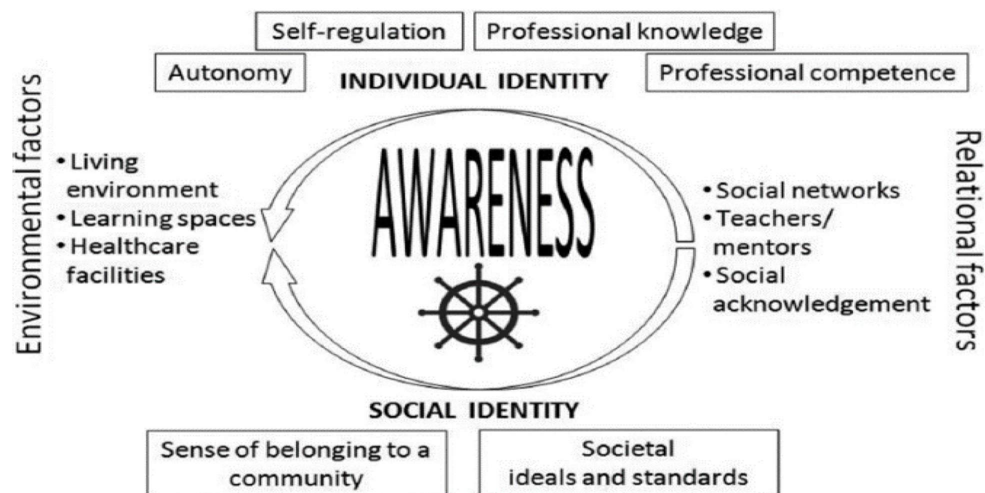


FIGURE 14 FINAL CONCEPTUAL MODEL. CONSORTI AND CONSORTI 2023

Just prior to the pandemic, in early 2020, a radical argument was made to get rid of in-person lectures and allow students complete the "early years" of medical education online. Emanuel (2020) argued the majority of "pre-clinical" relates to knowledge

acquisition and that through group work and Virtual Reality, formation of connections could be adequately fostered. The key driver for Emanuel's (2020) argument seems to be the noble ambition to reduce the cost and time associated with medical education. Although it couldn't have been envisaged at the time, COVID-19 put this model to the test. Emanuel's work underestimated the power of professional socialisation and relies too heavily on experiences during clinical rotations to deliver on professional identity formation. Not being able to grab a coffee, make friends and "*chitchat*" was shared by van der Meer et al. (2021) as part of the loss of the physical campus during COVID-19 whilst Consorti and Consorti (2023) shared the deprivation felt of not *"sitting together in the lecture hall*" and of the lost opportunity for "*informal learning in the pauses between two lessons*" caused by on-line delivery of lectures.

2.7. Summary so far: Curriculum, Professionalism and PIF developments

Through the above review of the literature, it is clear many educators and programmes want to support learners' professional identity formation, which is fundamentally a dynamic process of individual change, socialisation and belonging. This creates a new, overarching objective for educators to assist learners in developing new ways of being, not simply new ways of knowing or doing.

Given the impact of mentorship, authentic experiences, reflection, and faculty, consistently reported in the literature, it helps explain why the majority of research on interventions to support professional identity formation have been conducted in these areas, although a conversation on the impact of space and place is developing. The impact of the pandemic on health professions education practices, including hybrid approaches, continues to be evaluated.

2.8. Campus development in Higher Education

Higher education institutions know their campuses must support learning and attract students. Much of the capital expenditure over the last decade has been in the upgrade of teaching or research facilities. Many of the new spaces are grounded in socio-constructivist philosophies and are cognisant of individual learning styles, showcasing collaborative and flexible learning spaces, rather than lecture theatres for formalised learning. Growing attention has been paid to the role of informal spaces, how they assist learning through the provision of cues (Cox, 2018); create a sense of social norms, and build community (Cox, 2018, Berman, 2020) and affiliation with peers, the institution and the wider city (Nordquist et al., 2011, Sheahan, 2017, Soro and Nordquist, 2017b, Berman, 2020, AUDE and Sodexo, 2022, Cox et al., 2022, Oliveira et al., 2022).

Given sustained expenditure, research on how the built environment affects student retention, motivation, learning and attainment is conducted across architecture, design, estates and facilities management. In her review of "*Spaces of Teaching and Learning: Integrating Perspectives on Research and Practice*", Percy concluded that research in this area was

> *"a new and important frontier in educational thought and scholarship, and its contributions to higher education research and our understanding of learning are welcome additions to current thought and practice"* (Percy, 2019, pg. 432 - 433)

McNeil and Borg (2018) conclude that despite the "*considerable interest in learning spaces in higher education, the relationship between spaces and learning is complex and not well understood".* They go on to offer a descriptive framework elucidating the connections between space, teaching approach, and context, with a particular emphasis on the interrelationship and "*fluidity in interaction*" of pedagogy and learning spaces,

recognising a need to build the evidence base for how these learning spaces and their design supports or inhibits learning and teaching.

Temple (2009, 2018) extols the power the physical campus can have on knowledge creation, has decried the paucity of research by educationalists and has long been a proponent of research investigating the connections that may exist and the interdependencies between the university, its built environment and academic achievements. This is further compounded by the challenge of attributing a causal relationship between learner attainment and design / architecture, when student engagement is itself protean and multidimensional (Appleton et al., 2008, National Survey of Student Engagement, 2012, Oliveira et al., 2022).

Some literature exists to shed light on the types of spaces that support learning, often framed around the "student experience" in the form of a case study about a particular project. Observed limitations included the absence of the voice of the learner, empirical or longitudinal evaluation of the genuine impact on student learning or enhancement of the pedagogic practices (Scott and Usher, 2003, Acker and Miller, 2005, Graetz, 2006, Long and Holeton, 2009, Carnell, 2017). On follow-up, I noted at least one example of collaborative spaces converted since publication to other, less "radical" uses (Lambert, 2011, Warwick University, 2018).

The research often relates to achievement of learning outcomes through teaching modalities enabled by these spaces. The assertion is that active learning and learner collaboration achieves deeper learning. This may be sufficient justification for investment. The U.K.'s 2015 – 2017 Higher Education Policy Institute (HEPI) Student Academic Experience Survey (SAES) consistently reported large numbers of students who thought their institution should reduce spending on buildings (Buckley et al., 2015, Neves and Hillman, 2016, Neves and Hillman, 2017). A change in question saw this trend reversed (Neves and Hillman, 2018) when "Spending on campus developments" was

ranked fourth by respondents, suggesting students are willing to see their tuition fees used to fund campus developments. This shift in student views may reflect the actuality of students' experiences on campus benefitting from significant investments over the preceding period.

A university should have ambitious goals for the society to which it belongs. Goodwin's distinction of "*the nature of physical spaces, our perception of them and their evocative power*", echoing that of Lefebvre's idea of space being "*conceived in terms of the physical, the mental and the social*" both cited by Temple (2018) should motivate us to expect more of the investments made in the university's built environment. Maximising the opportunity (university) architecture offers to provide depth and emotion with the ability to create or sap joy (Lee, 2018), to enhance community (Rullman et al., 2012) and social interaction, and provide occasions for reflection (Strange and Banning, 2015), all in the pursuit of advancing knowledge, delivers scope for more.

Investment in campuses is also driven by mobility, technology enabled, and asynchronous learning (JISC, 2006). Creating a reason to go to campus and linger, and thereby forge a sense of belonging (Strange and Banning, 2015, pg. 137 -139) is a powerful way to aid student retention, create communities, and ultimately alumni who become ambassadors for the institution (Nordquist et al., 2016). The importance of a campus acting as a third place – "*where one neither lives nor works but goes to relax and enjoy the moment*" (Strange and Banning, 2015, pg. 199, Berman, 2020, Tate, 2023) is noticeable. Strange and Banning suggest a move towards an "*ecology of learning*" (2015, pg. 271 -300) where students and the built environment shape each other dynamically, intermittently and progressively, stating the "*impact of any environmental condition is contingent on the status and characteristics of the individual experiencing it*" (pg. 285).

The absence of opportunities for this mutual shaping during the pandemic and the impact on students is emerging (Daniel et al., 2021, Morris et al., 2021, van der Meer et al., 2021, Broner et al., 2022, Consorti and Consorti, 2023).

Exploring a shift from enhancing learning **spaces** to creating **places** is core to my research project and builds on previous work seeking to define the relationship between space and place and explain how it influences the actors within (Kitto et al., 2013, Nordenstrom et al., 2013, Hawick et al., 2018). Carnell recognised the power of users assuming ownership of spaces when they create attachment to "*form an identity*" with the place (2017) and Temple espouses that spaces become places when they have meaning for users, that "*place … is special space*" (2018). He understands this is complex and brings in social learning theories, and its importance in relation to learning attainment, as it "*supports users' senses of identity"* but does not suggest how places can of themselves support new identity formation, instead offering general support for universities as places of transformation (Temple, 2018).

University spaces supporting effective learning rather than simply instruction and studying, have become accepted (Ellis and Goodyear, 2016). In their attempt to integrate the research on space, place and learning in higher education, Ellis and Goodyear are clear learning can also "*result in a changed sense of identity*" (2016, pg. 155) and that learning achieved can be tacit as well as explicit.

Their section on the importance of physical informal spaces is informative, articulating the body of research and the changing role of libraries, a key space within my study. They include a helpful diagram describing the field of learning space research Figure 15, and the places that create the learning spectrum Figure 16, before suggesting future research needs to involve the interconnections of the physical spaces, desired student learning and any mediating factors.

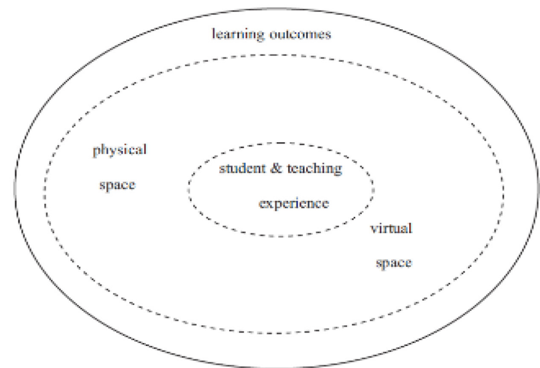


FIGURE 15 A GENERALISED REPRESENTATION OF LEARNING SPACE. ELLIS AND GOODYEAR 2016

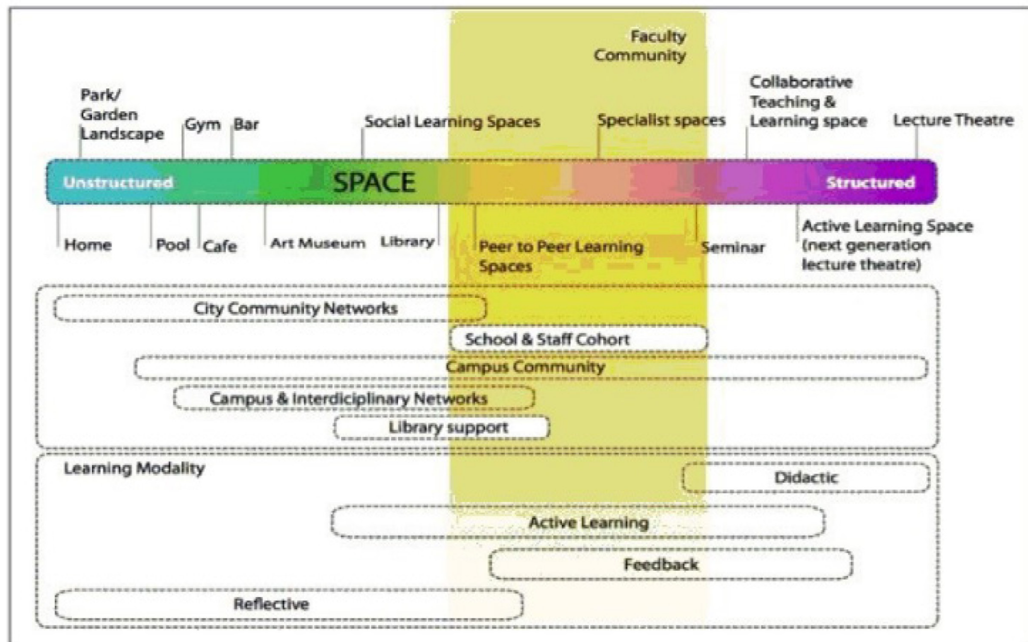


FIGURE 16 PLACES FOR LEARNING SPECTRUM (WILSON, 2009) CITED BY ELLIS AND GOODYEAR 2016

In "*Designing for Learning: Creating Campus Environments for Student Success"*, Strange and Banning (2015) explore the work of Fink and others and conclude

> *"learning must be viewed as a whole experience, across a wide range of formal and informal settings and involving an immersion in a community of learning"* (pg. 138).

They are acutely aware of the non-verbal messages embodied in campus developments or as previously discussed, the "hidden" curriculum (Hafferty, 1998). Oblinger's (2006) review and subsequent presentation of emergent patterns from a number of case studies suggests ways that space can impact positively and negatively on institutional ambitions and educational goals, and thus its ability to enhance or constrain must also be considered (2006, Ch. 14).

Morieson and colleagues (2018) formulated a belonging narrative and deployed it through action research to improve the first-year learning experience of students at their institution. Through design flexibility and co-creation, a space was repurposed to assist with first year transition and inter-programme peer support opportunities. Their key strategies included building connections; supporting transition socially and academically; "*signposting of key academic and disciplinary literacies*"; creating joy through recognising milestones and assisting students' sense of belonging. Provision of kitchenettes and ways to own the spaces e.g., tables that could be drawn on, rated positively.

A systematic review of formal learning spaces in higher education set out to establish if the field was still under-researched and under-theorised (Leijon et al., 2022). By looking at formal learning spaces and considering the requirements for physical spaces post-pandemic as universities seek to create meaningful and communal experiences, the review by Leijon et al. deepens what is known and demonstrates a sustainable field of research. Whilst Leijon et al. do not claim space on its own causes enhancements to

learners' attainment of learning outcomes, they are clear that people, space and the interactions and activities that occur become "*entangled*" (pg. 14) to create places, postulating:

> "*well-designed learning spaces support changes in pedagogy towards active learning methods that could enable students to develop a deeper understanding of a subject. Thus it is space, resources, people and pedagogy that together affects learning*" (Leijon et al., 2022, pg. 9).

In furtherance of the aim of curriculum alignment, Leijon et al. (2022) are clear *"the need for informal learning spaces is seen to grow in relation to increased student active learning processes"* (pg. 10). Whilst there is a growing understanding of the role of space, they suggest it remains challenging to try to answer questions such as 'what works' and 'will the investments pay off' given the complexity involved in learning, and support the move in the "*field towards a theoretical socio-material approach for understanding people, space and practices as entangled"* (Leijon et al., 2022, pg. 16).

Elkington and Bligh (2019) share case studies confirming that learning happens everywhere. They demonstrate the challenge to intimately connect and align curriculum with changing learner requirements and the built environment is well underway. This more holistic view of learning, underpinned by constructivist theory, seeks to reposition the dialogue away from an "either / or" (space or tech) to an inclusive appreciation of the need for spaces to assist in creating social connections, where the spaces will be moulded and shaped by the users. Bligh provides a vocabulary for talking about learning spaces: *"transparent, enabling, stimulating, associative, cognitively integrated and socially integrated"* (2019, pg. 10).

Eigenbrodt, in a well-constructed chapter (2017), sets out the evolutionary progress made in higher education institutions and their libraries to create informal spaces, given

that learning is a systemic, communal, social construct, involving "*cognitive, sensual and emotional inputs*" (pg. 41), before concluding

> *"Scholars and experts agree that space has a huge impact on learning and that design and management of informal spaces are of crucial importance for the learning outcomes of students."* (pg. 45).

2.9. Chapter Summary and Conclusions

Learning in health professional programmes results in a change in the individual. Although this is likely across facets of professional and personal identity formation, alongside acquisition of skills and knowledge, it should not feel like a deletion (Frost and Regehr, 2013). CoP, as an underpinning construct (Cruess et al., 2018) is helpful, particularly when considered alongside calls for subversiveness (Hafferty et al., 2016) and service to society (Frenk et al., 2010).

Learning at university is not just studying (Ellis and Goodyear, 2016) nor formal teaching (Leijon et al., 2022). There is strong support for the legitimacy of designing spaces on campus to promote informal learning through social spaces (Morieson et al., 2018, Berman, 2020, Cox et al., 2022). The small but growing discussion on the provision of spaces to foster incidental and accidental learning (Soro and Nordquist, 2017b) within health professions disciplines has been shared. Socialising and being in informal spaces, away from the formal spaces of instruction, gives rise to opportunities, and there is recognition that serendipity, interconnectedness, getting a coffee and "*chitchat*" (van der Meer et al., 2021, pg. 927) amongst other everyday things, aids metacognition, self-regulation and self-direction. These are essential constructs of professional identity formation, future healthcare practitioners and a goal of medical educators.

Socialisation, communities of practice, peer support and storytelling (Monrouxe, 2010, Lovell, 2015, Wald, 2015, Hawick et al., 2018, Sarraf-Yazdi et al., 2021) should be

facilitated, and are happening somewhere although this is not widely discussed. In campus and built environment research, a sense of belonging has been linked to retention, motivation and academic achievement (Strange and Banning, 2015). Feeling you belong is an essential part of becoming a health professional.

There is little research yet on how to optimise the space / place where socialisation, belonging and other core processes occur to support the development of professional identity, despite the longstanding appreciation in other fields of the importance of place in influencing behaviour and the growing body of research on the built environment.

Given the broad definitions of learning, the learning environment, and the importance of belonging and forming meaningful relationships, I suggest it has become evident that we need to better understand the role physical space and the built environment plays.

This DProf study aims to be part of the ongoing research illuminating professional identity formation and to address explicitly a subset of the learning environment, the campus built-environment. In seeking to explore how professional identify formation is impacted by the campus built-environment, my study is timely, given the growing understanding of the importance of socialisation and belonging in assisting students to become health professionals, and the impact remote / hybrid learning in the pandemic has had on these learners and on campus developments.

In Chapter 3, my research approach is conveyed, informed by the above considerations to address my research question, before describing the activities undertaken (Chapter 4) which led to the generation of my findings (Chapter 5), and ultimately to the development of a framework to assist in the management and development of campuses.

3. Design and Methodology

3.1. Introduction

The aim of this research project was to explore the interplay between campus spaces and their role, if any, on the professional identify formation of students on health professional degrees. The argument that professional identity is socially constructed and how it can be nurtured and promoted was proffered in Chapter 2, but questions on how the built environment influences its development generally, and professional socialisation in particular, remained.

In this chapter, I explore my ontological and epistemic positioning, my research philosophy and how they coalesce to produce the methodology which answers my research question: *(How) Is professional identify formation in health professionals' education influenced by the built environment on campus?* I specify and defend my overall research approach and data collection techniques. The influence of being an insider-researcher on the research strategy is explored, with a particular focus on its impact on issues of confidentiality and my resultant ethical stance.

3.2. Explorations of Ontology and Epistemology

I have always been a great believer in following recipes. As a baker first, and then a pharmacy student, I liked recipes setting out the ingredients, equipment, quantities and method to be used. Experience has helped me understand that even when you follow the recipe exactly, there is still an element of uncertainty when you cross your fingers and hope the cake, experiment or project, works. Life has taught me that sometimes if you innovate instead, based on tacit knowledge or other experiences, the outputs can be even better.

Chapter 3 Design and Methodology

Engaging in this doctoral programme as a health-professional-turned-education-administrator, and as someone involved in the building project which was a cornerstone of this research, has elevated my self-awareness as insider-researcher and employee. It would be improbable for my research not to be shaped by my history, so I needed to ensure due regard to my positionality, potential biases, and what I came to know was my ontological and epistemic positions, initially by setting out what these are, and then by exhibiting high levels of reflexivity as the research progressed.

During the early stages I was searching for a "recipe to follow" as I grappled with and tried to make sense of ontology, epistemology, methodologies and methods, relying on definitions such as:

> *"A method is a technique or process for data collection, methodology incorporates both theory and the analytical process that guides the research, and epistemology incorporates "strategies for justifying beliefs".* (Somekh and Lewin, 2011, pg. 4)

The more I read the more I wondered would I ever be able to write "that" recipe and I sometimes found myself stuck. In my professional life, I had often started with the "method", working from pre-existing or generating new data sets (student exam results, sales figures, etc.), to analyse and generate insights, not conscious of my ontological or epistemic position. Reflexively stepping back to understand and articulate how I justified my beliefs, rather than starting with the method, allowed me to situate myself and the research.

When I read Willig's work, there was an eureka moment. Her first chapter called "*From recipes to adventures*" helped make sense of my readings and wanderings. She sets out an approach which positions research as creative, seeking ways to discover, and replaces "*research-methods-as-recipes with a view of the research-process-as-adventure*" (Willig, 2021, pg. 4).

As part of my doctoral adventure and with a new understanding of ontology and how "*a particular ontological position impacts on, and affects, the subsequent stages"* (Grix, 2002); and epistemology (Whitehead, 2000, Braun and Clarke, 2006, Somekh and Lewin, 2011), I started to tease out what these terms meant for me and therefore this research. Whilst appreciating the interplay between these elements, Grix makes the case for starting with ontology, and preserving the directional flow Figure 17. He is dismissive of

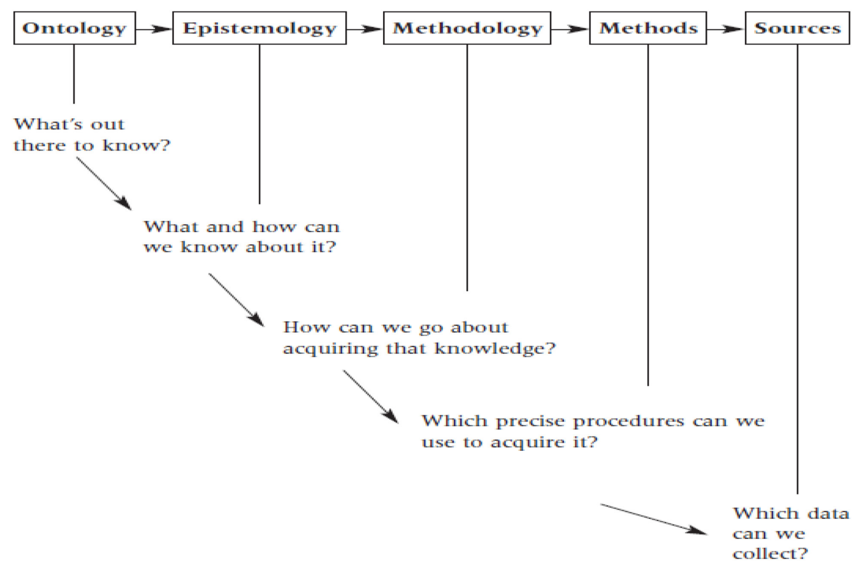


FIGURE 17 THE INTERRELATIONSHIP BETWEEN THE BUILDING BLOCKS OF RESEARCH. GRIX 2002.

research originating from "method" or "data sources" given the risk of assumptions made and the inability to fully critique outputs. The other central and compelling argument of the paper – that every student should understand the terminology and then articulate their own ontological and epistemic position prior to commencing research – is, in part, the reason for this section.

Willig (2021) goes on to state that as a general approach, any methodology chosen is likely to be informed by one's own epistemology, consistent with Grix's position of a unidirectional flow between the building blocks. This was useful alongside the looseness

Willig conveyed by legitimising exploration and discovery as methodology as part of the doctoral process, rather than something to shy away from in pursuit of “the recipe”.

Forged as I was in an empiricist scientific way, trained to rely on evidence-based-healthcare as a pharmacist, and through my early management experiences being driven by data to generate insights, it would be easy to assume this empirical approach was still the dominant force. However, over the years it has softened and rounded out through waves of experiential learning (Gibbs, 1988, Kolb, 2014); reflective practitionership (Boud and Walker, 1998, Bourner, 2003, Bassot, 2015); and a growing appreciation of the importance of learning and making meaning across working life experiences (Billett, 2004, Billett, 2014). Explorations of the importance of context within which my research was situated (Boud and Walker, 1998, Boud and Middleton, 2003, Whitehead, 2009), and a fundamental agreement with the position that knowledge is co-created and extended through social interactions and situations, confirmed my move away from a purely empiricist view.

Through my readings of Willig, I appreciated two types of reflexivity – personal and epistemological. Whilst the personal lens had been in view through earlier work, the epistemological reflexivity she extolled - asking me to reflect on the assumptions I had made and be critical of possible impacts on the research and its findings - was another helpful framework for someone who (still) likes recipes. Willig sets out three key questions:

1. *What kind of knowledge does the methodology aim to produce?*
2. *What kinds of assumptions does the methodology make about the world?*
3. *How does the methodology conceptualize the role of the researcher in the research process?*

(Willig, 2021, pg. 13-14)

In seeking to answer these questions, my approach solidified as an inductive researcher, seeking to unearth evidence by discovering what is going on between people within a defined setting. I am interested in participants' subjective and first-hand experiences and the texture of those experiences, as they become health professional students. My interpretation of the data generated allows me to understand these interactions and experiences, and hence the formation of their professional identity.

3.3. Conceptual framework and methodological considerations

The research by Hanson and colleagues (2011), situated within medical education, helpfully suggests qualitative researchers *"consider the mind of the researcher an instrument of analysis and interpretation*" (pg. 375) and are therefore able to *"respond to environmental cues, perceive situations holistically, capture nonverbal information and explore the unexpected"* (pg. 375). They proposed that the "goodness" of qualitative research lies in its provision of "*tools to study ….professionalism, which are difficult to measure with quantitative tools*" (pg. 376).

Having concluded my research would be qualitative, I was struck by the arguments made by Reeves et al. (2008) on the value derived from drawing on appropriate theories from "*social sciences and humanities to guide their research process and illuminate their findings"*. Their paper sets out the theory of Interactionism, how it can explore "*collective behaviours and perceptions*" and how meaning is created by individuals through every-day social interactions. This theory, concentrating on **how** people act based on **prior** experiences resulting in meaning; that the meaning itself is created **because** of social interactions with others, and that all this is then **internalised** and **interpreted** by the person (my emphasis), nested well into the literature shared earlier on the individual and social aspects of professional identity formation (Hafferty et al., 2016, Sarraf-Yazdi et al., 2021, Mount et al., 2022) and the growing appreciation of

interactions and social encounters in determining how spaces are used on campuses (Oliveira et al., 2022, Leijon et al., 2022, AUDE and Sodexo, 2022).

This further assisted my understanding of the processes underpinning social interactions and possible professional socialisation at the heart of this study, helping orientate the methodology and method of data collection towards ethnographic approaches. George Bordage (2009) drew attention to the absence of conceptual frameworks in many medical education studies, and how if used they can "*illuminate and magnify*". He explained *"Conceptual frameworks are like lighthouses and lenses……Whereas the lighthouse illuminates certain parts of the ocean at any given time, other parts are left in the dark"* (Bordage, 2009, pg. 313). With this metaphor, and the clarity of what my project will shed light on and amplify, it also became clearer what the study was not. This study was not a description or a sociological study of the socialisation or acculturation of learners into the professions. It did not try to understand the pre-existing structures students are contending with when in lecture theatres, anatomy rooms or on clinical placements. All these and other interactions create meaning but are not part of the research aim and objectives. Devising my appropriate methodology was made easier by knowing what would not be magnified nor illuminated, and by the selection of a conceptual framework.

Benade reviewed the literature related to the built environment and relationship with its users, seeking to establish the role of conceptual frameworks across a range of journals, given his own position that the "*building does matter (because it is in dialectical relation to its occupants, whose practices are influenced by the built environment)*" (Benade, 2021, pg. S12). Of the 136 original articles reviewed, only 28 (21%) utilised *"robust theoretical or conceptual frameworks"*. Benade argued by applying theoretical frameworks, specifically a Lefebvrian approach to non-traditional learning spaces, it enabled a more critical appraisal. Benade shared Lefebvre's arguments that space is

"*socially produced, and that social relations are affected by space*" and that "*space is produced in two ways, through mental conceptions, and through social relations*". Benade reasoned the adoption of a theoretical approach – Lefebvre's or others – enabled reviewers and researchers to move beyond a review of building fabric performance or the attitudes of its users and in so doing create new knowledge from insights that would not have existed otherwise (Benade, 2021).

Bordage challenged us as researchers to apply the framework(s) chosen and to "*go beyond simply citing or paying lip service to a conceptual framework*"(pg. 316). In reading Bordage (2009), I realised my time spent struggling to decide which framework(s) and methodology could be used was time well spent, as it helped explicate my once implicit assumptions. He also articulated what I experienced –this is a "*task that can be daunting, especially for novice educators"* (pg. 318).

Symbolic Interactionism

I undertook an exploration of symbolic interactionism, originating from my reading of Becker's "Boys in white"(Becker et al., 1961). Symbolic Interactionism (SI) is a perspective and theoretical lens that emerged from the Chicago Schools of philosophers and sociologists. The term itself is attributed to Herbert Blumer (1900 – 1987), who adapted and developed George Herbert Mead's (1863 – 1931) ideas. It emphasises the importance of social interactions, the ways in which people communicate and view each other, the meaning and symbols derived, and thus how this shapes and explains human behaviour, and hence the development of self and identity (Dingwall, 2021). Fundamentally it speaks to the uniqueness of an individual, who can give meaning to their experiences (rather than acting on reflex) because people "*learn what things means as they interact with one another*" (Sandstrom et al., 2001 pg. 218) and so "*in essence, they learn to see and respond to symbolically mediated 'realities' – realities that*

are socially constructed" (Sandstrom et al., 2001 pg. 218). SI brings a focus to the individual and their construction of reality through social interactions and associations with others, and their interpretation of events. In effect, symbolic interactionists hold that involvement in society is fundamental to the development of self and of the mind, and to realising ones potential (Sandstrom et al., 2001). It suggests that meanings, and hence identity, is fundamentally fluid, as meanings are negotiated through interactions. Behaviours are not pre-set, but rather are constructed as a result of past stimuli and experiences which have been attributed meaning and in that way can be considered empowering (Brekhus et al., 2021).

This does not negate the influence of gender, race or other structural factors which can constrain individuals, and hence how they interpret and respond to these, all of which contributes to the formation of self and mind. Within these interactions, it is recognised that people have agency and that they are influenced by the social world: the person-to-person interactions and the subsequent interpretation of those interactions, and importantly for my research study, that those responses and meanings are influenced by the subjective meanings assigned to the objects and situations which comprise their environment. SI therefore allows for identity formation to develop, as people ascribe meaning to new or reframe past events, in effect unlearning and learning anew, consistent with the perspective promoted by Fink (2013). The new "self" thereby appears and develops through the negotiation of these social interactions. Symbolic interactionist's stress that people actively and agentically shape identities within specific situations such that " *Society and its structures are human products; they are rooted in the joint acts we engage in with other people."* (Sandstrom et al., 2001 pg. 219).

My research study is concerned with professional identity formation, and the symbolic interactionist theorists believe the "*self emerges, develops and is sustained through processes of social interactions. ……… Rather an individual must learn who [they] are*

through interacting with others" (Sandstrom et al., 2001 pg. 219). It also recognises the subjective nature of reality, and that an individual's past experiences have a role in the meanings they attribute and the new social worlds they construct in the present. My selection of SI as a theoretical framework for researching professional identity formation within the societal construct of a university is apposite, given the literatures already discussed in Chapter 2, and my ontological and epistemic position set out above.

Sandstrom et al. (2001) suggest that interactionists seek to understand the world of meanings and those in it, to see it as those being researched do, and that in order to do so have to 'take the role' of those individuals and groups, in essence to become an insider, a position which lends itself to a research study as part of a professional doctorate. In this way SI can be considered an appropriate theoretical lens for insider and field -based research, due to its emphasis on understanding socially constructed events formed by the dynamic and fluid interactions of people and the meanings they ascribe to those interactions.

In effect SI, allows me, the researcher, to focus on day-to-day exchanges that shape participants realities, and it provides a framework through which to interpret how these symbols then shape behaviours. Every interaction becomes meaningful and therefore there is a richness and depth available in what otherwise might be considered quotidian or mundane. By giving weight to individual's interactions and voices, it can create ways for a variety of experiences to be heard, creating opportunities to capture the multifaceted reality of participants experiences on campus.

I agreed with Clarke (2016) who in their discussions of Blumer's (1969) *Symbolic Interactionism: Perspective and Method* state he "*essentially argued that theory and method are inextricably entwined and nonfungible"* (pg. 47 ebook). Symbolic interactionism – human interaction in groups with significant others - allows the

development of ideas, "*concerns to be aired, meanings conferred and rationales for views and behaviours to be developed*" (Barbour, 2018, pg. 33).

In effect, the choice of SI as a theoretical lens creates a helpful focus on the interactions amongst the participants in the study and their surroundings and their construction of self through their interpretation of these social processes. Selecting this as a framework in this study was appropriate because symbolic interactionists believe that the formation of the self is a social process, as people are internally engaged in conversations and reflections, and externally engaged in discussions and interactions with others and the surroundings. It speaks to the joint acts (Turner, 2000) that take on meaning, and through which lives and societies, and in this case professions are ordered and organised. SI supports, or rather requires, researchers to be reflexive as it recognises that both my perspective as the insider-researcher and the participants are socially constructed, necessitating the constant review of potential biases throughout.

Lye cited by Clarke, asserted:

- *"meaning has been relocated from reality out there to reality as experienced by the perceiver*
- *an observer is inevitably a participant in what is being observed*
- *interpretations must be situated*
- *cultures are networks of distinctive symbols and signifying practice*
- *interpretation per-se is conditioned by cultural perspectives and mediated by symbols and practices."*

(Clarke, 2003, pg. 52 ebook)

Through all these I came to understand my epistemological reflexivity, advocated by Willig (2021, pg. 11) was situated beyond my ontological belief and ascribed to Grix's description that "*social phenomena and their meanings are continually being*

accomplished by social actors" (Grix, 2002). This is congruent with Segre's discussion and citation of Becker, in that "*What occurs in someone's life, in other words, depends 'not only on his [sic] actions and choices, but also on what all the other people he [sic] was involved with did*'" (Segre, 2019, pg.379). Segre's discussion of Becker et al.'s work and his proposal of a "*sketchy version of Symbolic Interactionism Theory*", is germane for the basis of this study, which is situated in a higher education institution - in effect a socially constructed world:

> *"1) Networks of meaningful, habitual, and cooperative actions produce work if these informal interpersonal relations form a social world; 2) This social world is constituted by shared experiences and by interdependent activities; 3) It is therefore empirically observable as a concrete social actuality; 4) This social world is a community if - and only if - it is the site of routine cooperation, collective action, and shared experiences which are meaningful to those who participate in them, and to others as well."* (Segre, 2019, pg. 384 - 385)

3.4. Summary so far: stories

Part of my history and hence identity formation is a love of reading. Salman Rushdie's HAROUN AND THE SEA OF STORIES is a favourite, having the power of stories and storytelling at its heart. The eponymous hero has an adventure, meeting magical creatures, getting embroiled in battles between good and evil in a different world and saving his family in the process. I was reminded of it during this phase, when grappling with ontology, epistemology and methodology:

Chapter 3 Design and Methodology

> *"So Iff the Water Genie told Haroun about the Ocean of the Streams of Story, and even though he was full of a sense of hopelessness and failure the magic of the Ocean began to have an effect …. He looked into the water and saw that it was made up of a thousand thousand thousand and one different currents, each one a different colour, weaving in and out of one another, like liquid tapestry of breathtaking complexity; and Iff explained that these were the Streams of Story that each coloured strand represented and contained a single tale….. And because the stories were held here in fluid form, they retained the ability to change and to become new versions of themselves, to join up with other stories and so become yet other stories; so that unlike a library of books, the Ocean of the Streams of Story was much more than a story of yarns. It was not dead but alive"* (Rushdie, 2014, pg. 71 - 72).

This extract seemed to me a beautifully crafted argument to support a constructivist, interpretive, interactionist research study, particularly if the word "student" replaces the word "story"! With this acknowledgment of the centrality of student stories within my ontological and epistemological stance, it helped me to finally answer Willig's three questions (Willig, 2021, pg. 13 - 14):

Q1: What kind of knowledge does the methodology aim to produce?

A1: *Constructivist.*

Q2: What kinds of assumptions does the methodology make about the world?

A2: *That the world is socially constructed, based on interactions and open to interpretation.*

Q3: How does the methodology conceptualise the role of the researcher in the research process?

A3: As curator, narrator and interpreter of the stories of others.

In summary, I inhabit an ontological position which is constructivist. This influences my epistemological position which is interpretivist and the extent to which I believe I can know about professional identity formation within the specific context of a campus' built-environment.

My research was concerned with uncovering the personal meanings students conferred to and drew from their experiences particularly those related to professional identity formation and the built environment, occurring in the interactions between themselves and their worlds. In consideration of appropriate methodologies, I therefore sought ways to bring stories and lived experiences of the students to life.

My next task was to assess what methodology might be most suitable to uncover these experiences and capture the meaning-making experiences and symbolic interactions within the socially constructed world of a health sciences university.

3.5. Methodology

Through my professional life, I have become comfortable with large data sets and analysing numerical data. The thought of quantitative methodologies and analysis did not therefore "*send shivers down the spines of many novice researchers who baulk at the thought of statistics*" (Cohen et al., 2007, pg. 501). Numerical analysis, including assessing materiality or validity of differences and being able to triangulate datasets to draw inferences and estimations, had been a cornerstone of my professional practice and career success, and I understood how to generate reliable and valid quantitative data and insights enabling decision making (Rowley, 2007).

As comfortable as I am with quantitative data, this was ruled out early, given their primary aim to measure or compare rather than to describe; and my desire to foreground students' experiences. My research was not about frequency of usage or

who was using it, so could not be quantitative. It had to be qualitative - researching students' experiences of using campus, to elucidate and communicate how this *"place, these people, these practices 'work'"* (Somekh and Lewin, 2011, pg. 35).

In their discussions on Situational Analysis, I found myself agreeing with the statement from Clarke (2016) *"We are all experts on our own lives. This is especially important to grasp in critical projects"* (pg. 39 ebook) and again later, when they stated:

> *"Constructionism (or constructivism) assumes that people (<u>including</u> researchers) construct or interpret through their own situated perspectives the realities in which they participate."*
>
> (Clarke et al., 2016, pg. 47 ebook)

I wanted access to students' perceptions of their experiences; what it meant to them; and how that connected to their "becoming" a health professional. Clarity on my ontological and epistemic position resulted in the selection of a "*participant led, or bottom-up, in the sense that they allow participant-generated meanings to be heard"* (Willig, 2021, pg. 5) qualitative research strategy.

Foregrounding the student voice and preserving its depth was an important consideration. With the selected approach, space would be created for participants to bring themselves and their past narratives (Somekh and Lewin, 2011, pg. 122); creating a coherent and current construct, consistent with the description by Cohen, Manion and Morrison who stated, "*History and biography intersect – we create our own futures but not necessarily in situations of our own choosing"* (Cohen et al., 2007, pg. 167).

There were some false starts along the way: a novice's fascination with Foucault (Gutting, 2005, Zemblyas, 2006, Siebert and Mills, 2007) led to a misplaced desire to utilise Foucauldian approaches on discourse and discourse analysis "*shedding light on what is possible to think, say and be in medical education*" (Hodges et al., 2014, pg. 563),

but a realisation this would result in the focus being about power relations rather than centring their actual lived experiences ruled this out.

My project was a study of a socially constructed world, where learner lived experiences, human actions and agency were contingent upon, and related to, interactions and co-construction of meaning in-situ. Given the thrust in professional identity formation and built environment literature on meaning making, Gill and Goodson's articulation of the "*significance of social interaction in the construction of narratives and transforming human experience into meaning*" (Somekh and Lewin, 2011, pg. 157) led me to conclude that exploring and discovering through listening to the students' stories should be foregrounded in the methodology.

Explorations included readings on ethnography (Atkinson and Pugsley, 2005, Hammersley, 2006, Somekh and Lewin, 2011, Ch. 4, Mannay and Morgan, 2015), autoethnography for doctoral research and healthcare (Wall, 2006, Farrell et al., 2015, Hayes and Fulton, 2015, Chang, 2016, Farrell, 2017); living theory (Whitehead, 1989, Whitehead, 2009); and case studies (Cohen et al., 2007, Somekh and Lewin, 2011, Ch. 6), with considerations of data definition, reliability and validity, expanding my experimental scientific research origins.

From Ethnography to Ethnographically informed research

Adopting a symbolic interactionist perspective aligned both with an ethnographically informed research strategy, as my research sought to understand and unpeel the actual lived experiences and stories of the individuals; and with the literature shared in Chapter 2 in relation to learning and professional identity formation. Ethnographically informed methods, such as interviews, focus groups and participant observations, are key to capturing the little events, rich stories and nuanced interpretations that are implicit in adopting a SI perspective.

Chapter 3 Design and Methodology

Recognising that I was already in some way in the "field" , both as a user of the campus built-environment in my employee role, and as an observer of N-Building from my office window, I began to develop an approach grounded in ethnography (Atkinson and Pugsley, 2005, Hammersley, 2006, Mannay and Morgan, 2015). Ethnography as a qualitative research method involves the systemic study and observation of defined societies, groups or cultures, first-hand (Hammersley, 2006) through in-situ fieldwork. This includes immersion, noting and recording everyday lives and events, supplemented by annotations, descriptions, field notes, and interviews. At its best, ethnography allows for an openness of approach and a suspension of "*taken-for granted understandings*" (Somekh and Lewin, 2011, pg. 34). It keeps participants at the fore, uncovering the many layered and intertwined worlds influencing why people act in certain ways and (re)tell stories, ultimately helping the researcher to *"open up new ways of thinking"* (Somekh and Lewin, 2011, pg. 35). Atkinson and Pugsley (2005) are clear that ethnography is not a method but rather an approach underpinned by a number of core "commitments", including social-life is meaningful; is not fixed and open to (re)negotiation; the local culture and context matters and must be part of the analysis; and that tacit knowledge is drawn upon within the culture and must be part of the investigation. They go on to discuss the importance of the everyday-world which does not occur accidentally, but rather is a direct result of the "*socially organised actions of the social actors*" (Atkinson and Pugsley, 2005, pg. 230).

Whilst ethnographically informed research often involves extended periods in the field and longitudinal studies, descriptions of short-term ethnography (Pink and Morgan, 2013), sometimes called quick- or micro-ethnography (Bryant et al., 2009) were useful in legitimising an ethnographic approach for this project when time was limited, and given the desirability of bringing a precise focus to one aspect of a larger system and culture. Rather than duration, Pink and Morgan (2013) argue it is the intensiveness of

the excursion that elicits what matters to participants. First-hand involvement is maintained alongside deliberate probing of the detail of everyday visible and invisible practices.

My overall approach was therefore to describe, illuminate and interpret something that is otherwise tacit, by exploring the impact of the built-environment on the development of participants, hidden in the quotidian experiences of learners as well as seminal moments. In adopting an ethnographically informed approach and leveraging my access as an insider-researcher, the intent was to explore what was going on, to "*make space to appreciate the unexpected and unpredictable as key moments of insight*" (Mannay and Morgan, 2015, pg. 172), thus facilitating an holistic view and allow for interpretation.

However, I am not a student anymore, although being a health professional is a facet of my own professional identity. Engaging as an ethnographically informed insider-researcher, I could only be an observer, an outsider to the student community and the research participants. My observations would capture what happened, i.e., what I saw and heard, and what I felt and thought about these events. The contextualised knowledge and meaning derived from my everyday role as an employee and a health professional, would be entangled through the research. Combining ethnography with reflexivity (Liberati et al., 2015) is thus a crucial part of the process in *"doing and writing ethnography"* (Somekh and Lewin, 2011, pg. 35). In adopting this combination, the findings and themes generated and presented in Chapter 5 are, as a result, a function of me. They are my interpretations and perspective as an insider-researcher developed from participants' data. The findings may be different from those of the individual participants, but they are nevertheless valid.

Having clarified my methodology as ethnographically informed, I then considered which of the data collection techniques, or as Grix (2002) postulated, the methods and "*precise*

procedures to acquire knowledge" would be most appropriate. The methods selected and discussed below followed sequentially from my ontology, epistemic, and methodological building blocks. Ellis and Goodyear (2016) suggest research involving university spaces needs to pay "*close attention to what students actually do and the sense they make of what they do*" and they go on to conclude:

> "*observing what students actually do - how they move in, inhabit and reconfigure space, how they create congenial learning places, how they assemble tools and other artefacts in their work as students - is the best way of gaining insight into likely mechanisms; so too is talking with students (and teachers and other stakeholders) to gain their sense of what they are doing and why, how they experience different spaces, what they believe to work best for them, in each of the diverse activities, making up their studies. Combining observational and experiential data is still relatively rare yet vital.*" (2016, pg. 181)

Considered collectively: me as insider-researcher, using symbolic interactionism to look at the interactions between people and spaces allowing for interpretation and meaning to be ascribed to participant's experiences; and the exploration of learners' social construction of reality through the adoption of an ethnographically informed approach; alongside the advice from Ellis and Goodyear; the procedures I selected to best achieve my aims and answer my research question were **focus groups** and **observations**, the rationale for which follows.

3.6. Methods: Focus Groups

Ensuring participants voices are heard can be done in different ways, including questionnaires, interviews and focus groups (FGs). Whilst questionnaires and interviews were considered, they were rejected as I was keen to move beyond individual or personal narratives and explore group dynamics, interactions and experiential

reflections (Palmer et al., 2010). One additional, practical consideration, which further ruled out interviews, was the data was to be collected by a facilitator, due to ethical considerations discussed later (pg. 96). FGs, in comparison to interviews, engaged more participants from a reduced number of data collection events, which would have been beyond the resources available (Palmer et al., 2010). In my review of literatures, a number of papers had utilised questionnaires (Shochet et al., 2015, Tagawa, 2019) and whilst useful insights had been derived in relation to their research question, I had been struck by the inability to explore what respondents had understood by the questions or meant by their responses. Questionnaires can help researchers understand what participants think and say, but not necessarily why. I wanted to know the meaning participants ascribed to learning and built environment.

Barbour (2018) sets out the history and differing uses for FGs, sharing many examples of how they generate knowledge within different research strategies. A key reason for selection of FGs is they lead to less superficial conversations as participants interact and engage with each other (Pope and Mays, 2009) including debating and defending ideas (Somekh and Lewin, 2011, pg. 63). FGs can generate new ideas amongst participants as they discuss, comment, and build upon each other's contributions (Willig, 2021), in contrast to individual interviews. Group discussion can lead to inconsistencies, differences of opinion, shades of grey and nuance. For my research, this is not problematic, but rather assists in creating rich and thick descriptions for analysis. The discussion, debate or dialogue which happens during a FG, is in itself a social process, where the participants will co-create and produce a specific "*account of themselves and their ideas*" (Somekh and Lewin, 2011, pg. 63). Sharing of perspectives, exploring similarities and / or differences can surface aspects of the culture in which participants reside (Hanson et al., 2011). The intensity of the discussions, the forming, un-forming and reforming of perspectives assist in the emergence of rich data, and the provision of

evidence "*in which participants may justify their positions, and how they may be persuaded by others to change their views*" (Willig, 2021, pg. 38). Barbour suggests FGs can address gaps in understanding arising from symbolic interactionism, as it allows an engaged, purposeful researcher to link the micro interactions with macro elements i.e., the social context (Barbour, 2018).

Accessing students' stories through FGs explores the meaning inherent for them as they entered university, became acculturated or not, and reduced the risk of ventriloquation (Bennett et al., 2017) with what is expected of them as "good" healthcare students had 1-2-1 interviews been used instead. FGs although an artificial and contrived situation (Cohen et al., 2007, pg. 376), facilitate disclosures between participants in relation to the research question, and provide opportunities to tap into existing dynamics and shared or contrasting experiences. It is the interchanges between people, the reassessment of a position, the changing of a mind, rather than any consensus or decision reached, that were of interest to me as researcher in the selection of FGs, which are not available in questionnaires or interviews (Barbour, 2018, pg. 24).

Despite concerns of some researchers (Barbour, 2018, pg. 19), FGs have been used in sensitive research areas, resulting in the provision of nuanced accounts and explanations that otherwise may not have emerged. Whilst my research study was not immediately a sensitive topic or dealing with vulnerable groups, I was conscious a discussion could expose personal or professional challenges within the context of their shared experience of becoming a health professional student.

Designing and running the focus groups

With the FG design, I appreciated "*experiential claims, narratives, or reflections are likely to be nested within a fairly complex set of social and contextual relationship*" (Palmer et al., 2010). Designing and piloting the FG topic guide (Appendix 5 pg. 291) was a key step

and is discussed fully in Section 0, By academic year 21/22, when the observations took place, teaching was still being delivered HyFlex, social distancing and masks were compulsory on campus. Restrictions on building usage began to be relaxed, although not yet to pre- or post- COVID-19 levels. The range of students with access to campus during the observation phase was therefore different: students from all years and all programmes could attend, rather than those involved in the FGs, which had been confined to new entrants / first years only.

Changes during the pandemic in the UoH learning, teaching and assessment environment, and my role in the administration of these services, required a highly reflexive review of my original research project proposal, alongside active discussions and support of my supervisory team. The study was ethnographically informed, in that I am immersed in the environment and wanted to study the culture within the community. However, in order to ensure participants anonymity and freedom of expression, the design evolved, particularly with respect to gathering data through Focus Groups.

Focus Groups, pg. 115, alongside the impact of COVID-19, and the actual data collection process. The topic guide was designed to empower participants to converse, apposite given the socialisation involved in professional identity formation. FGs would be online, hosted and recorded using MS Teams. Professional verbatim transcription of all the interviews would ensure accuracy in capturing what was said, reducing the likelihood of missing key events or bias and thereby increasing reliability.

A facilitator, primarily for ethical reasons discussed later (Section 3.9, pg. 96), would conduct the FGs. Training and collaboration with the facilitator throughout the process ensured the collection and generation of data addressed the research aims and objectives (Barbour, 2018, pg. 94). This separation of roles further assisted with reducing

potential bias, which could have been present given my insider-position in the university.

Sampling and recruitment

The number of FGs is a critical decision for the researcher. There is no set number, but rather it should be a factor of the evaluations and comparisons to be drawn (Barbour, 2018, pg. 70). My research design, pre-COVID-19, envisaged including participants from new entrant through to final year students enrolled in the UoH's medicine, pharmacy, and physiotherapy undergraduate programmes, as professional identity formation is a continuous, albeit not necessarily linear, process, and student perceptions of the learning environment change as they progress (Skochelak et al., 2016, Dunham et al., 2017). This would have enabled me to explore, for example, impacts on first year medicine, pharmacy or physiotherapy students who are becoming "health professional students" (Stubbing et al., 2018), as well as how students mid-way through their programme of study in medicine, pharmacy or physiotherapy, access peer support or how final years' students in those programmes decompress (Lovell, 2015) away from the clinical environment (Hawick et al., 2018). Given the longitudinal nature of professional identity formation, investigating across multiple stages of the student life-cycle would have been justified. However, the impact of COVID-19 imposed significant restrictions on campus access during the period of the study, and the research design of the focus groups was revised accordingly, such that new entrants and first years studying undergraduate medicine, pharmacy and physiotherapy programmes only were included. The changes to the research proposal as a result of the pandemic restrictions and my changed role are part of Chapter 4.

Sampling Strategy

A minimum of two and a maximum of four FGs, ideally with 6 participants per group, was included in the research design. The actual numbers are shared in Section 0, By academic year 21/22, when the observations took place, teaching was still being delivered HyFlex, social distancing and masks were compulsory on campus. Restrictions on building usage began to be relaxed, although not yet to pre- or post- COVID-19 levels. The range of students with access to campus during the observation phase was therefore different: students from all years and all programmes could attend, rather than those involved in the FGs, which had been confined to new entrants / first years only.

Changes during the pandemic in the UoH learning, teaching and assessment environment, and my role in the administration of these services, required a highly reflexive review of my original research project proposal, alongside active discussions and support of my supervisory team. The study was ethnographically informed, in that I am immersed in the environment and wanted to study the culture within the community. However, in order to ensure participants anonymity and freedom of expression, the design evolved, particularly with respect to gathering data through Focus Groups.

Focus Groups, pg. 115.

All possible participants were enrolled on a degree leading to a primary healthcare qualification in either medicine, pharmacy or physiotherapy. Given COVID-19 restrictions, the criteria for selection of the participants in the FGs was purposive, selected to gather data from specific groups who had access to the main campus during academic year 20/21. This increased the likelihood of a common experience of campus usage and, in this limited regard, homogeneity of background. This is consistent with

advice on participant selection (Somekh and Lewin, 2011, pg. 64) becoming the basis for comparability and aiding the emergence of patterns.

Whilst there was commonality through the purposive sampling, diversity within this was possible, given the age, nationalities, backgrounds, and prior experiences of this group (Monrouxe, 2010, Stubbing et al., 2018). Target numbers, including considerations of gender, age, nationality, route of entry and programme were part of the sampling framework. Discussions with the facilitator on the mix of participants for each group were planned, mindful of the importance of participant selection and sampling techniques (Barbour, 2018, pg. 70) to ensure the discussion did not lose focus or become unrepresentative (Cohen et al., 2007, pg. 377).

Having this defined group of participants would enable exploration and discovery of the interactions and experiences of first years who are becoming health professional students on their way to “being” health professionals. These students arrive to study medicine, pharmacy or physiotherapy having been at the top-end of the cohort in their second level or high-school educational experience. When they arrive, they are with a group of equals, resulting in some of them becoming “below average” for the first time. This transition can be discombobulating, stressful and a source of identity dissonance (Kay et al., 2018) and hence worthy of study.

Students under 18 were excluded given potential child protection issues. There were no exclusions for biographical or geographical characteristics.

3.7. Methods: Observations

As specified in Chapter 1, a particular stimulus of the research was N-Building (Figure 1 pg. 10) on the city centre campus. My insider-researcher status along with my involvement in the design, build and commissioning, ensured I would meet Willig’s

requirement to be "*involved enough to understand what is going on, yet remain detached enough to be able to reflect on the phenomenon under investigation*" (Willig, 2021, pg. 35). With symbolic interactionism as a conceptual framework, observations could identify patterns and events through noticing activities and displays of behaviour.

Observations were not to elucidate if lecture theatres were busy, or dedicated rooms were conducive to the essentials of good simulation practice. They were not reviewing the utilisation of the café, nor the performance or fabric of the building. Given my theoretical standpoint, the purpose was to explore the lived spaces (Benade, 2021), informal (Berman, 2020) and third spaces (Strange and Banning, 2015, Tate, 2023), where students meet without "*teacher supervision, usually outside of scheduled class time"* (Ellis and Goodyear, 2016, pg. 167). Ethnographically informed researchers understand "*everyday encounters are a staple and they generate insights in to social and cultural practices*" (Mannay and Morgan, 2015, pg. 174). Whilst insights would have been generated through either method alone, using them together acknowledges the underpinning tradition of ethnography i.e., really understanding people's perspectives by reviewing what they say and what they do (Hammersley, 2006).

Willig's (2021) discussion of observations further clarified the nature of my own: overtly in the participants natural setting, with no involvement in the activities being observed, other than through reflexivity. Ethnographically informed fieldwork includes observations as well as the collection of photographic images and other visual or documentary material, providing a record of everyday life (Atkinson and Pugsley, 2005) which can be analysed and interpreted. The material gathered needs to be converted to data in a systemic and structured way, as the observer does not simply "*glean general impressions*" (Atkinson and Pugsley, 2005, pg. 231). Through piloting, careful observation and documentation, and high levels of reflexivity, claims of subjectivity can be overcome.

Sampling Strategy

My observations would aim to gather data across three of the four settings identified by Morrison and cited in Cohen: physical; human; and interactional - what is taking place, formal, informal, planned, unplanned etc. (Cohen et al., 2007, pg. 397). The fourth being the "programme setting" e.g., the resources and their organisation, pedagogic styles, curricula etc, was not part of this study. With only a limited time in the field, I could not assume that my observations were typical of the activity or that it "*always happens*" (Hammersley, 2006, pg. 5) due to daily / weekly / monthly student learning cycles. Intentional scheduling of observations can account for some of these temporal limitations (Hammersley, 2006). In this way it is similar to purposive sampling, as time is allocated based on who is expected to be present, informed by my research aims and objectives. Further mitigation can be achieved by capturing other situational and contextual factors i.e., examination dates etc.

The Setting

N-Building the locus of the observations, was included by Nordquist et al. (2019) as an example of explicitly aligning curriculum, learning activities and physical space for optimisation of learning. It is most heavily used by undergraduate students, although postgraduate professional training and continuous professional development (CPD) programmes are regularly and frequently scheduled too.

After careful consideration as to the location of the observations, and with recourse to the literature on symbolic interactionism, socialisation and professional identity formation, the learning commons with its blue couches (Appendix 9, Figure 40 and Figure 41, pg. 301 - 302), study pods (Appendix 9, Figure 42, Figure 43 and Figure 45, pg. 303 - 305) and the Dispensary café area (Appendix 9, Figure 44, pg. 305) were identified

as bases. These are common areas on campus, and spaces to which I had free access as an employee.

COVID-19 impacted the operation, access and functions of the building and the detail of the actual observations is included in Chapter 4.

3.8. Data Analysis

Overall, an inductive approach was preferred, specifically no coding frame would be initially applied, although reference to the literature and the research questions would be a constant, and the analysis would always be through the lens of symbolic interactionism. Fundamental within SI is the idea that individuals actively construct meaning through their interactions with others, and hence that meanings are not intrinsic but rather are socially constructed. The data collection outlined in the Methods sections above, speaks to this and creates an ability to focus on capturing the perspectives, interpretations and interactions of the students, within the socially constructed world of the UoH. SI emphasises the importance of actively and consistently being reflexive, so that any researcher bias, experiences and tacit knowledge can be explicit when gathering, understanding and interpreting the data collected. Reflexive Thematic Analysis (RTA) was therefore adopted to analyse the data (Braun and Clarke, 2006, Braun and Clarke, 2021). Thematic analysis can be used across a range of theoretical frameworks and is suitable for addressing social constructionist research questions. In adopting RTA, what counts as a theme is dependent upon my ontological and epistemological positioning which I defined earlier. Braun and Clarke describe a theme as "*patterns of shared meaning*" which should be underpinned by a common or central concept (Braun and Clarke, 2012). Themes can be explicit (semantic) in the data or implied (latent).

Whilst the excellent RTA resources available on their website (Braun and Clarke, 2021) informed my actual process and activity, see Chapter 4, the three-stage model of Hanson et al. (2011) Figure 18, provided another useful framework to me as a novice researcher in conceptualising the combined data corpus.

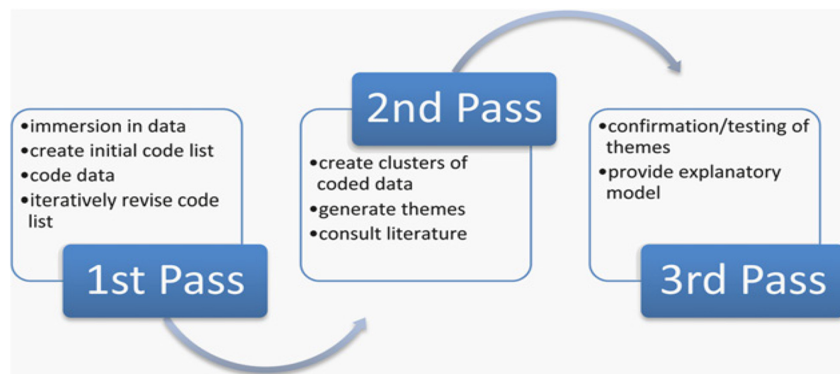


FIGURE 18 THREE STEP DATA ANALYSIS. HANSON ET AL 2011

Focus Groups

Data analysis could only commence upon receipt of the transcripts, given the FGs would be facilitated. The reflexive thematic analysis approach involves six key stages: 1) familiarisation and immersion in the data; 2) generating initial codes across the data set and attaching those codes to items; 3) actively reviewing the codes to generate initial themes; 4) beginning the report by "writing as you go", as the writing assists with analysis and synthesis; 5) iteratively reviewing and refining potential themes with recourse to the codes and original data, before finally 6) defining and naming the themes (Braun and Clarke, 2021).

Observations

Undertaking the actual observations would allow me to take a look "at the field" prior to establishing any meaning from the drawings, photographs, notes and descriptions (Somekh and Lewin, 2011, pg. 137) enabling a move from recording and describing of

the data to *"inference, explanation, suggestion, causation and theory generation"* (Cohen et al., 2007, pg. 169).

The overall analysis would follow the six stages of reflexive thematic analysis (Braun and Clarke, 2021) outlined above. Immersion and familiarisation with the data would occur through the annotation and reviewing of notes, always conscious that my notes had subjective thoughts and ideas (Cohen et al., 2007, pg. 469) implicit and sometimes explicitly encoded. Notes and photographs would be consulted in an iterative process. High levels of reflexivity would be required during the analysis, given that my selective attention – what I had chosen to look at and for how long, (Cohen et al., 2007, pg. 410) - could have an effect, as could other factors, including the gap in time since actual observations and final write up, my interpretations and meaning applied in my reading, reviewing, and coding of the data. Systematic coding and reflexivity would mitigate the risk of subjectivity. Key items (field diary notes, photographs and observations) would be extracted during the analytical process and noted for inclusion in the relevant chapters of this thesis.

Combining the data sets

Reflexive thematic analysis would be an iterative process (Braun and Clarke, 2021) across the six non-linear phases: four of which would occur in each of the data collection methods prior to combination: 1) familiarisation; 2) generating initial codes; 3) initial theme generation; and 4) "write as you go". The final two phases would occur initially within each data stream and then again post combination: 5) review and refine potential themes and 6) define and name. This would ensure that as my thinking evolved, validation remained central, enabling creation of overarching themes, bringing participants experiences to life, creating meaning and knowledge. Themes would be reviewed and reworked as necessary, with recourse to the original transcripts,

observation field notes and photos, allowing stories to be told and final themes actively constructed. When reviewing and interpreting the themes, they were considered within the framework of SI, which required exploration of how participants interpreted events and symbols, and then I ascribed meaning to those interactions, and the influence of any social constructs. During this phase I maintained a dialogue between SI and the themes I was generating, allowing my data to flesh out my own understanding of SI and vice-versa; and discussed all this with my supervisory team.

Conceiving of the data analysis in this way aided reflexivity and diminished concerns on reliability or validity (Cohen et al., 2007, Ch. 6 pgs 133 - 164, Somekh and Lewin, 2011, Ch. 15, pgs. 131 - 138).

- Phase 1: reviewing, looking, counting, noting events; patterns; repeated activities; relationships between data; coding and then clustering these together; considering the FGs first and then observations as separate streams,

And then

- Phase 2: bringing the clusters together; assigning metaphors; bringing the data to life including connecting the data with theory; combining streams together to create my sea of stories (Rushdie, 2014).

The accumulation of data from different sources – focus groups and observations - assists with triangulation, not in the classic quantitative sense of seeking to validate or corroborate, but rather as another lens from which to view the interactions. Willig understands these different perspectives will not "*necessarily converge and generate a coherent picture*" but instead may "*complement one another, thus giving rise to a fuller understanding*" (Willig, 2021, pg. 43).

Maintaining high levels of reflexivity is required to allay the risk of bias in selecting quotes or perspectives that "fit" my own narrative. This was further reduced by

reviewing the data again, at a distance (of time) following the interruption of studies, by reference to newer studies published, including learner experiences during COVID-19 (Daniel et al., 2021, Deshetler et al., 2021, Slivkoff et al., 2021, Consorti and Consorti, 2023). Maintenance of reflexivity was further assisted by regular and sustained engagement with my supervisory team throughout.

Overall, by iteratively focussing on the participants, elaborating and amplifying through the noticing of patterns and relationships in the data, I was able to understand what the various events, spaces and places meant to students, generating my findings which are presented and discussed in Chapters 5 and 6.

3.9. Ethical Considerations

Ethical approval for the study was submitted through the MU Health and Social Care Research Ethics Committee. An application was also made to the UoH's Human Subject Research Committee. Approval was granted by both institutions (Appendices 1 pg. 282 and 2 pg. 284). No inducements were offered to participants[10].

Whilst the project is inherently reciprocal, in that my findings will enhance the built environment for students, this may not be overtly apparent. The findings may not be available or implementable before the actual participants graduate, meaning the reciprocity is for the student body in general rather than to an individual student.

Given my employee role in the HEI from which the participants were recruited, it was crucial to preserve the highest standards of ethical research (Roberts et al., 2001). Members of my team deliver student wellbeing and welfare services whilst others (within Registry) are responsible for managing disciplinary and appeal processes. One of the powers invested in my office is to place students on immediate Leave of Absences

[10] Declaration: Funding for my doctoral studies and a small bursary to cover incidentals and research costs i.e., transcription, has been provided by my employer.

or Suspensions if a situation arises. It was essential participants were insulated from my positionality before, during and after the activities of the study, in case of historical or future connections. Students as participants in this study may have noted the inherent asymmetry and felt they had much to lose by engaging in research evaluated by me.

Guillemin and Gillam observe that it is in the day-to-day practice of research that *"ethically important moments"* (2004) occur and the researcher is faced with the decision about how they should respond. My investigation of professional identity formation and by extension the "professionalism" of students, magnified this challenge. A number of key decisions were made to ensure ethical practice was maintained and are discussed below.

Informed Consent

It would be explicit in all communications that I was the researcher but given my positionality all recruitment material was designed to limit any perception of coercion. The initial email invitation to students would be sent from a third-party email address, the Office of the Gatekeeper. My role as insider-researcher was explained and transparent from the outset. Within the study and the possibility that "*precise lines of analysis emerge as the data accumulate*", it was recognised a tension may arise with the requirement to fully inform participants of the research purpose prior to commencement and a strategy of "*reasonably informed consent"* was adopted (Cohen et al., 2007, pg. 53).

On the observation days, particulars of the study would be displayed proximally (A4 sign), and information sheets made available to any passer-by requesting details. Information about the observations and the study would be displayed on the information screens across the building. Contacts would be provided for those seeking more details, as formal written consent from all the people utilising the spaces was not

possible. My passive overtly conducted observations avoided disruption or distress to the setting (Murphy and Dingwall, 2007, Pope and Mays, 2009).

Anonymity and Confidentiality

In pursuit of a pervasive culture of integrity, the FG design evolved over the proposal phase. Originally, I was going to facilitate the FGs, however, the potential risk to students discussed above of unintended consequences, necessitated removing myself to genuinely create anonymity for participants. The recruitment of a neutral skilled facilitator, discussed further in Chapter 4, thus protected participants completely. Respondents to the FG recruitment email were directed to a Qualtrics online survey (Appendix 3, Consent – Qualtrics Survey, pg. 285), used by MU at the time due to the pandemic, where I had created the Patient Information Sheets (PIS). In this way consent was achieved. Descriptors of anonymity and confidentiality were included in the PIS, alongside data security, and a clear declaration that non-participation or withdrawal, including timescales, would have no negative consequences on their studies.

Reports from Qualtrics, advising of new consenting respondents were created by me and went automatically to the research facilitator for follow up. The facilitator contacted these respondents directly - as possible participants - to organise and confirm arrangements. The facilitator then moderated the FG. In this way, there was no contact between me and participants at any stage. Anonymity and confidentiality were reconfirmed at the beginning of each session. The original MP4 files were stored on OneDrive in the Gatekeeper's office, prior to transcription, and then deleted without ever having been reviewed by me. Names were removed from the transcript prior to my receiving the text version.

Any photographs of participants during the observations were taken to minimise the ability to identify individuals. If faces were visible, these were “inked” using MS photo. Photographs were deleted from the phone used and are stored securely on the MU OneDrive.

Other Ethical Considerations

The FG topic guides (Appendix 5 pg. 291) gave due consideration to the possible sensitive nature of disclosures, observations and participants vulnerability (Cohen et al., 2007, Ch. 2 pgs 51 -77). The welfare of the participants was paramount throughout, and they were treated fairly and with respect, appreciating their generosity for giving freely of their time. The facilitator had details of the institution’s free confidential counselling service and student assistance helpline to support participants’ disclosure of information requiring referral to support services e.g., witnessing others’ unprofessional behaviour, stress or anxiety.

Whilst assurances of anonymity and confidentiality were given, there was a risk within the FG setting of exposure amongst peers, resulting in possible marginalisation or isolation if differences were expressed and unresolved. In mitigation, the facilitator detailed the supportive behaviours and confidentiality expected of participants during and after the session. Support to a participant affected in this way - in the form of a follow-up and debrief - was agreed with the facilitator and built into the protocol. Participants were advised they did not need answer any question they did not wish, nor to join in discussions. Participants had the facilitator’s email in case concerns arose and they wished to contact them after the session.

Given the high levels of COVID-19 and lack of vaccine availability at the time, it would not have been ethical to request FGs occur in-person and they progressed on-line.

Observations took place as the COVID-19 campus restrictions eased and it was deemed safe for me to attend campus in my capacity as researcher rather than employee.

All notes, transcripts and recordings are stored securely and confidentially on MU OneDrive for the duration of the study and will be securely retained and destroyed in keeping with relevant protocols. Disposal will be by secure means in keeping with retention and disposal schedules.

In writing up the study and disseminating the work, attention was given to ensuring deductive disclosures could not lead to the identification of participants or individuals, which became pertinent in dealing with place of birth and nationality in Chapter 5.

Participants have been acknowledged and thanked for their participation in the study.

3.10. Summary

In this chapter I have relayed my research strategy and justified my data collection techniques. In summary, and reversing Grix's flow (2002) Figure 17 pg. 68, thematic analysis was selected to review data from focus groups and observations, which were underwritten by an ethnographically informed methodological approach. Conceptually, symbolic interactionism was the framework used, as my research sought to know how interactions between students within the built environment of a socially constructed world (campus of a university), impacted their professional identity formation.

This approach reflected my reality as an insider-researcher (Kenny, 2009, Floyd and Arthur, 2012) and my ontological and epistemic positionality. High levels of reflexivity and ethical awareness were demonstrated throughout as I devised and designed the research strategy, to explore and interpret these interactions. In Chapter 4, I report on the actualities of the project activity and the analysis undertaken, before presenting my findings in Chapter 5.

4. Project Activity

4.1. Introduction

In this chapter I detail the activities of the research project, including challenges encountered collecting the data. I explain any variations from what was planned in Chapter 3 and describe the intricacies of the research undertaken. The evolving situation of the pandemic is present throughout, and its impact on my actions is considered and discussed. The actualities of the data collection methods: five on-line focus groups, the observations, and their appropriateness in addressing the research question, aims and objectives, are presented. Data analysis and refinement follows, before presenting the findings and themes generated in Chapter 5, which are then discussed in Chapter 6.

A diagrammatic representation of the research is presented Figure 19 pg. Figure 19 Diagrammatic Timeline of Project Activities102. This takes account of two interruptions of study: the first due to workload during the pandemic and the second for family reasons. The remainder of this chapter works through those activities in sequence.

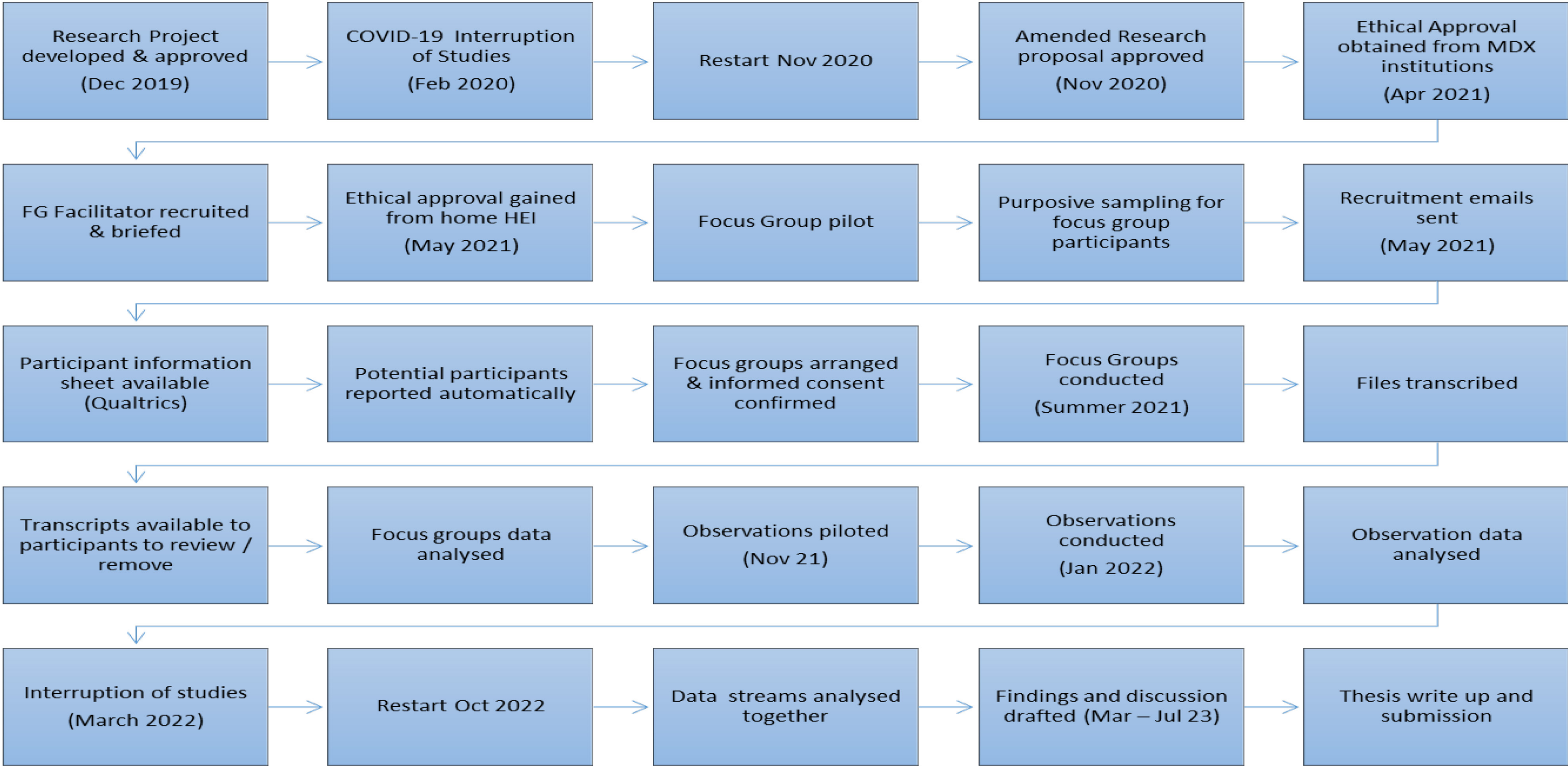


Figure 19 Diagrammatic Timeline of Project Activities

The Setting

The setting for this research study was described in Chapter 1 as an historically positioned but modern, research intensive university of medicine and health sciences, home to Ireland's largest medical school, alongside undergraduate[11] Schools of Pharmacy and Biomolecular sciences, Physiotherapy, and Physician associates.

As part of the DProf process my research proposal and project plan setting out the intent, aims, objectives and activities, was approved by a Programme Approval Panel in December 2019. The HEI of the participants, my employer, was supportive and fully aware of the research study (Appendix 4, Gatekeeper Agreement, pg. 290).

COVID-19

In late January 2020, warnings of the possible impact of the emerging novel coronavirus began.

In February 2020, the UoH began issuing regular communications to staff and students to assist with preparedness. Daily emails to students were initially issued in my name. Internal preparations were activated for a pandemic including completion of clinical assessments for final year students (McGee, 2021) and readying staff and students to work and teach virtually (Ralph, 2020).

In March 2020, when COVID-19 was declared a pandemic[12], the university officially switched to on-line teaching and assessment for the remainder of the semester (Duffy et al., 2023). When the UoH closed in March 2020, many of the messages for the

[11] Postgraduate schools including Nursing and Midwifery, Healthcare Management, Population Health, and Research, are part of the university but were not part of this research study.

[12] 'Taoiseach's full statement: "I need to speak to you about coronavirus"', RTE.ie (12 March 2020). https://www.rte.ie/news/coronavirus/2020/0312/1121849-taoiseach-full-statement-coronavirus-ireland/

arrangements being put in place were issued with my signature. These included schedules for the completion of final year teaching and assessments in medicine, pharmacy and physiotherapy, to facilitate the Classes of 2020 joining the workforce; moving to on-line assessments; devising and implementing policies for “Pass / Fail” assessments and many other changes to procedures and practices. In essence, my “back-of-house” role became visible to more students, such that by graduation in early summer 2020, many new graduates sent emails, personally thanking me and the UoH, for all the actions taken to support them during the period.

The UoH stayed open for teaching and clinical placements throughout the pandemic, albeit in a modified way including the adoption of strict social distancing measures and the creation of an in-house COVID-19 PCR testing capability. These tests involved taking a nasal swab initially and later a sample of saliva, from the students on university premises, which were then analysed in a UoH laboratory setting (De Santi et al., 2021, De Santi et al., 2023). This allowed the UoH detect the virus early, in contrast to antigen tests which could be used by individuals at home, creating higher levels of confidence and allowing students to continue to rotate through clinical placements.

Students in medicine, pharmacy and physiotherapy degree programmes, who were the participants in this study, became subject to these regular mandatory PCR tests, based on a number of factors including their programme schedule and the local clinical and public health advice at the time. The scheduling of these inhouse tests, follow up and support, and communication of whether students were cleared to attend placements, became the responsibility of my team. Whilst the majority of students were extremely compliant with the testing routine, some students missed appointments and needed follow up. Regular messages to student year groups, sub groups and individuals were issued from the COVID Control Admin Team (CCAT) and sometimes directly using my

name, particularly at the start of semester or other critical times, such as spikes in cases or in-person clinical examinations.

It was also compulsory for students to report their symptom status prior to attending, to record which clinical sites they attended and to upload those records. These were actively monitored and reported upon by the CCAT. Information from these activities was then compiled into weekly reports for UoH senior management and externally to government departments and local public health services as required.

Once the vaccine became available, the CCAT activities then shifted to assist with the tracking, reporting and follow up of vaccination rates amongst medicine, physiotherapy and pharmacy students, as required by the health service and other clinical sites. This resulted in me personally discussing the impact of non-vaccination on academic progression with individual students, as access to clinical sites was dependent on acceptance of vaccination.

My additional responsibilities, including leading the CCAT, active monitoring and interventions, altered my engagement with students from before the pandemic. It could be perceived by students in a variety of ways from supportive through to controlling or invasive. Breaches by students of the UoH COVID-19 requirements were pursued through the university's disciplinary proceedings and sanctions issued, the processes for which were also managed within my department.

In parallel, the UoH had implemented an online, remote proctored assessment tool for all written assessments. These assessments were created by yet another team within my department, for students registered to medicine, pharmacy and physiotherapy, the participants in this study. Any academic integrity concerns observed during assessments were also investigated and managed by my teams.

My "day job" swelled to absorb these aspects of the response operations drafting and implementing policy changes for academic affairs, teaching and assessment; and ensuring quality assurance and governance of changes was maintained, tracked internally and reported externally.

My workload increased significantly, and I requested an interruption of studies.

As a result of these changed circumstances, and conscious of the unique position an insider-researcher inhabits (Costley et al., 2013) to usually investigate an issue from a basis of trust and with ease of access and information available, I was concerned how I would be perceived by students. In essence that my name on many of the mandatory missives and instructions associated with the pandemic control and assessment processes, could be counter-productive to building trust and achieving the research aims and objectives.

Meanwhile, preparations for the academic year 2020/21, were created by working in partnership with the student body (Machikan and Marmion, 2020), and the university adopted a modified HyFlex[13] approach (Beatty, 2019) to teaching and learning. Student learning communities (bubbles) were created and assigned "home rooms" with dedicated days on-campus (Strawbridge et al., 2022). Specific buildings were assigned to certain year groups and investment was made in a satellite campus, established in a sports and conference venue approximately 5km away from the main campus[14]. This meant the majority of campus was not being used as intended or as the study would have originally expected. Specifically, N-Building could only be used by first-years and only at set times and days, resulting in a vast reduction in usage and occupancy. Controls

---

[13] HyFlex is a combination of "hybrid" and "flexible". Sessions are delivered synchronously online and in-person, and learners choose with which to engage. UoH students were assigned which modality for core didactic elements alternatively, with in-person conferring the right to attend campus on those days / sessions.

[14] Croke Park News and Events (Accessed 10th March 2023)

on social distancing meant closure or reductions in other services including catering, student societies and events, gym and sports facilities, in line with public health requirements and best practice (Wrighton and Lawrence, 2020). This further reduced animation and activation across the buildings.

Clinical attachments, although modified, were maintained throughout the pandemic (Milligan and Langhe, 2020). The simulation suite on levels 3, 4 and 5 of N-Building, was heavily used by all clinical programmes[15], as a safe alternative to bed-side clinical learning (Cassidy et al., 2021) with learners arriving for specific timetabled slots and then required to leave. The impact of COVID-19's various waves and associated changes in public health controls are woven throughout my findings and discussion in Chapters 5 and 6.

Whilst extremely proud of the efforts of the UoH and the team's efforts to support students to get one step closer to graduation, I was conscious from the UoH internal student feedback surveys that some students found the approach taken - the testing, tracking, reporting and follow-up - invasive. Their lived experience, use of campus and professional identity formation during this time, needed to be explored and unravelled including any ambiguities, but, I needed to ensure that my own positionality within the organisation did not become a barrier, either because of my own unconscious biases or participants perceptions. Stahl and King (2020) discuss the importance of bringing one's passion and excitement to bear within qualitative research, but go on to state

> *"it is also necessary for researchers to monitor the influence of their values and passions. Being immersed in the research with their values creates another level of trust, providing researchers are able to communicate their entailment in their own research"* (Stahl and King, 2020, pg. 28).

[15] Simulated solutions in response to the pandemic (accessed 19/03/2023)

I had been passionate about the developments on campus. I had been excited to review and consider if and how these intersected in the learners' lived experiences as they became health professional students. I was passionate about keeping the UoH open and students on track to join their professions during the pandemic.

But the landscape, and my role in it, had changed because of COVID-19, and in late 2020, with no end in sight, I took stock, and drafted and submitted a revised research proposal.

Revised proposal

Coming back from the interruption of studies, I reflected on the revised access and usage of campus by fewer and distinct groups of students.

My investigation of PIF, how learners use campus spaces and by extension uncovering the meaning ascribed to their interactions with each other and built-environment had to alter in response to the pandemic. The additional restrictions – social distancing, room capacities, quarantine, testing regimens – impacted how campus was used, but it also impacted my employee role, student-student and student -staff interactions, and hence students' perceptions and meaning. In considering how to progress with the research, it amplified the need to ensure engagement with participants proceeded ethically. Even before the pandemic, all possible student participants commit to the institutional definition of professionalism, codes of conduct and associated disciplinary procedures. As the employee I was responsible for their oversight and their implementation which feeds into my tacit knowledge as a research-practitioner.

During the pandemic UoH regulations were added to in a myriad of ways including mandatory daily logs, COVID-19 testing, and assessment protocols, as the CCAT team were added to my department and carried out their worked in an interventionist way.

There was therefore an increased risk that students may view the asymmetry and tension between my "employee" role and their position as students as too great, and

have been concerned about participating in research about professional identity formation and their use of the campus, conducted by me.

With no end to the pandemic in sight, the amended research proposal was submitted and approved in November 2020. The project title, research question and ethical stance remained unchanged. The revised proposal reconfirmed the research question as: (*How) Is professional identity formation in health professionals' education influenced by the built environment on campus*?

The aim was:

- Investigate the development of professional identity through the voices of the students.

And research objectives confirmed as:

- Examine how variations in the built environment influence professional identity formation and development.
- Explore the interactions of diverse and multi-national learners with the built environment.
- Based on insights from existing literature explore how learners interact with the built environment in relation to Professional Socialisation.
- Assess the impact built-environment design has on reinforcing or disrupting pre-existing personal identities.

The aim of the study continued to be to understand the social behaviours, practices, norms and interactions of learners enrolled in primary degrees leading to the award of medicine, pharmacy or physiotherapy, in other words, students studying to become doctors, pharmacists or physiotherapists at the UoH.

Chapter 4 Project Activity

Maintaining an ethnographically informed research strategy allowed for the observation of modified daily routines, conducting of interviews and collection of field notes to generate and gain an holistic understanding of the social dynamics at play.

In one sense, my new employee responsibilities as a result of COVID-19 had moved me closer to the daily worlds of students, their challenges in complying with these additional requirements, and the impact of a pandemic on them, as I was involved more directly in email communications between students and team members, as we sought to respond to and address a unique set of challenges.

By recommitting to an ethnographically informed research strategy, I maintained a focus on the provision of rich, detailed descriptions, in order to offer insights and understandings. The systematic study and observation of students studying medicine, pharmacy and physiotherapy would be through my direct engagement with their world, as it played out during the pandemic. Their daily lives and activities would be studied by interviewing and observations, backed up by my deep tacit knowledge gained by working closely with students and staff in devising and implementing pandemic policies for living, learning, teaching and assessment on campus.

The interviews would provide data on their beliefs, customs and actions during this period, whilst field notes would document their actions and interactions, and my emotions and reflections, throughout the period (Atkinson et al., 2001).

As discussed in Chapter 2, Professional Identity Formation (PIF) involves personal and professional development shaped by social, cultural, and institutional factors (Cruess et al., 2015, Sarraf-Yazdi et al., 2021, Mount et al., 2022). An ethnographically informed approach allowed the exploration of the lived experiences of students as they uncovered and faced challenges and were shaped by these factors. It also enabled an interpretation of how socialisation and the use of campus buildings can contribute or inhibit to the formation of that culture, including identity negotiation, as they balance

personal values, expectations and the demands of being a student on the way to becoming a health professional.

In this way the interactions, challenges and stresses, faced during their studies, alongside coping mechanisms, support systems and other factors would be captured by maintaining an ethnographically informed approach throughout the data collection methods (Atkinson et al., 2001).

PIF is a multifaceted process (Sarraf-Yazdi et al., 2021) and hence my adoption of this research strategy during the pandemic assisted in gaining a rich and comprehensive appreciation of these processes, by providing a deep and nuanced understanding through the gathering of personal experiences, beliefs, values, stories, motivations and aspirations, and providing rich insights into their own development journey situated within a societal context, whilst the pandemic waxed and waned.

Taken together, this would enable me to interpret and contextualise (Geertz, 1973) the experiences and interactions within the university community as I sought to maintain an holistic, albeit focussed approach. Given my positionality, before, and during, the various phases of the pandemic, and hence my own biases and passions, reflexivity throughout was my touchstone.

The data sampling and gathering altered to match the new reality, given the building and campus were controlled in a way which could not have been envisaged at the outset. In making these changes, I determined researching students' interactions in a physically distanced and controlled space was worthy of study, given the importance or professional socialisation in the literature. However, the longitudinal nature of professional identity formation, which was to have been explored by including participants at multiple stages of the student life-cycle in FGs was challenged, given they had restricted access. This was recognised and removed in the resubmitted and reapproved research proposal. The data collection methods were revised such that:

- The FGs would be on-line using MS Teams rather than in person.
- Recruitment of participants for FGs would be from new entrant students only rather than across the years of registered undergraduate students.
- A minimum of two and a maximum of four FGs, comprised of new entrants, would be conducted. This was instead of three originally, i.e., one FG each of first years, mid-point and final years.
- Data collection from FGs could commence when ethical approval was granted but observations could commence only when it was safe to do so given the ongoing prevalence of COVID-19.

Participants for the FGs were purposively sampled. In medicine, this included students from first year graduate entry (4-year duration) or direct entry (either 5 year or 6-year duration) programmes, who all had access to a building on the main city-centre campus. This created three cohorts: Graduate Entry Medicine students assigned M-Building (GEM1); Foundation Year (FY) students as new entrants and registered to the six-year medical programme, assigned H-Building (FY MED); and First Year, Direct Entry Medicine Students who may or may not have attended FY the previous year and were assigned to N-Building (DEM 1) (Figure 46, pg. 306). Pharmacy students and physiotherapy students in first year were included, also using H-Building.

Once the revised research proposal was approved, ethics approval from Middlesex University Health and Social Care Research Ethics Committee was gained in April 2021 (Appendix 1, Ethics Approval - MDX, pg. 282). Within my home institution, information including considerations of GDPR and the requirement for a Health Research - Data Protection Impact Assessment, were completed and submitted for approval to the Research Ethics Committee.

Approval was granted in May 2021 (Appendix 2, pg. 284).

During this period of gaining ethical approval (Spring 2021), a new spike in the epidemiological profile of COVID-19 occurred Figure 20 pg. 114 (Source: Government of Ireland 2023), resulting in students in the early years of the programmes being allowed to complete the second semester fully online, rather than HyFlex (Beatty, 2019). This further impacted potential participants' usage and attendance on campus.

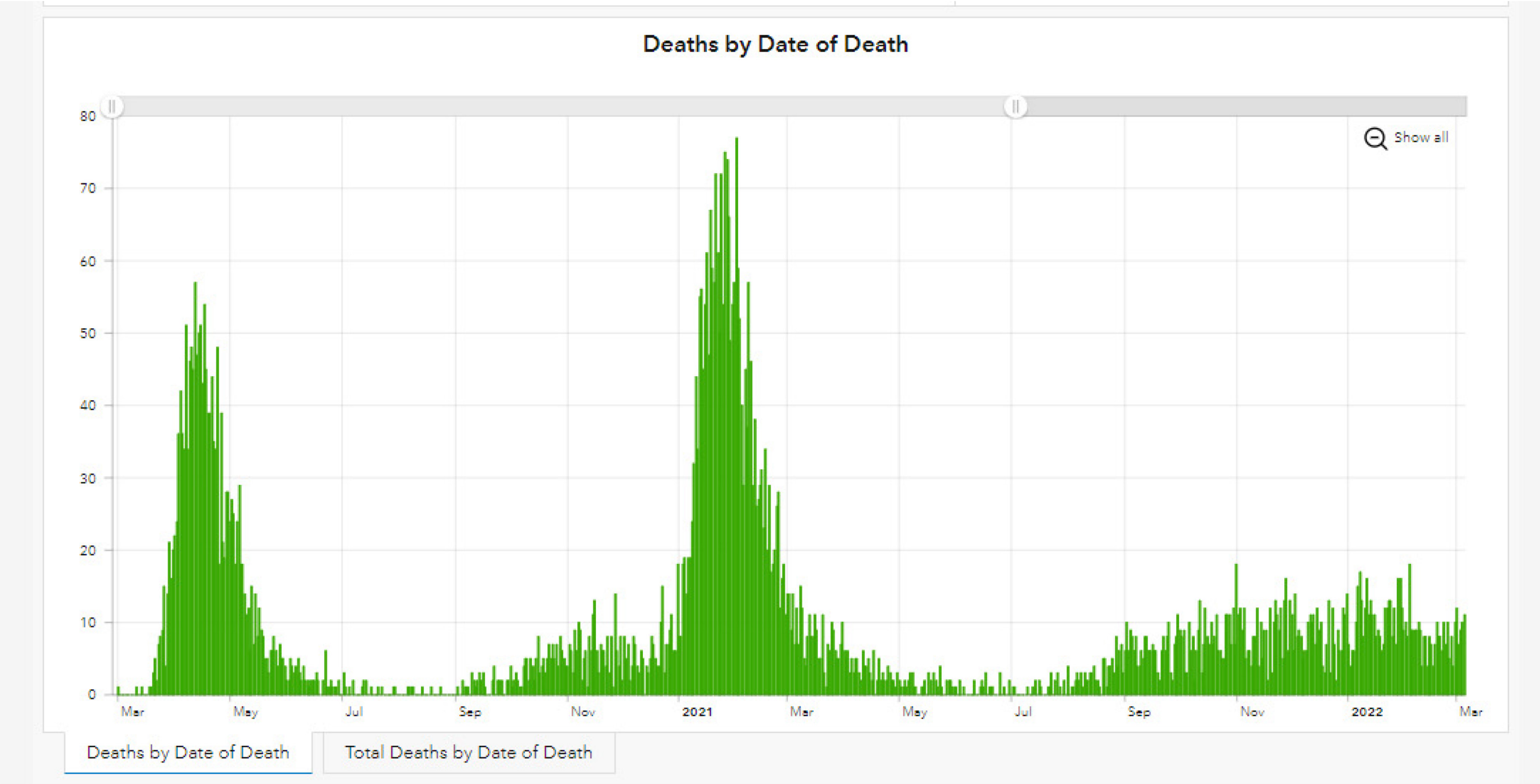


FIGURE 20 DAILY DEATHS IN IRELAND FROM COVID-19 DURING THE STUDY (SOURCE: GOVERNMENT OF IRELAND, 2023: ONLINE)

By academic year 21/22, when the observations took place, teaching was still being delivered HyFlex, social distancing and masks were compulsory on campus. Restrictions on building usage began to be relaxed, although not yet to pre- or post- COVID-19 levels. The range of students with access to campus during the observation phase was therefore different: students from all years and all programmes could attend, rather than those involved in the FGs, which had been confined to new entrants / first years only.

Changes during the pandemic in the UoH learning, teaching and assessment environment, and my role in the administration of these services, required a highly reflexive review of my original research project proposal, alongside active discussions and support of my supervisory team. The study was ethnographically informed, in that I am immersed in the environment and wanted to study the culture within the community. However, in order to ensure participants anonymity and freedom of expression, the design evolved, particularly with respect to gathering data through Focus Groups.

4.2. Focus Groups

In the revised research proposal, I had planned between two and four FGs with at least 6 – 8 participants each. Recruitment proved challenging, in part down to eligible participants having already finished the academic year, and, by virtue of the pandemic, being dislocated from the university. Instead, five FGs were held in June and July 2021, albeit with fewer participants per group. FGs are not about the number of individual voices, but rather about the ability to compare between voices and between groups (Barbour, 2018) and this number was deemed sufficient in addressing the research question. The next section deals with the activities required to complete those five sessions.

In Academic Year 2020/ 2021, there were a total of 778 students who were eligible to participate in the FGs, applying the criteria described previously, namely they either entered the university as a new student (75%) or progressed from a foundation programme (FY) in the prior year academic year (25%).

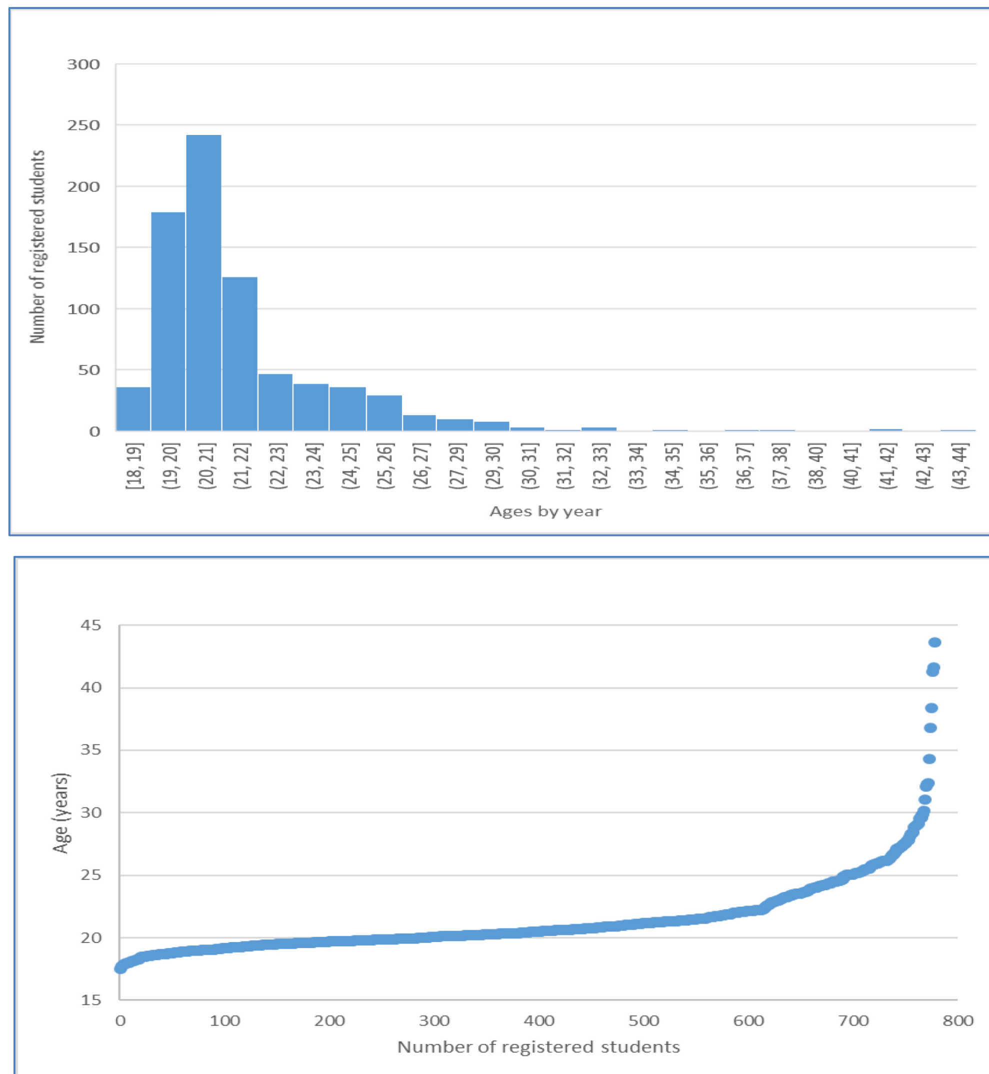


FIGURE 21 AGE PROFILE OF ELIGIBLE STUDENTS

A wide age range existed, Figure 21 pg. 116, with mature entrants present in all programmes. Students under 18 were ineligible for the study, bringing the eligible number of participants to 771. The average age at the time of the first FG was 21.3 years, although as expected average age in the GEM programme was higher TABLE **1**.

TABLE 1 AVERAGE AGES (YEARS) OF ELIGIBLE PARTICIPANTS BY PROGRAMME

	DEM 1	*FY Med*	*GEM 1*	*Pharm*
# Students	386	179	87	70
Min Age years	17.5	17.7	22.1	17.8
Avg. age Years	21.0	20.1	25.4	20.5
Max Age years	41.7	30.1	32.4	43.6

Nationality and domicile / location

A current limitation of the university student record system is that it does not record ethnicity, but rather captures nationality and domicile[16]. Participants were not asked their ethnicity as no comparison would have been possible, thus creating a limitation in the study. Of the 771 eligible FG participants, 46 different nationalities were noted: 203 students (26%) were from eight countries in the EEA and Great Britain, predominantly Ireland; and the remaining 568 (74%) hailed from the rest of the world (RoW), with the top 5 cohorts being Kuwaiti; Canadian, Saudi Arabian, Malaysian and American. Hosting the FGs on MS Teams ensured participation from those who otherwise would have been excluded due to location, having returned home to complete all or part of the second semester on-line (COVID-19).

[16] Country of residence immediately prior to commencing the programme of study.

Data collection by means of a facilitator

In keeping with the ethical stance adopted, and discussed earlier (Chapter 3.9 pg. 96) I decided that a proxy was required to collect the data and facilitate the focus groups. This decision was considered and approved by the research ethics committees.

Leveraging my positionality as an insider-researcher, which gives a deeper understanding of institutional opportunities and constraints (Mercer, 2007), I approached a colleague (a Chair of a Department, and UoH Deputy Dean) as soon as I gained ethical approval from the MU Health and Social Care Research Ethics Committee to use a proxy for the data collection. This first approach was made in April 2021, when I requested her assistance in the identification of a possible focus group facilitator (FGF). My colleague is an experienced qualitative researcher, used to working with behavioural and longitudinal data sets, who in addition to significant disciplinary expertise and publications, also publishes in the field of health professions and medical education, including most recently on professional identity formation and professionalism.

In our discussions I set out my research strategy and discussed the ethical considerations given my professional context and my employee role. In particular I set out the need to protect participants from my enduring responsibilities for student disciplinary matters, whilst generating data separated from the increased control and compliance being exerted on students during the pandemic through my management of the COVID-19 administration team.

Through these discussions, my colleague identified and suggested a person. This person had completed a PhD in the area of youth mental health at the UoH, and was currently employed as a post-doctoral fellow across the academic Depts of Psychology and Psychiatry. In considering him as the focus group facilitator (FGF), I appreciated he had his own tacit knowledge of the culture, student life, wider institutional landscape, and the campus built-environment within the UoH, but was not involved either with the

likely participants directly i.e. through teaching; or with my role as employee, other than through this research. In this way, his neutrality from my positionality and my research was confirmed.

At my request, initial contact was made by my colleague. The FGF confirmed their interest and availability, and I set up a meeting with them. For the purposes of this study, I have assigned the FGF a pseudonym "Connor".

I arranged an MS Teams call with Connor in late April 2021 to brief him on my professional doctoral study and begin training. I organised a number of subsequent meetings and discussions during May 2021, held on MS Teams due to the prevailing pandemic, and had a number of email exchanges, all designed to ensure Connor was able to carry out the role of facilitator, and ultimately to ensure the generation of verbatim transcripts that would allow me to interpret the data and address the research aims and objectives (Barbour, 2018, pg. 94). I provided Connor with the research proposal; sections of the MORE form, and a curated selection of the key literature (Monrouxe, 2010, Goldie, 2012, Cruess et al., 2015, Sharpless et al., 2015, Hawick et al., 2018, Jowsey, 2018, Temple, 2018). In curating this selection of papers, I was consciously shaping our discussions and subsequent research, as well as assisting Connor's understanding of and alignment with my own ontological and epistemological position and research strategy.

In this way, the actions I took to identify and appoint Connor as the FGF mitigated the risk and minimised the influence that what the participants would say was overtly influenced by my presence. I suggest this layer of separation was necessary to avoid undesirable consequences for the participants and that through the appointment of Connor, has contributed to building trust in the research process. Connor facilitated an unfiltered capturing of the voices of the students and hence the overall trustworthiness and ethical nature of my approach was enhanced. Given my altered positionality from

inception of the study to what could be perceived as a more authoritarian figure during the pandemic, my appointment of Connor as the FGF helped mitigate the risk of *"Informant Bias – 'Everyone knows what she wants us to say' "* (Mercer, 2007, pg. 7) which could have arisen had I conducted the FGs myself.

Maxwell (2012) however points out that the researcher is always a party to the interview and the situation:

> *"While there are some things you can do to prevent the more undesirable consequences of this (such as avoiding leading questions), trying to minimize your influence is not a meaningful goal for qualitative research. As discussed previously for bias, what is important is to understand how you are influencing what the informant says, and how this affects the validity of the inferences you can draw from the interview."*
>
> (Maxwell, 2012 pg. 135)

My actions in appointing Connor recognised this, by leveraging his own tacit knowledge and experiences as a student of UoH, to assist in ensuring my research strategy remained ethnographically informed, enabling him to act for and as me in this study, commencing in May 2021.

The appointment of a FGF brought with it new challenges, described by Stahl and King when they state

> *"One can learn so much from another's experience, and from a good story. Yet, the degree of trust one has in the person telling the tale has much to do with the degree of trust attributed to the telling"*
>
> (2020 pg. 26).

The attention I had given to the recruitment, briefing and debriefing of the FGF, built trust between myself and Connor, and ultimately ensured the tales told were those of

the students, and their voices remained unfiltered. Ensuring the sessions were recorded and then professionally transcribed verbatim supported this preservation of the participants voices for my analysis and interpretation.

The use of a Qualtrics online survey to secure informed consent and manage the participant pool are detailed in Chapter 3 (pg. 98), which worked well, once reports had been set up to automatically inform the facilitator of new respondents.

During the entire process I found Connor very supportive, offering words of encouragement, and in addition to diligently following the protocol and completing the FGs, provided me with what I perceived as much needed near-peer mentorship, having recently completed their own doctoral studies, for which I am extremely grateful.

Designing, piloting, and implementing the topic guide

In accepting the premise that knowledge is "*generated between humans often through conversation*" (Cohen et al., 2007, pg. 349), I had selected FGs as the means of data collection to generate interaction between participants, produce shared understandings and collective descriptions of their experiences. When designing the topic guide, the content and flow were structured to link to the research question, aims and objectives, and to facilitate interaction (Appendix 5, Focus Group Guide, pg. 291). The topic guide's main questions "*created scaffolding*," and additional explorative queries (Hanson et al., 2011) were presented to facilitate follow-up. The topic guide utilised insights from studies on professional identity formation and space / place (Nordquist et al., 2011, Goldie, 2012, Shochet et al., 2013, Cruess et al., 2015, Skochelak et al., 2016, Hawick et al., 2018). The facilitator was invited to give prompts and ask supplementary questions, which were in the topic guide. I recognise these were provided mainly for my comfort, given the sessions were being moderated by Connor.

I shared drafts of the guide and discussed these on MS Teams calls and by email with Connor. Clarifications were sought and given, suggestions and amendments were made as a collaborative process. I initiated a pilot using the revised draft with the facilitator and two colleagues. Undertaking the pilot and the process of review and refinement was important as further changes were made. In particular it facilitated a better design, helped expose the use of jargon, established if the questions and guide would assist in stimulating the required conversations, and mitigated failure (Barbour, 2018, pg. 85 and pg. 172). The final guide was further tested by Connor with one of his colleagues, which aided his flow and timing. One weakness was the pilot was not tested with students, but rather with colleagues who had many years pre-COVID-19 experience of the campus, meaning different responses were elicited from the participants.

One of the observed limitations with MS Teams was the number of voices that could be heard at any one time, and it was decided to limit the group sizes to 4 maximum, rather than the 6 to 8 participants envisaged even in the revised proposal. This was particularly important because when using MS Teams only one voice at a time can be heard, and so the interaction, ebb, and flow and “talking over” which occurs in real-life conversations is not possible. It was agreed that FGs would proceed as long as there was a minimum of two participants.

Overall, the pilot and refinements were extremely useful as a number of items were amended which influenced the flow, success, and duration of the sessions.

Selection and recruitment of participants

The criteria for selection were purposive. Participants who had access to the campus but who chose to attend remotely were not excluded. All students, n=778, were emailed using standard email lists by me through the Gatekeepers Office. The first email issued 30th May 2021. Posters were not used to recruit participants to support a more

sustainable and green campus and given the sparsity of eligible students on campus with the timing of recruitment. Between the initial email and the 4th of June, eleven responses were received. A reminder email was sent on the 4th of June to the same groups of students, resulting in an additional 10 responses. One further response was received between 11th and 18th June. Follow up emails were sent to the Year 1 students in pharmacy and physiotherapy, and to the GEM 1 students on June 24th, as they were underrepresented at this stage (Appendix 6 Emails to participants, pg. 290). Only two additional responses were received between the 18th of June and the 9th of July.

A sampling framework included in the research proposal, was relaxed and then set aside (Somekh and Lewin, 2011, pg. 66) due to recruitment challenges experienced. Connor followed up with participants ensuring informed consent, and he was supportive and flexible in arranging dates and times to suit availability. Significant efforts were invested to facilitate students who had returned home and were in differing time zones.

Once participants were selected, it had been intended that additional characteristics would be considered e.g., mature and graduate entrants; medicine only; other health professions programmes; with the aim of creating a useful basis for inter-group comparisons (Barbour, 2018, pg. 70). In reality, given the number of respondents, the main driver was availability and location / time zone. Although attempts were made to over-recruit to each session to allow for no shows (Barbour, 2018, pg. 71), this was not possible. No-shows resulted in the cancelling of one focus group entirely. In total, 5 FGs ran, with 13 participants. The shortest FG lasted for 51 minutes, whilst the longest were two FGs that lasted for 67 minutes each, and in total over 300 minutes of recording were transcribed verbatim.

Activities involved in the Focus Groups

All FGs were arranged and run by Connor setting up calls on MS Teams. Recording was through MS Teams and was automatically saved as an MP4 file to Microsoft Stream. Concerns in relation to participant confidentiality arose, as participants could go to MS Stream, access the recording, download, and share. Working with colleagues in the I.T. Department and accessing MS Office training resources, I devised a protocol, resulting in participants' access to the chat being removed at the end of the FG. This was trialled prior to the first group. Participants were advised to contact Connor by email if required for any reason afterwards. At the start of each FG, participants were requested to keep their microphones and cameras on for the duration to aid with non-verbal cues and group dynamics.

The spread of FG participants and actual numbers are presented in Figure 22.

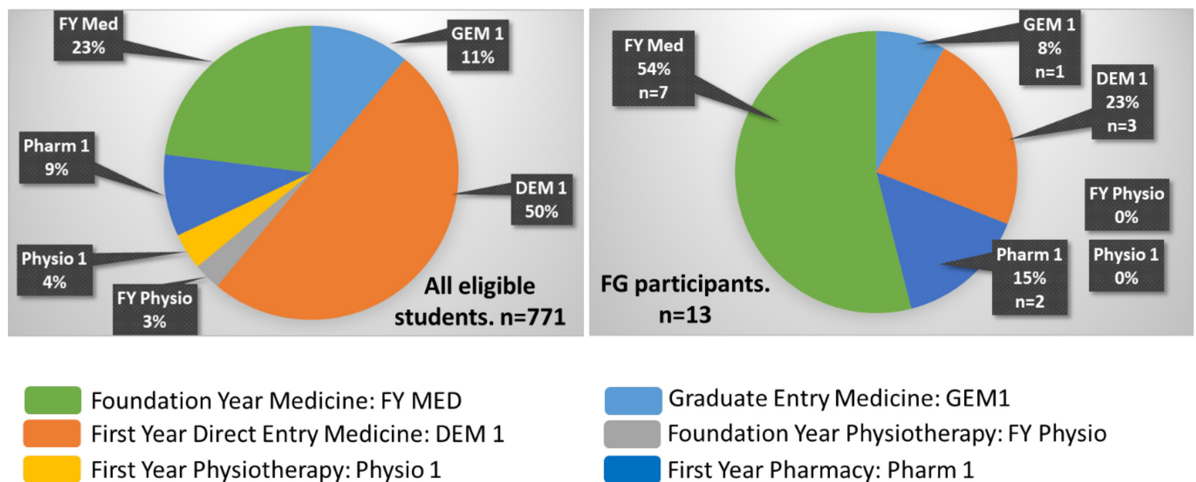


FIGURE 22 DISTRIBUTION OF ELIGIBLE STUDENTS AND FG PARTICIPANTS BY PROGRAMME

Despite some gaps, namely no physiotherapy students, I determined these were sufficient to address the research question, aims and objectives. The participants had experience of the campus and were beginning their journey as health professional

students. The benefit of qualitative sampling is "*to reflect the diversity within the group or population under study rather than aspiring to recruit a representative sample*" (Barbour, 2018, pg. 69). My FGs were for qualitative research, rather than for market research, and the need to uphold any "*notion of representative sampling*" (Barbour, 2018, pg. 11) of the population was not required, given the theoretical framework underpinning the research.

During the first four FGs, there was one student who was ill and unable to attend; one no-show and one cancelled at late notice. The research facilitator attempted to reschedule these three students into one new group, given compatible time zones, but this proved impossible. Two other students who had expressed an interest by completing the consent questionnaire did not respond to either the first or follow up emails and were excluded. It was at this stage that the follow up emails (June 24th) were issued. A fifth FG was scheduled and completed successfully, but a sixth was cancelled due to no-shows. Attempts to reschedule were not successful.

Post Focus Group activity

At the end of each recorded session, Connor thanked participants and advised them how to withdraw if wished, or review transcripts for validation purposes. He completed the following actions: 1) participants were removed from the chat; 2) the recording was saved, downloaded and deleted from MS Stream; and 3) recordings were sent via OneDrive, to the Gatekeepers Office, where they were stored securely prior to transcription.

There were no concerns raised in relation to student wellbeing or distress after the sessions, although signposting to services was available.

Transcription. At the time of data collection, automatic transcription was not yet enabled on the version of MS Teams. Even if it had been, the quality of the transcription

generated by MS Teams, whilst helpful to aid recall, would not have been sufficient given the sessions were conducted by the facilitator, and the accuracy of capturing the participants exact words was essential to me as the researcher.

In keeping with the ethical stance adopted and commitment to anonymity, I did not transcribe the FGs. An external transcription service organisation was selected with experience of research across the higher education sector. The MP4 files were uploaded using their bespoke secure file transfer system for verbatim transcription. The text files were available to download using the same secure system. Using this service preserved the ethical stance adopted, given the risks of possible identification for participants during or after the study had I transcribed them myself. This process, whilst ensuring complete anonymity of the participants, is a limitation of the research design. Having not been present, not being able to hear the inflexions and tone of the participants voices, or to spot body language may lead to incorrect interpretations (Barbour, 2018, pg. 63).

The switch from in-person to on-line FGs limited the free-flowing dialogical discussion which is usually a feature (Somekh and Lewin, 2011, pg. 63) but was restricted by MS Teams technology. It did alter flow and overlaps, and there are smatterings of lost dialogue where the recording was unclear, or participants were overspeaking. However, it mitigated a perceived limitation - the production of noise when speakers talk over each other - described by Barbour as "*data that it is hard to order and attribute to individual speakers"* (Barbour, 2018, pg. 19). Ultimately this aided my analysis by allowing each voice to be clearly heard and the interactions between participants was apparent in the transcripts. Once the interviews were transcribed, a copy of each transcript was available to the participants to review, although no participant opted to review the transcripts.

The transcription service was asked to "*identify the participants and anonymise the data set for names and places*." In the initial return of transcripts this removal of places included both countries of origin and the names of buildings involved in the study. This was identified upon reviewing the transcripts as a diminishing factor in the data. This error in my briefing of the service provider was rectified and the transcription service was asked to re-include the places / buildings, for which an additional fee was payable. The final transcripts were provided in January 2022 and are stored on an MU password protected OneDrive folder. Original files have been destroyed.

4.3. Activity in carrying out the Observations

As noted earlier, public health advice continued to change, and on-campus constraints eased throughout academic year 21/22. There were less restrictions on building usage and in particular, all students, from all years and all programmes had limited use of the main campus buildings. Social distancing and capacity limits were still in place, and masks were required. Campus COVID Officers and university security staff enforced requirements. The range of students with access to the city centre campus during the observation phase increased, and the range of events being conducted in the buildings was more varied than the period when the FGs took place. The beginnings of a "winter wave" in November 2021 caused some ripples of concern and internal management discussions, but the already significant testing and other controls in place (De Santi et al., 2023) coupled with high vaccination levels (as all students were health professionals) and the use of proctored on-line assessments, were deemed sufficient protective measure to allow campus and associated activities remain open. Thus, this was the context and situation I would be present in as I made a "*record of one's impressions*" (Somekh and Lewin, 2011, pg. 131) of what was happening within N-Building.

Designing, piloting, and implementing the observations

Having experienced the value piloting had for the topic guide, I undertook a pilot observation in November 2021, to test my ability to collect data aligned with the research question, using the three key aspects of physical, human, and interactional settings (Cohen et al., 2007, pg. 397). I learned the importance of setting out a naming convention for the key locations; the usefulness of a diagrammatic map; the difficulty in trying to record everything "free hand" in a notebook; and how or even if to record quantitative and demographic details. The pilot helped me make choices about what and how to record, given the symbolic interactionist positioning of the research and my aim to record patterns of behaviours (Somekh and Lewin, 2011, pg. 132). After the pilot I created a template with prompts to help record key data (Appendix 0,

Chapter 4 Project Activity

Observation Template, pg. 296). These were printed landscape, single-sided to facilitate additional notes, observations, feelings and comments.

Sitting quietly to one side of the main spaces, I matched the description of "*unstructured observation*" (Somekh and Lewin, 2011, pg. 133) and was conscious of my own socially constructed values, and of feeling conspicuous.

Photographs of the building and the users present during the pilot were recorded on a standard iPhone. Steps were taken to ensure no users of the spaces were identifiable when taking the photos. When reviewing the pilot data, any faces visible were inked out using Microsoft software, prior to the photos being stored on OneDrive, and deleted from the phone. No other recordings (either audio or video) were included in the ethics approvals, and none were taken.

These observations provided information about the usage of spaces by students in the evening and weekends i.e., when no "formal learning" was scheduled, providing insights at times of the day and days of the week when faculty and staff are not normally present. The pilot therefore started at. 18:00 on Thursday 25th November 2021, lasted approximately an hour and generated useful data which has been included in the analysis. This was consistent with the research strategy to explore what was happening away from formal teaching, learning, and the gaze of faculty, allowing a focus on professional socialisation within the built environment on campus.

In addition to testing the mechanics and logistics and making changes to these, the pilot was interesting personally as researcher and observer. It facilitated reflexivity before the other observations took place. I grappled with being a watcher. I felt I stood out even though I had changed from my normal work attire (Somekh and Lewin, 2011, pg. 133), and because of my age. Mask wearing on campus was compulsory, and this contributed to my discomfort as I was unable to fully connect with those under observation, i.e.,

smiling, when eye contact was made. These factors were not within my control to change, but rather the pilot reduced my levels of anxiety during the observations.

Scheduling of Observations

In selecting the dates for the next two observations, I was conscious this was another form of sampling. Having consulted the university's academic calendar, it was noted most programmes had nearly finished their teaching in November. Online proctored written examinations were the COVID-19 university standard, and many students had already or were shortly travelling home to complete end of semester assessments. I predicted that building usage was therefore likely to decline and no spike in library usage was expected for the remainder of November and December 2021.

In deciding to hold the observations after the winter holiday break, there were two key considerations: COVID-19 would not result in major restrictions to travel or clinical access, and some students may not yet have returned. In particular, holding them on January 14th (Friday) and 15th (Saturday) 2022 meant new-entrants and first years, the participant sample in the FGs, were still on winter vacation and unlikely to be present. At the time of the observations, the majority of students attending campus were final year or penultimate year students. The observations, therefore, unexpectedly, offered an insight into the experiences of more senior students.

During the Observations

Consent: During these observations it was not possible to obtain formal written consent from all the people utilising N-Building. Participants were in effect *ad-hoc*, entirely dependent upon which students chose N-Building on that day at that time. Instead, written permission was sought and granted from the Chief Librarian to display a notice on the digital signage screens advising users in the building of the research study (Figure 23 pg. 132) and A4 signage was displayed beside my location (Figure 24 pg. 132).

Situation and Physical Terrain:

One observation took place on Friday evening, starting at 17:00, with me walking the building from the 5th (top) floor through to the ground floor, and then from the basement -4 back up to ground, where I was based. It lasted for three hours.

FIGURE 23 PARTICIPANT NOTICE DISPLAYED ON BUILDING SCREENS

The primary space used as my base for the observations was determined by the pilot, which had been informed by the FGs, and the literature around the importance of socialisation and peers (Cruess et al., 2015, Sternszus and Cruess, 2016, Hawick et al., 2018).

FIGURE 24 NOTICES TO OCCUPANTS

The main base was on the ground floor of N-Building, which gave good views over the building entrance, lifts, stairwells, Learning Commons and cafeteria. The cafeteria (Dispensary café) was not serving, and the offering was limited to self-catering through microwaves, hot-water boilers, self-serve coffee and vending machines. When it wasn't possible or appropriate to take photographs, I used my journal to record additional observations. These field notes also captured how I felt during the observations, including:

> *'Have settled comfortably into this – have sign on table – info sheet on table. Much "less anxious" …. I saw sign pop up first time on big screen – wanted to make sure I was "legit" – but also invisible*.'
>
> (Research Journal, 14th January 2022)

This note captures the complexity of being the insider-researcher, and that the "tools of my trade", my DProf journal, observation template, etc. conferred a different status than senior employee. Although I knew I had the correct ethical clearance and was indeed legitimately in-situ, I was able to relax into my researcher role once I had spotted the message scrolling through a few times.

Towards the end of the evening period, (approx. 19:45) I commenced an ascending sweep of the building, recording observations and taking additional photographs as I went.

The final observation took place the following morning, Saturday, starting at approximately 09:30 and also lasted three hours. I completed a walkthrough of the building, from top to bottom, including the gym and basement areas. I decided to position myself in a similar position on the Ground Floor. At the end of the period of observation (approx. 12:30) I did a descending sweep of the building, having taken the lift to the 5th floor, noting student activity on the way. My field work diary notes the weather on the Saturday was '*miserable'*.

In total 7 hours of observations were undertaken, one hour for the pilot and two periods of three hours each. All observations were recorded *in-situ*, using the template (Appendix 7, pg. 296) and diary for notes and fragments, alongside photographic images and sketches capturing the settings.

Post Observations activity

The photographs taken were reviewed. Inking using blue dots was added to cover visible student faces. Photographs were saved to MU OneDrive and deleted from my iPhone.

Notes on the templates were reviewed and brief annotations made. Personal observations and feelings were recorded in my research diary. The completed templates were scanned and stored in a folder in MU OneDrive.

4.4. Ethical considerations arising during the project activity

Data collection

As previously explained, a facilitator was used in the FGs to ensure separation as researcher, from the person responsible for professional conduct issues in the institution. This proved to be valuable as during the data collection, FG participants shared with Connor details of a Thanksgiving party (October 2020), held during a time when social events were not allowed under COVID-19 rules. By the time the FG were held (summer 2021) the event had been dealt with through usual university procedures, including issuing of sanctions, which had been issued through my teams responsible for disciplinary procedures and COVID-19 control. The use of the facilitator provided an extra layer of protection for the participants and enabled them to talk freely.

Anonymity and Gender

During the DProf programme my awareness of issues of equity in higher education has grown, including challenges in assigning gender to others.

At the time of the research design, I consciously excluded capturing any sensitive personal data, including gender or sex, as these were not a specific part of the research question. This is not to say that sex or gender do not influence the usage of spaces (Alzeer, 2019) or the development of professional identity formation (Beagan, 2001,

Volpe et al., 2019) however these considerations were not designed to be part of this study.

The participants were not asked to indicate how they would like their gender to be noted in transcripts and subsequent report findings. Genders were assigned by the transcription service. Assumptions, based on biological or observable characteristics were made by me when recording observations. I became increasingly uncomfortable about this assignment given my growing awareness of issues faced by non-binary and transgender students, the problematic possibility of mismeasurement and misrepresentation (Cameron and Stinson, 2019), and the continued propagation of the notion as gender as a binary construct. Demographic comparisons using sex or gender are therefore not part of this analysis.

Culturally, geographically and gender-neutral appropriate pseudonyms have been devised for participants to aid the reader whilst centralising participants' voices and stories in the findings. Non-gendered pronouns are also used. This is discussed further in Chapter 6.

4.5. Data Analysis

Access to nVivo and other software packages was available, however immersion in the data through reading and rereading and then manual coding was preferred (Willig, 2021, pg. 69). Data was analysed thematically and reflexively (Braun and Clarke, 2006, Braun and Clarke, 2021) using the research strategy from Chapter 3 and the actual activity detailed below.

Focus Groups

Familiarisation with the data

The FG transcripts had been provided in MS Word. The transcripts were read many times and, in many locations, including in the car waiting for my son to finish after-school activities, achieving immersion and familiarisation. During these early readings, no formal coding was undertaken, but annotations were made, and thoughts jotted down of links to the research question and the literature, and possible connections to each other. In this way, I sought to become increasingly familiar with the contents whilst holding “space” around what it all might mean. After initial reading, line-spacing was

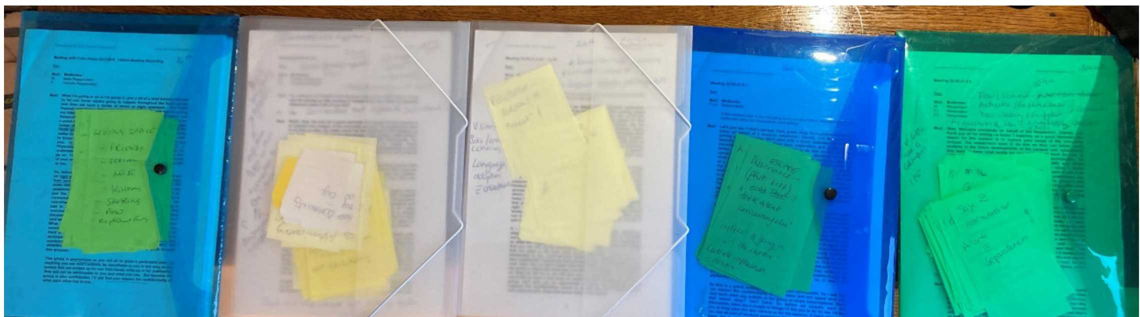


FIGURE 25 FOCUS GROUP PACKS

increased and transcripts printed single-sided, to ease annotation of items of potential interest to the research question. This repeated returning to the data also allowed identification of frequency of items, omissions and declarations of significance (LeCompte, 2000). On subsequent (re)readings, thoughts and ideas for further exploration in coding were jotted on post-it notes and left in-situ. Individual notes of my response to the data were logged, exposing potential bias and ensuring high levels of reflexivity. I read each FG actively, critically and individually, spotting things that were familiar and anticipated as well as looking out for any surprises. My lexicon used for the annotations and jottings evolved, becoming more common across the readings. Each FG and its associated notes were kept separately, Figure 25 pg. 136.

Coding

Given my epistemic approach I carried out the coding inductively, inclusively, and comprehensively, using open coding (Braun and Clarke, 2012). This ensured the participants stories and meanings remained central. First-pass systematic coding followed, then revisions and re-reading of the transcripts. The MS Word transcripts were converted into a table, participants' responses in the first column and then my codes added in the second column. In this way data stayed attached to the codes. I logged anything I thought could be analytically interesting in relation to my research question, trying to assign labels that would capture a core concept or take away. Comforted by Braun and Clarke's description and in common with many novice researchers my initial codes were predominantly semantic, with some sprinkling of latent codes and linkages to the literature. Codes were succinct, working in effect as a shorthand for something that I as analyst would understand (Braun and Clarke, 2012, pg. 61). Relationships between codes were spotted and noted. This first-pass produced over 950 individual coded items across the five sessions. I then completed a "take away the data" test suggested by Braun and Clarke and realised that some of my codes had been too succinct (!) and no longer conveyed sufficient meaning. A full second pass was completed, resulting in refreshing and reinterpretation of codes. Semantic codes were replaced following my derivation of meaning, resulting in generation of new latent codes. Others were discarded completely, so that by the end of this stage, there were approx. 620 coded items. These codes were checked against my post-it notes, now removed from being in-situ in the text, as a final check to ensure nothing had been missed.

This phase finished with the coded items being transferred to MS Excel (Bree and Gallagher, 2016) for ease of reviewing, grouping and clustering, with all the relevant data could be viewed in one place, assisting with validation of the patterns and clusters of codes.

Generating Themes

In an evolution of their 2006 position, Braun and Clarke clarified themes do not emerge, but rather the researcher is an active participant in their generation (Braun and Clarke, 2019, Braun and Clarke, 2021). Recognising myself as the reflexive research instrument meant coded items continued to be tidied up, discarded, and reviewed for similarities and connections. Codes were clustered based on meaning and / or wording and recursively and iteratively reviewed as I searched for and sculpted themes (Braun and Clarke, 2012, pg. 63). Several passes through the data set were undertaken, and items were colour coded and then sorted by colour (Bree and Gallagher, 2016). In parallel, draft thematic maps and tables, using post-it notes, assisted in letting things go that weren't working. This was a fluid and organic process. Evolution continued, including sometimes creating new codes, until patterns were observed, and formation of themes was possible (Barbour, 2018, Ch. 8 and Ch. 9, Willig, 2021, Ch. 6). Twelve initial themes were drafted (Table 2 Initial Themes from Focus GroupsTable 2).

TABLE 2 INITIAL THEMES FROM FOCUS GROUPS

Transition – growing up; I've arrived!; leaving behind the familiar. Going (between) places.	Authentic learning experiences - including simulation - help make it feel real.
The Third Space: when all you have is living and working – where do you connect? Importance of kitchens. Food.	Together: Apart – need to socialise, even when displaced. Need to see and be seen amongst peers.
Not welcome and a lack of trust: Active surveillance vs passive through design and peers.	Past lives influence current meaning. Familiarity to me may be new to you.
Need to escape and carve out anonymity.	Peers: mainly supporting, benchmarking and judging. Impostor syndrome.
Part of something bigger.	Art, artefacts and kit help create meaning and distinction - from being a "science" student.
We're on a journey –help bring future self into focus or at least make it less fuzzy.	Sense of commonality and joint venture.

These initial themes were checked against coded extracts, the overall data set and then finally against the research question, which was used as an anchor throughout the analysis.

At this stage it had been important to avoid generation of themes by “bucketing” common codes. Codes that upon first review seemed connected because of “key words” were, when looked at through the framework of symbolic interactionism discussed earlier in Chapters 2 and 3 (Blumer, 1969, Sandstrom et al., 2001, Segre, 2019, Brekhus et al., 2021, Dingwall, 2021) not related to each other but rather aligned across several other clusters and nascent themes. By way of illustration, I had formed a cluster of codes into a theme around “transition” and “transitioning”, but my constructionist and interpretive review and exploration clarified it as too superficial and not worthy of a theme as it lacked a core, central and unifying concept. When considered reflexively, I acknowledged it had most likely been an attempt by me to force the codes into supporting the literature on “becoming” and “transformation”. The items in that bucket were removed and reanalysed.

In parallel to this generation of themes, relationships between themes and how they interconnected to construct the overall story was also considered.

Reviewing and developing themes

My activity during this phase was best construed as pressure testing, when I looked to see if the themes proposed in **Table 2** pg. 138 were really quality, multifaceted themes, giving considerations of both the boundaries – where one stopped and the next one started – and how one flowed into the next. Braun and Clarke (2012, pg. 65) counsel against too many themes or subthemes, as it can convey fragmentation of the data and under analysis. I made sure there was sufficient data extracts to support themes, and conversely, checked if there was too much data or it was too wide and disparate.

Themes must be rich and complex in reflexive TA, and this was my standard as I tested each theme to have a central concept drawing coded items together, and where relevant acting as an umbrella for any sub-theme. At this stage, I also checked for patterning across the data corpus. Again, coded items and themes were let go, before being reassessed.

Describing the themes and naming a theme

A brief description was written for each theme, setting out a clear sense of the central concept, capturing the essence of the different attributes as they relate to each other under the unifying concept. Each theme captures the stories told by participants as interpreted by me, and ultimately how they relate to solve the research question. In this phase, it became clear that some themes were actually sub-themes, and this further helped refine and finalise my thematic map and findings into those listed in **Error! Reference source not found.** pg. 152 which are discussed in Chapter 5. An illustration of the codes assigned to themes from the FGs is included in Appendix 0, pg. 298.

Observations

The observations were also analysed using thematic analysis, however, having completed the analysis of the FGs, it was challenging to not slip into a more deductive approach using the FG themes. This would have been an acceptable approach (Pope et al., 2000) but, to ensure nothing was missed, I returned to the observations and persevered with a systematic, storied and intentional examination. Ensuring my exploration and generation of insights wasn't constrained by the FG themes and that space was created for inductive analysis required reflexivity and rigour. In contrast to the FG transcripts, I adopted a rapid approach to TA (Vindrola-Padros and Johnson, 2020) using both the photographs taken and my handwritten notes as data sources.

Familiarisation with the data

Photographs were reviewed multiple times and notes made as to what was present or absent, and my initial thoughts as to what this might mean, using post-it notes. My field notes and templates were scrutinised, looking holistically at the environment – the physical furniture, availability of sustenance, technology - and the actors present, and any observable social structures suggested by the interactions of the actors and the physical environment.

Particular attention was paid to the noted behaviours, the comings and goings, any language used between the actors, and potential meanings, which created an annotated description of "a moment in time" of their everyday experiences. A subsequent review of the data sources was undertaken to identify any recalcitrant behaviours.

Coding

Post-it notes were heavily used, rather than MS Excel, allowing easy grouping and refinement of codes. The creation of thematic maps (also using Post-it notes) helped finalise the clusters generated from the observations.

Generating themes

Seven initial themes were generated from the observations. These initial themes were again checked against coded extracts, photographs and field notes, and the research aims and objectives. At this stage, it was important for rigour in the analysis to consider the themes generated from the observations distinct from those of the FGs. The overall process was similar to that utilised with the FGs, with the lens of symbolic interactionism being used to evaluate and link events, allowing themes to tell the story of this community.

Reviewing, developing, describing and naming themes

Finally, a review, comparison and compilation of the findings from both data sets was undertaken (see Combining the data sets pg. 94), creating the final themes, which are presented in Chapter 5.

4.6. Role of Supervisory Team

In qualitative research, trustworthiness is a crucial goal for researchers, and can be achieved through consideration and discussion of the fundamental issues of reliability, validity, sampling and generalisability throughout the process (Stahl and King, 2020).

My doctoral supervisors played an important role in enhancing overall trustworthiness, primarily through regular and sustained engagements during the design (and pandemic redesign), and the period of data collection, analysis and write up, when they supported my rigorous and reflexive employment of the methods described. My supervisors are both extremely experienced qualitative researchers and doctoral supervisors, familiar with a range of methodological approaches, data collection techniques and data analysis. In addition, they possess deep understanding of professional identity across a range of professions, work-based learning, and healthcare.

Validity, and therefore trustworthiness in this study originates from the ontological and constructivist epistemology set out in Chapter 3, which I arrived at through my readings and subsequent discussions with my supervisors. In essence, I used these discussions to pressure test my decisions and the "*inferences and uses that come about from the results*", ultimately assisting in the provision of validity described by FitzPatrick (2019, pg. 212) as highly contextualised and essential in enabling trust in the conclusions.

The data collection process supported by concurrent and contemporaneous discussions and long-term involvement (FitzPatrick, 2019), both mine and my supervisory team, assisted me in the creation a full and revealing picture. This was further supported by

my decision to create and then share the verbatim transcripts of interviews, through MU OneDrive, with my supervisors.

Using the reflexive data analysis approach of Braun and Clarke (2021), and being able to discuss this with my supervisory team during the data analysis phase and my write up provided support and challenge to my interpretations “*not by **verifying** conclusions, but by **testing** the validity of your conclusions and the existence of potential threats to those conclusions”* (Maxwell, 2012, pg. 136, original emphasis).

Our regular discussions allowed me to add new dimensions when reviewing the transcripts, codes and themes, exposing complexities and biases that could otherwise have impacted the findings. It was with their encouragement that I searched for discrepant evidence or negative cases, a “*key part of the logic of validity testing in qualitative research*” (Maxwell, 2012, pg. 137).

By involving my supervisory team appropriately, I was consistent with Maxwell’s suggestions that “*feedback on …. conclusions is a valuable way to identify your biases and assumptions and to check for flaws in your logic or methods*.” (2012, pg. 137). As a result, I decided to make the coding and its prevalence in the data more explicit, further assisting with trustworthiness to display and “*assess the **amount** of evidence ….. that bears on a particular conclusion or threat”* (Maxwell, 2012, pg. 138, original emphasis). This provided an additional perspective and test, not in a quasi-statistical or positivist way, but by demonstrating the diversity or strength of the various perspectives across the data corpus, which ultimately led to the inclusion of Table 5 pg. 185.

FitzPatrick’s focus on qualitative health education research (2019) discusses the importance of incorporating trustworthiness through validation procedures during the study, rather than “*leaving them …. all for afterward*” (pg. 213). This was the approach adopted by me and supported by my supervisory team who ensured an awareness of potential alternative explanations, discrepant data, and consideration of any serious

threats to validity (Maxwell, 2012). This discursive and dialogical support was maintained throughout, right through to reviewing and providing feedback on draft chapters.

Working with my supervisory team, I was able to delve deeper and explore my researcher reflexivity (FitzPatrick, 2019), my reactions to and feelings about the study; testing the way my ontology and epistemology, my research philosophy and beliefs, were shaping the data and hence the interpretations and inferences I drew.

4.7. Utilising my tacit knowledge

My tacit knowledge and deep understanding of the situational context was leveraged throughout this research study, but in particular through the period of revision and project activity. It was particularly important in the recruitment and appointment of the FGF, from the initial contact I made with the Deputy Dean, and onwards through the collection and analysis of the data.

Fundamentally, my research approach itself stemmed from this tacit knowledge and a deep personal curiosity driven by what I had noticed since N-building had opened in 2017. I was embedded on campus, with my offices across the street, and I had noticed senior students coming back to campus in the evenings after their placements with a resultant increase in visibility to early year students and events and interactions on a daily basis.

After N-building opened, and as other campus development and refurbishments came on stream between 2017 and 2022, the UoH regular anonymised student surveys began to include information relating to these spaces. I had access to these reports to inform my own departmental operational priorities and but I was also privy to students' free

text comments in relation to campus facilities and other aspects of their daily lived experiences of teaching, learning and assessments.

During the pandemic, these surveys included questions and comments about the UoH pandemic approach to learning, teaching and assessment, and other COVID-19 measures, which I then used to inform my day-to-day activities and responses.

In effect what I was bringing to this research and all the decisions I made through the research process, was informed by my i) own experiential knowledge (Maxwell, 2012) having worked at the UoH since 2011, ii) supported by the literature, and iii) the discussions with my supervisors. In particular, and as set out earlier, I had been heavily involved in the design development and delivery of N-building, which itself was informed by a series of global benchmarking trips, student feedback, and the observed student lived-experience between 2011 and 2015.

My tacit knowledge continued to grow post opening of N-building, including how the campus was actually being used before and during the pandemic, by working and being on campus, being observant, formal student surveys and informal feedback.

My own background and identity, it's influence on the formation of my ontology, epistemology and hence research strategy, was discussed previously in Chapter 3. Acknowledging my role as the instrument of the research and as an insider-researcher, this approach allowed me to keep the research connected to all aspects of **my** self rather than "*cuts off from a major source of insights, hypotheses and validity checks*" (Maxwell, 2012, pg. 55). Within the structure of a DProf, there is acceptance of the validity and depth available from one's own experiential data. This then allowed me fold in and reflexively consider my tacit knowledge virtuously to underpin an ethnographically informed research strategy, consistent with the position of Maxwell who considered subjectivity could be advantageous if used adroitly, and citing Strauss (1987) who

advocated researchers to "*mine your experience there is potential gold there*" (2012, pg. 55).

4.8. Chapter Summary

In this chapter, I have recounted the project activities, the setting and context within which data collection occurred, and my subsequent analytical processes. During this period of project activity, my DProf journal has a note asking '*who am I at this time – lockdowns and isolation? Is it "must get this done*….' and a suggestion for this chapter's title "Holding my Nerve." There were times when I questioned the whole rationale of the study and my ability to ever complete it, having seen the silence descend on a once vibrant campus, the loss of social interactions, and being overwhelmed with the day job and family commitments.

With the benefit of distance, and the voices of the participants to share, I can see the power of capturing their lived experiences by noticing what was missed as much as present. COVID-19 had an impact on the study, but the data collection methods coupled with my tacit knowledge proved appropriate to generate insights and understandings of the participants lived experiences of using the campus built-environment and their professional identity formation. These findings are presented next in Chapter 5 and discussed in Chapter 6.

5. Project Findings: "A race we're all running together"?

5.1. Introduction

In this chapter I present my findings generated using reflexive thematic analysis (Braun and Clarke, 2021). Underpinned by my research strategy (Chapter 3), a constructionist and interpretative approach was applied to the experiences and stories shared in the Focus Groups (FGs) and observed during the study (Chapter 4). Findings generated by my analysis are consistent with key theories and positions scrutinised in the review of literatures (Chapter 2) and are discussed within this context in Chapter 6, before setting out recommendations in Chapter 7.

As reported in Chapter 4, the period of data collection coincided with an ever-changing landscape of COVID-19, significant wave of cases, hospitalisations, and deaths through Autumn 2020 and into Spring 2021, Figure 26 pg. 148 (Government of Ireland 2023). As time passed, the vaccine roll-out gathered pace, case numbers and deaths stabilised, and by the start of the academic year 21/22, restrictions were relaxed further, although not yet removed completely. Thus, learner experience and access to campus varied over the period of the study. This is seen in the experiences of the participants presented in the findings below first from the FGs, and then the observations, prior to considering them collectively.

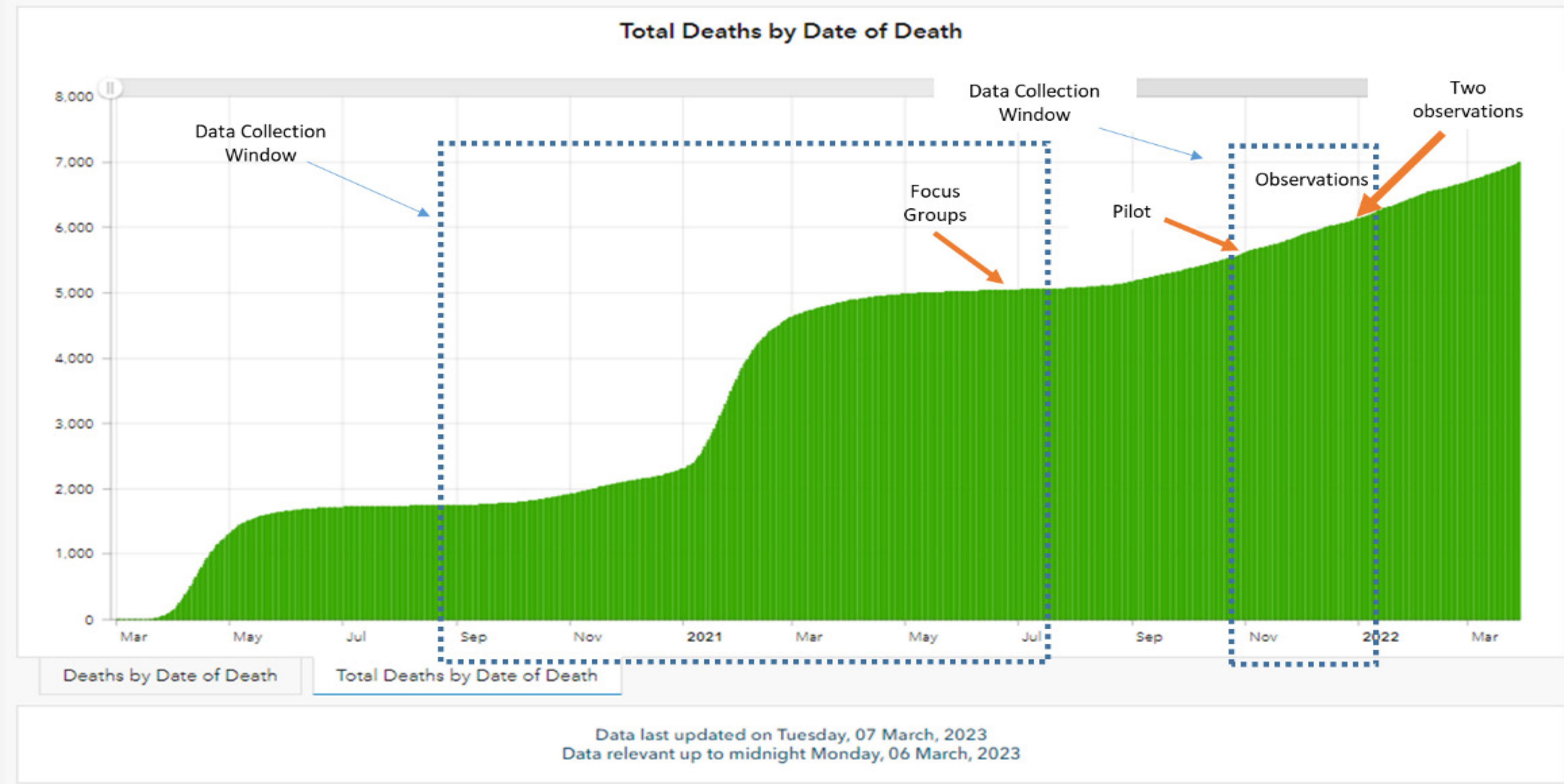


FIGURE 26 TOTAL COVID-19 RELATED DEATHS DURING DATA COLLECTION PERIODS (SOURCE: GOVERNMENT OF IRELAND, 2023: ONLINE)

5.2. Presenting the findings

A summary of FG participants' characteristics is presented in Table 3 pg. 149. Participants were recruited purposively (see pg. 87). Although no physiotherapy students chose to participate, all other programmes were represented (see Figure 22 pg. 124). Students from Foundation Year Medicine (FY MED) were overrepresented in the sample. Given my research strategy, and as discussed previously representative sampling of the population was not required (Barbour, 2018, pg. 11).

The participant spread of EU to RoW was 23:77 mirroring that in the eligible population (see Section on Nationality and domicile / location pg. 117, Figure 22, pg. 124). Where necessary, nationality identifiers are grouped into regions e.g., Gulf Cooperation Council (GCC), to ensure participants could not be deductively identified in keeping with the ethical stance previously outlined. The thirteen FG participants came from a diverse range of countries, with 15 different countries provided in responses to the icebreaker question "where were they born"? Students had either been born, or their parents had immigrated prior to their birth from Australia, Canada, Egypt, Iraq, India, Ireland, Malaysia, Pakistan, Qatar, Russia, Saudi Arabia, Syria, U.A.E. and U.S.A.

TABLE 3 FOCUS GROUP PARTICIPANTS

	Pseudonym[17]	**Program**	**Born**	**Resident**	**Identifier**
FG 1: 16th June	Eddie	FY Med	Canada	Canada	FG 1.1
	Farif	FY Med	Asia	Canada	FG 1.2
FG 2: 22nd June	Jo	GEM 1	Asia	U.S.	FG 2.1
	Adel	FY Med	GCC	Canada	FG 2.2
	Shaz	DEM 1	Malaysia	Malaysia	FG 2.3
	Mel	DEM 1	Ireland	Ireland	FG 2.4
FG 3: 23rd June	Rami	FY Med	Canada	Canada	FG 3.1
	Suni	FY Med	Asia	Canada	FG 3.2

[17] Culturally, geographically and gender-neutral pseudonyms have been selected and allocated to participants.

	Pseudonym[17]	Program	Born	Resident	Identifier
FG 4: 24th June	Chris Temi	DEM 1 FY Med	Oceania Africa	GCC Africa	FG 4.1 FG 4.2
FG 5: 29th June	Fedha Dara Taj	FY Med Pharm1 Pharm1	GCC Ireland Asia	GCC Ireland Ireland	FG 5.1 FG 5.2 FG 5.3

5.3. Generating Themes from the Focus Groups

I applied reflexive TA to the data (Braun and Clarke, 2006, Braun and Clarke, 2019, Braun and Clarke, 2021), working first through each of the FGs individually, before considering them in totality (Section 4.5 Data Analysis pg. 135).

Insider researcher reflexivity

Braun and Clarke caution the researcher against arguing with the data, or casting judgement (Braun and Clarke, 2021). Initially, the temptation to point out what was "factually incorrect" when analysing the data and generating findings was strong. Familiarisation, coding of items, and generation of themes, all presented a reflexive challenge given I was an insider-researcher intimately involved with the UoH's operational and strategic response to COVID-19. It was essential to separate my insider knowledge of what was "actually" available to students from the participants lived experiences - what they accessed or didn't and why, and how they made sense of what they did and didn't do - during the period. During this phase, what was central to the generation of themes was what **they** said, **their** assumptions and **their** understanding. The context of my insider position was intrinsic to **my** interpretation of the data and **my** construction of the themes.

By way of illustration, my notes from the early reading of the data have annotations such as “Thanksgiving dinner - part of Prof. conduct issue[18]” or “much more availability than accessed” or “chose to do it online even though all in Ireland”. Once I subjugated my knowledge to the participants’ stories and stopped judging or arguing, I was better able to interpret their perspective. The subsequent coding and theme creation changed significantly, for example interpreting the participants’ desire to (re)create familiar events (Thanksgiving) as linking to their pasts (Theme 1) and making new connections (Theme 2); and availing (or not) of what was “actually” on offer or opportunities, as their ability to exert choice and control and have agency (Theme 5).

Taking all this into consideration, five core themes were generated. A sixth theme was context specific as it relates to participants response to the pandemic.

In keeping with the process described by Braun and Clarke (2006), I gave a name to each theme, and wrote a short, first-person, narrative descriptor, to define the theme, which encompasses the essence of that theme in a few sentences (Braun and Clarke, 2012, pg. 66).

These are presented below (**Error! Reference source not found.**).

[18] Students had organised a Thanksgiving dinner which exceeded the public health limits. The event was notified to university authorities. It was dealt with through appropriate channels which included my role as employee rather than as researcher. The use of the facilitator prevented any other impact than that described above on my role as researcher.

TABLE 4 THEMES FROM FOCUS GROUPS

	Theme	Subtheme(s)
1	**The Destination …. and the Journey:** I might only be at the beginning, but I have a sense of the destination and an understanding of the scale and importance of the journey embarked upon.	**Past lives:** How I understand my new world is influenced by my past experiences and motivations.
2	**Building Connections for Now and for the Future:** It's important to build connections with others who are on the same journey, it will sustain me. They help me to make sense of what's ahead.	**N/A**
3	**Part of Something Bigger:** I am realising I am part of something bigger. I am becoming a health professional. Pointers along the way help contextualise and situate my experiences. Sometimes, this can all be a bit much and I need an escape.	**Pointers help us find our way:** Navigational aids provide me with a sense of geographical, chronological and professional place. **Escape valves:** Sometimes, this can all be a bit much and I need to peel away. Exercise helps as does commuting or exploring the wider city, as it provides opportunities to get away.
4	**Authenticity and Experientiality:** Early authentic activities and experiences - across a full range of activities: social, fun, team and individual learning - allow me to make sense of what's happening. How and where these happen, with what and with who, matters.	**Sense of Development and Progression:** I can feel a sense of development and progression. It creates (some) separation between us and others, including family.
5	**Reasons to Linger:** How campus feels, how it is set up, provides reasons and (implicit) permission for us to linger. By lingering all sorts of interactions happen from peer support, reflections, to meeting professional role models. Space, both pedagogically and physically, needs to be provided to encourage and facilitate lingering.	**Agency, choice and control:** I like to be able to exercise choice and have a variety of options to suit me. I want to be in control over where I go and when I go there. When I get there, I want to be able to inhabit the spaces.
6	**Lemons and Lemonade:** COVID had an impact on our university experience, but when you get given lemons, make lemonade. We made the best of what was available.	**N/A**

In this next section, each theme is presented in more detail with extracts to centre the voice of the students.

FG Theme 1: The Destination …. and the Journey

Participants desires and excitement, having started their programme, was patent. For some, they arrived having achieved a long-held goal and their satisfaction was evident:

> ***Fedha:*** *"I chose to study medicine because it was my dream since when I was a child. So yeah."* *FY Med, FG 5.1.*

With others, their past acted as motivation:

> ***Shaz:*** *"The reason why I wanted to join medicine was based off my past experience, I guess. Yeah."* *DEM 1, FG 2.3*

A driving sense of purpose was tangible across participants and focus groups:

> ***Eddie:*** *"I decided to become a Doctor because I want to make a positive impact on other people's lives".* *FY Med, FG 1.1*

Collectively these create a rich tapestry of emotional and meaningful reasons why the programme was selected. For many participants, this coincided with a move far from home to a new country.

Family influences and expectations, both in their choice of course and what they hoped to achieve played a part:

> ***Suni:*** *"I chose to go into healthcare because like Rami I was surrounded by it all the time, except in the opposite direction, because [their] family is in the industry and my family were all patients. [laughter] So because of that, I saw both the good and bad … I wanted to make a good change and a positive impact on patients' lives and empower people and help them live their best lives."* *FY Med FG 3.2*

Suni doesn't talk of "becoming" or "being" a doctor, a strong sense of purpose connected to future potential impact is intertwined with where they have come from

and where they are headed. Excitement and pride, of what had already been achieved in getting a place, was most visible when participants discussed the White Coat Ceremony (WCC), which due to COVID-19 had been individually pre-recorded, prior to airing on the universities YouTube channel[19]. The importance of symbolic events and ceremonies such as the WCC is discussed in Chapter 2, (Goldie, 2012, Cruess et al., 2016, Sarraf-Yazdi et al., 2021) and I was curious to hear how and where participants experienced it during some of the highest levels of COVID-19 restrictions:

> ***Rami:*** *"Once it ended we were all talking about how real it's all getting, how we felt proud and our parents were online as well, so we were all talking to them. It was very social and a very proud moment. So that's what we did"* *FY Med, FG 3.1*

Rami's description links their current achievement to their past and the pride they feel now, both for themselves and their family. They saw it as a communal and community celebration, linking sets of important people, their family with their new friends and peers.

Others found the declaration (Appendix 11, pg. 318) made at the WCC incongruent and at odds with their own perception of current-self and how much of the journey still lay ahead:

> ***Farif:*** *"I felt like I was playing a part………… because I just feel like I'm so young ……… that's so far from now"* *FY Med, FG 1.2*

A feature of the WCC declaration at UoH is its universality (Tighe et al., 2018). The oath was created in conjunction with students from medicine, pharmacy, physiotherapy and physician associates, and speaks to the common aims of patient care, delivered blind to any form of discrimination on any grounds, and a commitment to lifelong learning.

[19] White Coat Ceremony 2020/2021

Students from across the schools are invited to the same ceremony. In this way whilst it frames the professional identity ahead, it reinforces common aspects of healthcare delivery and begins to situate inter-professional learning and teamwork from the beginning. An ability to envision their future destination, as professionals working as part of multi-disciplinary teams - through events such as the WCC interpreted above, alongside formal learning innately as individuals, or sometimes with the support of others - helped participants make sense of their current experiences and situate them within the longer-term journey:

> ***Temi:*** *"this is where I'm going to be. I definitely think that sort of stuff, what I'm doing to do in the future, always thinking forward, I'm quite surprised how this is going"* *FY Med, FG 4.2*

Sometimes this realisation of their future and the scale of what was ahead crystallised through course structure and workload:

> ***Mel:*** *"when you get into college, there's no ceiling of what you need to know….. So that was a massive shock to the system for me. … It had two sides, I was excited about it, but it was quite daunting …that was the big thing for me that I was actually training to be something and I wasn't just in school anymore."* *DEM1, FG 2.4*

The sense of challenge being presented and embraced, alongside the potential for stress, is clearly articulated. **Mel** went on to talk about "*the whole impostor syndrome and everything that you go through in your first year".* By the time the FGs were held, these students had successfully navigated through to year-end, but it was clear that periods of stress, turbulence and identity dissonance had been present, and had left a mark.

Maintaining a sense of perspective, by keeping the destination in mind was important for participants, especially when the learning activities were challenging, or conversely had not (yet) matched expectations. This ability to visualise their future practitioner-

selves and inherently connect and rationalise that new identity with learnings now, is a core element of this theme:

> ***Eddie:*** *"Because for example, if I missed one portion of the lab then I'm going to be losing marks, but in a real-life situation it's far, far more major because if you mess up one stitch, if you don't stitch up the person properly, then they're going to be potentially bleeding out, there's going to be far more major complications than they potentially had coming in."*
>
> *FY Med, FG 1.1*

Opportunities to learn alongside other health professional students were contextualised through this lens of their future destination and appreciated as more than just a way to meet new people:

> ***Adel:*** *"they [physiotherapy students] sat on the other side of the theatre. But throughout the semester we talked and we realised, "Okay, we're not that different. We're very similar." And I think that's important in the future as well when you work with different professions."*
>
> *FY Med, FG 2.2*

Co-learning with students enrolled on other healthcare programmes, interprofessional learning, (IPL), was recognised as being a valuable experience even at this early stage, given the multidisciplinary nature of healthcare provision. Students recognised and appreciated these opportunities:

> ***Dara:*** *"Yeah, because when we are graduating, we are going to need that – we are going to need some doctors and some other healthcare professionals. It's not going to be pharmacists only"*
>
> *Pharm1, FG 5.2*

Dappled throughout the transcripts is a realistic appreciation and understanding of their current positionality, of being at the beginning of their journey:

> ***Farif:*** *"We feel like the babies of the school, at least I do, I feel very young."*
>
> *FY Med, FG 1.2*

Entangled within this theme was clearly a sense of nervousness about what lay ahead, both in being able to complete their studies, and the potential pressures later in the programme and post-graduation, as shared by Rami, who agreed that a relaxed atmosphere was required in spaces conducive to teamwork at the early stage of their programme:

> ***Rami:*** *For now, I think. Until it becomes a lot more professional and stressful, this is the way to train yourself and make yourself comfortable with the concept.”* *FY Med, FG 3.2*

Subtheme: Past lives

Family ties and past healthcare experiences influenced their choice of programme and their understanding of the journey ahead, and their past lives conveyed additional meaning. Given the international mix of students in the programmes, and the global nature of healthcare it was not surprising for students to have come from a diverse range of countries. What was more unexpected was the way they answered the question “where were you born?” as part of the icebreaker, which should have been a single city / country but for many was a multi-nation description[20]:

> ***Taj:*** *“I was born in [Country in South Asia] but I moved to Ireland when I was three. So I’ve spent most of my life here”* *Pharm 1, FG 5.1*

And

> ***Adel: “****I was born in GCC, but I'm [Country in Africa], but I lived in Canada”*
>
> *FY Med, FG 2.2*

Whilst a richness is conferred from these multi-nation starts in diverse places, people, cultures and societies, it also speaks to not being defined by nationhood:

[20] In some cases, naming the actual town, country and city could allow for deductive identification and therefore continents or regions have been used instead.

> ***Chris:*** *"I'm from [City, in Oceania] but I lived in GCC Country 1 and GCC Country 2 for most of my life."* *DEM 1, FG 4.1*

It follows then, that this layering has a bearing on how they see themselves, their identity and their place in the world, and how they make sense of their new society and of higher education. How it links through and begins to weave into their future destination was epitomised by Adel:

> ***Adel:*** *"I lived in xxx….. a very multicultural city. So I didn't really expect to have much unconscious biases about people because I always interacted with people from different countries and cultures. But after a workshop on unconscious bias … "Okay, everyone that I'm meeting, I can't even assume anything about them because they're their own individual. They're not what their culture is; they're not what their country is like. They decide who they are." And 'Okay, this is going to be useful in the future for my profession'."* *FY Med FG2.2*

The positive connections to past-lives, family and friends, as motivators and supporters comes through, but also casts a shadow in the expectations to do well and perform:

> ***Suni:*** *"That's where I had a lot of my reflection, in an environment where no one knew me, and I didn't owe anyone anything. I didn't have to give anything."* *FY Med, FG3.2*

Learning activities e.g., in laboratories, met expectations of "newness" for some, whilst for others, labs were more-of-the-same. Instead, other ordinary campus spaces created a sense of difference, transitioning and of having arrived:

> ***Farif:*** *"I really liked being in the lecture hall, more so than the labs. Because the labs I did a lot in high school …... so that wasn't as new to me as the lecture hall."* *FY Med, FG 1.2*

Differences from their unique pasts - which vary from participant to participant - propelled them into their current setting and into a future sense of self.

FG Theme 2: Building Connections for Now and For the Future

This theme flows from Theme 1, as our newly arrived participants embarked on their journey, seeking to make connections and create mutually beneficial and sustaining collaborations. This was explicitly stated by participants as well as being construed through their COVID-19 limited activities. The prominence ascribed by participants to these early attempts at professional socialisation chime with the significance previously articulated in the literature appraised in Chapter 2.

Participants used every opportunity afforded through quotidian events to connect with classmates including cooking and sharing food in communal spaces or kitchens; and organising holiday or celebratory events:

> ***Eddie:*** *"…we'd have other gatherings such as Thanksgiving which we do in October; it's a very top thing in Canada so [laughs] we had a little celebration with that. We invited the Year 1 people … because they were staying in the same residence, so I was able to get to know them as well."*
> *FY Med, FG 1.1*

The desire to have a meaningful event, tethering them to their past whilst making connections for their future must have been a powerful force. This event breached public health laws and high levels of social cohesion, at the time. **Farif**, who didn't live in the same building and had not been to the Thanksgiving dinner, brought it up later in the FG, as indicative of the challenges they had to overcome in making connections:

> ***Farif****: "it's funny actually [name] brought up Thanksgiving, because I remember that being a very controversial moment [laughs] … it just goes to show how difficult it was for us to properly see people and hang out…….everyone who lived at M – even people who weren't even there – were basically put into mandated 14-day quarantine, and as a result of that they missed their lab and they lost the marks for that lab……*

Alternative ways to make connections than large gatherings were much more common: with Adel citing doing their laundry, or the walk back home from classes through the city to their dorms providing opportunities:

> ***Farif:*** ***“****I think a lot of the times, the walks to and from campus to my dorm and back, like we would talk about just our lives now and just reflect on everything that’s happening and all the things that we need to do …..”* *FY Med, FG 1.2*

Many of these connections were facilitated by the way university accommodation and learning had been configured during COVID-19. Students who lived with or near each other (including non-university accommodations) were combined for scheduled teaching activities into “living and learning communities”, creating formal (scheduled teaching and the right to attend in person) and informal opportunities for shared experiences, and commonality of purpose:

> ***Adel:*** *“my entire building was the same learning community, and although there are sub-groups, so we would all go on campus together. So we all knew each other, which made things much easier, honestly, because it's like, kind of scary to just… Because we all moved from back home and we didn't know anyone…..we talked to one another in the building”* *FY Med, FG 2.2*

The challenge of having moved overseas to study manifests in Adel’s fear, and the structures put in place were welcomed as a means to assist formation of connections. When connections were made, this common purpose was leveraged to garner support from peers:

> ***Eddie:*** *“like no-one’s going to make fun of you if you ask a particular question because we’re all there to learn, we’re all there to accomplish the same goals in life”* *FY Med, FG 1.1*

Their shared sense of destination also gave them a reason and a way-in to make these connections:

> ***Farif:*** *"so I feel like I'm constantly in my head going "Okay, in five years I'm going to be getting into a residency." And we're always talking; within my friend group we're always talking about how we have a couple more years of just being young, and then in a couple more years it's not that our studies are finished, it's we're going into a career"*
> *FY Med, FG 1.2*

One amplification, which I ascribe to the pandemic, was the volume of connections happening in kitchens, often the only places available for congregation:

> ***Eddie:*** *"Or sometimes my friend will cook, I'll bring food and then we'll go talk for a little bit. It could be really about anything; school, sports, you really name it. More often it was school, [laughs] but it was just trying to do those things in order to have a connection with my friends, my roommates, because I'm probably going to know them for the next five years so I thought maybe it would be a good time…." FY Med, FG 1.1*

As soon as restrictions eased, participants began to use other spaces on campus, particular for collaborating with newer peers, outside the living and learning community structures:

> ***Shaz: "****for me, it was my apartment's kitchen because I discuss it more with my friends. And for those that are not my friends, just like, for example, I'm currently in the research summer school and they assign us into groups for projects, and we all live in different places. So we actually use the school's blue couches, you know, the first floor blue couch?"*
> *DEM 1, FG 2.3*

At the height of restrictions, students who did not live on campus or in shared student accommodations struggled to make connections outside of formal classes, given the lack of access:

> ***Taj:*** *"it meant that the minute I arrived, just as the class had started, and I left immediately. So even when I talked to Dara, it was only like in between the lectures, or something."* Pharm 1, FG 5.3

They snatched at the opportunities presented, even during limited access to connect on campus, and recognised the value access to third spaces (Berman, 2020) would usually proffer:

> ***Jo:*** *So for me, going to campus ….. was pretty much the only chance to interact with my classmates in-person, which is a big deal because you want to make friends when you start medical school. …………………… but because I live off-campus and I don't have this community of people who live in the same housing as I do, I feel like, yes, I would hang out with people on campus."*
>
> GEM 1, FG 2.1

For others, who only came and went to campus for scheduled activities, commuting became a keyway to connect and get peer-support and mentoring:

> ***Dara:*** *"I used to take the train with another girl, and we used to discuss that and ask her for advice. Because she worked in a pharmacy, so she knew more about that, and she also liked helping me all the time, as well."*
>
> Pharm 1, FG 5.2

Connections were facilitated by HyFlex (Beatty, 2019) and campus spaces being organised into learning communities with home rooms, facilitating peer-support and socialisation:

> ***Fedha:*** *"Well, you know, because of the pandemic, it was difficult to socialise and make friends. But I've made many friends in my learning community. So it was easy to talk to them after the classes and sessions, when the professors left. So we can ask each other then."*
>
> FY Med, FG 5.1

The opportunities for in-person connections decreased during the academic year as the COVID-19 situation worsened and students completed more elements on-line. The loss of these opportunities and nascent community of practice was keenly felt:

> ***Temi:*** *"Yes, it was a bit tough…….. In terms of making friends or communicating with people again there was barely anyone coming to the classes or the lecturers there and when we finished we were kind of escorted, if that's the right word [overspeaking]………….. So I was basically – the few people I did know, they were all gone, so I didn't have a lot of people to talk to."* *FY Med, FG 4.2*

Participants made choices and changed their behaviour influenced by the situation, their peers' actions and resultant lack of connections:

> ***Eddie:*** *"because no-one in my residence really stayed, so I thought what point is there for me to go back if no-one's going to stay? Who am I going to talk to?"* *FY Med, FG 1.1*

The overwhelming sentiment expressed was that in-person activity was preferable for making connections although conveniences were afforded by tech-enabled learning.

> ***Taj: "****Research-wise, I think we did a great job. ……okay, it would have been nice if we met each other on campus or discussed it on campus. But yeah, I think it was all right except for the fact that it's mostly online."*
> *Pharm 1, FG 5.3*

Being together and actually working synchronously allowed for co-construction of knowledge and bouncing ideas off each other, rather than a process of collaborate, go away, do more, and bring it back for review:

> ***Farif: "****there's something about being on an online meeting; you can delegate tasks and then everyone goes off and does their own thing and there's never a group working time when everyone's actually working together. So it was just so messy, I felt.****"*** *FY Med, FG 1.2*

The connection to Theme 1, and participants' ability to remain future focussed and remember the destination, seeps through perceptibly in their attempts to make connections:

> ***Mel:* "***seats close together, seats facing each other that encourages, like, teamwork, because ultimately as doctors you're always going to be working on a team, whether it's with other healthcare professionals, or other doctors."* *DEM 1, FG 2.4*

The benefits of connections, within the year for lessening stress and intimidation of group work, to more senior students helping make sense and navigate the journey ahead, and to other health professionals envisaging and juxtaposing their future selves, were understood and unmistakeable. In making these connections with others, participants' appreciation of themselves also grew:

> ***Temi:*** *"I think as the year's progressed, I'm starting to like that a lot more. You can't just burden yourself with the work, you need to separate it, give it to other people. So I definitely think the understanding of each other and as a person yourself, how much you can do, how much you should expect of others, is definitely important going forward."*
> *FY Med, FG 4.2*

This connection and support was also present between participants who reassured each other during the FGs, helping frame past experiences, adopt shared positions, and supporting aspirations of future opportunities available for authentic learning:

> ***Temi:*** *"Yes, when I talk to the people above me, like in years above, I'm like 'okay, this is where I'll get a little bit more practice'."*
> ***Chris:*** *"Yes, it'll change. It'll definitely change"*
>
> *FG 4 (2 and 1)*

Having arrived with a sense of their destination and developed an appreciation of what lies ahead, participants made connections with each other, garnering support for the

journey and learning more about themselves along the way. Places for in-person connections on campus were severely restricted, but participants called out the importance of these to just hang-out with like-minded people with the same goals. The process of professional identity formation, individually constructed (Goldie, 2012, Jarvis-Selinger et al., 2012, Cruess et al., 2014, Mount et al., 2022, Consorti and Consorti, 2023) within a societal context is conspicuous in the situated nature of the relationships created. This sense of being part of something bigger is explored in Theme 3.

FG Theme 3: Part of Something Bigger

A commonality of purpose and a sense of joint enterprise was recognisable in part through the connections made but also as a result of their sense of destination. Theme 3 posits that being part of something bigger than the individual who arrived to university is an inspiring and intimidating part of the process. These realisations for participants were constructed across a range of settings, and the settings mattered. As established in Theme 1, past experiences of built-environments created opportunities to transition from being a high-schooler to a health-professional student. One unexpected finding was the impact the lecture theatres had on participants. The scale and the design conveyed a sense of grandeur which triggered feelings of being part of a bigger tribe:

> ***Farif:*** *"Being there, sitting in a room that's just so big, it felt like we're doing something bigger than us………Yes, just a feeling of importance."*
>
> *FY Med, FG 1.2*

The scale reinforced that sense of having arrived, and contributed to a growing appreciation of others beyond who they lived with or had already met, were part of the same journey, with the same shared goals:

> ***Temi:*** *At the beginning being in that lecture hall, having those first few lectures, I was like, okay, surreal I'd say. After so many years, you're doing what you want to. ………………. Those few weeks which I was able to be in that lecture hall and meet a few people, for me when it was …. communal*

> *thing on campus…… I'd say that's when I was like 'okay I'm studying, I'm officially becoming ….. I've entered medicine, this is what I've worked for, this is my life.'"* *FY Med, FG 4.2*

Lecture theatres (LT) as communal congregations to learning, is a shift from viewing LTs as didactic, formal spaces to convey information from "an expert" to "the many". Participants reframed them, as privileged spaces where people gathered for in-person sessions, to chat, connect and ask questions in real time. Lecture theatres allowed some to reflect on the scale of the journey and the destination:

> ***Rami: "****I even remember being in the lecture hall, that was a moment of reflection too because often I would overlook and see so many people and so many different ideas…… it was very intimidating and real."*
>
> *FY Med, FG 3.2*

Rami expanded on the point above to explain*: "it's just me talking to myself in my head and I'm listening to what I'm doing and then thinking".* The focus in these large formal teaching spaces was away from them as an individual, in ways that weren't always possible during other activities. Attending sessions in LTs created an appreciation of the many other actors involved and the bigger stage they were joining, which may need to be balanced against the risk of getting lost.

The built environment facilitated this sense of being part of something bigger and shared purpose. Even in the depths of COVID-19 and the height of restrictions, creating communal spaces for people facilitated progress:

> ***Suni: "****I like having that big space and knowing other people are there because it motivates me to do the stuff we're supposed to. It doesn't make me feel so alone. This is a race we're all running together…………I think it's more just realising that as alone as I am, I'm still a part of something"*
>
> *FY Med, FG 3.2*

The importance of being part of this tribe, of running the race together, with shared beliefs, values and decision-making frameworks, was challenged when more students chose to learn remotely, exemplified by **Chris**:

> *"it felt like the room was too big for four people and it served more as a distraction than something that facilitated our learning …..it wasn't the size of the rooms itself but rather the empty seats that was distracting"*
> *DEM 1, FG 4.1*

The under-occupancy and resultant empty seats in a tutorial room undermined their own choices to continue to attend in-person. Suddenly, because of the room set up, they were conscious of being on the outside of their new culture and tribe, having made a different choice.

Working individually and together, even in busy communal spaces was desirable, with many citing the presence of others as a motivator. The implicit and tacit support from peers to learn, socialise, and in some cases control behaviour, was evident. Collaboration opportunities afforded a chance to benchmark and ensure they were on the right track in this new, busy world of health professions education:

> ***Mel:*** *"Any time we did tutorial groups or anything else, I always felt better about it because you can kind of gauge where everyone else is at, but if I was kind of on my own and I was trying to compare myself against this unknown standard"* *DEM 1, FG 2.4*

When spaces were inhabited by others doing similar, expected, activities, it created a social norm. Learning to zone out distractions and stay focussed on the task was helped by furniture, layouts and proximity:

> ***Suni:*** *"being together definitely helped, not necessary in an enclosed location but relatively close to each other. We would all sit at one table or be in a room where the couches were apart ……..because we would sit at a table in the basement but there would also be other tables and*

> *people working there, so it's a matter of staying focused on the group."*
> *FY Med, FG 3.2*

Purposeful activity, in this next case solo studying, were assisted by design and layouts:

> ***Taj:*** *"It was just it had that studious feel – it makes you want to study and get some work done "* *Pharm 1, FG 5.3*

with the views, internally and externally, also facilitating Fedha to achieve their goal:

> ***Fedha:*** *"And also, like, the views and the design of the library"*
> *FY Med, FG 5.1*

These quiet study library spaces created a sense of being connected with other learners, preserving the sense of the individual, but situating it within, and as, a common event:

> ***Suni:*** *"it's just the atmosphere of determination. For me. I like going to libraries because I like the judgment that people have of me. It motivates me. I don't want people to look at me and be like, "Oh, she's goofing off. She's not doing any work. What is she doing here?" So that motivated me to be constantly productive or academically productive while I was there."*
> *FY Med, FG 3.2*

Configuration of spaces and design cues either helped or hindered, with some being described as intimidating or scary:

> ***Rami: "****but something like a board room meeting would be very scary as opposed to a casual meet-up in the library…."* *FY Med, FG 3.1*

Whilst much of these messages are positive, there are powerful indicators of assimilation, learning how to behave as expected, and fear of being judged or found lacking, the implications of which are discussed in Chapter 6.

Visibility, through and across spaces, conveyed welcome, communality of usage, productivity, and confers passive control. It also aids transparency externally and reminds learners of their connection with the wider world:

> ***Suni**: "even if you were in a room you didn't necessarily feel isolated because you could look outside and there ….. people going about their day. So even though the focus is in here you know you're a part of something else."* *FY Med, FG 3.2*

The built environment's design and configuration helped individuals realise they are part of something bigger, by amplifying connections with each other and situating their personal and professional progression within a wider societal context:

> ***Mel**: "The thing I like about N-Building is the glass front. Straight away it looks like a communal space and like everyone can see in and everyone is welcome in…."* *DEM 1, FG 2.4*

A sense of developing self through these experiences is voluble. This development can be challenging and can be mitigated by other additions and adjustments in the totality of the learning environment, some of which are presented in the sub-themes below, prior to being discussed in Chapter 6.

Subthemes: Pointers help us find our way:

Symbolic events, such as the WCC, have been discussed earlier in the context of aiding transition and allowing a sense of pride and achievement to be shared with family and friends. It was noticeable that participants who used the WCC as a reason to create an event and a chance to congregate seemed to derive deeper impact:

> ***Rami:** we all woke up early, we sat in an apartment in the living room, connected it to the TV so it was on a big screen and we were all sitting there eating breakfast [laughs] and watching ….. it was just to create a sense of impact. On our own in our rooms wouldn't really do much, so being with people, allowing you to realise what's really happening, made it feel a little more special than it already was."* *FY Med FG 3.1*

Suni who was in the same FG, explained in contrast that they were "*alone in my room*", although they too called family. In response, Rami offers the consolation

that the WCC was "*pretty early on*" almost trying to compensate and include Suni now, making up for being "left-out" originally. The sense of added benefit from communal watching of the WCC elicited this warm description too:

> ***Farif:*** *"we all watched it together on a TV screen in the living room and it was very cute and nice, and there was a big sense of community like we're all doing it together, yes."* *FY Med, FG 1.2*

In addition to symbolic and big set piece events, such as the WCC, participants wanted the totality of the learning environment, including through the use of art and artefacts, to assist with transition, reminding them they aren't "just" students:

> ***Adel: "****I just saw and it just reminded me, "I'm in a healthcare school," was in the cafeteria in [building], there's like these…there are these glass… not drawers, they're like a closet where you can see, like, old medical instruments. So I think that's really nice"*
> *FY Med, FG 2.1*

In addition to reminding them of their destination, participants saw a wider role for art:

> ***Rami:*** *"because the majority of us are international students, we don't know very much about the building itself or the history of it. So I think art and history filled walls would be great…………I would love to know more about the people and the first surgeries maybe and even medical related information. I think that would be great, I would love that."*
> *FY Med, FG 3. 1*

At this point the facilitator let the group know *"actually …. there are loads of old paintings and medical equipment that's worth having a look at ……",* to which Rami replies "*Wow, okay, yes…..That's so cool, okay, I love that stuff. I'm going to go take a look after*".

Whilst the lack of discovery illustrates just how restricted access to campus had been for these students, the excitement between the students to learn these were available

was palpable. Items of art and artefacts are navigational aids as they help students locate themselves, both to a sense of place literally i.e., outside the anatomy room; or figuratively i.e., a healthcare course; and a sense of purpose. They act as pointers and perhaps portals, connecting students to past, current and future practice.

At scale, art can invoke awe, and was a powerful reminder of appreciating the journey **and** the destination, and of being involved in something bigger than the individual:

> ***Jo:*** *"For me, the awe moment actually was associated with a place on campus. I was walking into the anatomy lab for the first time[21]. It wasn't even what we were doing there…… it's gorgeous, it's beautiful. It has those amazing, like cardboard paper statues[22] hanging from the ceiling and then just realising that there are bodies there for us. So our learning is so important that someone has chosen to donate their body[23] to us, and just being in that space, I think I even cried a little bit when I first walked in, I was like, 'Wow. This is overwhelming'." GEM 1, FG 2.1*

Subtheme: Escape valves

The commitment from participants to their final destination was never in doubt, but they expressed a need to sometimes carve time and space away, in effect to escape, make sense of what they were experiencing and be anonymous. Having people to talk to about the journey and shared destination, as demonstrated in Theme 2, is important, but sometimes the cloistered sense of living and learning together could be too much. Exercise was cited as a way to change things up, support their wellbeing and relieve stress: "*Even if we were to go to the xxxx gym, anything that's just different than sitting*

[21] Art and science share a common space in the anatomy room, home to a permanent art collection

[22] Nine of Mick O'Dea's RHA sculptures on loan from the installation The Foggy Dew, commemorating the 1916 Easter Rising, and depicting falling figures, are hung from the rafters in the Anatomy Room, titled the Ever Present Dead.

[23] Cadaveric dissection is usually part of the curriculum for all programmes included in the study. Whilst small group anatomy teaching continued throughout COVID-19, restrictions required adaptions and the use of prepared pro-sections instead.

down and studying and that gets you to socialise" (Adel FG 2.2). Participants across the FGs requested more, and more access to, indoor and outdoor sporting facilities. However, one participant, a regular gym user prior to university, to their own surprise had stopped going because of a lack of anonymity, as well as feeling observed in a gendered and non-neutral way:

> ***Rami**: "I've gone to the gym my whole life but something about knowing everyone who's there was very… but for some reason I knew everyone in the gym and that was just not comfortable, so I really did try to stay away from it…….. I've not tried the xxxx gym but I've heard that it's pretty nice so I might try that next time. But I'm definitely staying away from the [main] gym".* FY Med, FG 3.1

Outside personal connections and friendships were useful as a means to get away:

> ***Mel:** "I'm really into exercise as a means to relieve stress. So I would meet friends for runs and that kind of thing. And I'd find myself talking about medicine all of the time, every day. Whereas I think the best thing for me sometimes is to meet friends I had that were doing other degree programmes and instead of joining in on the ranting, they would just want to talk about something else. So that helped me massively, to be honest."* DEM 1, FG 2.4

It becomes clear internal and external voices can act as influencers or barriers in student success, depending on support or opposition for events occurring in the programme and the resultant development of professional identity.

The connection between the university and its surrounding city was appreciated, creating transitional spaces to fulfil a need for escape and anonymity:

> ***Suni**: "I would like to go on walks by myself and I felt like I had a bit of anonymity …. because I had a mask on and a hood or a hat on, and I'm walking by myself, zooming through the streets of Dublin, so I'd be*

> *walking like what am I doing here?"*
>
> *FY Med, FG 3.2*

Release valves and reflection were also achieved by taking the *"longer route to kind of think about it and think what it means to me"* after a jarring experience during anatomy with a professor (Jo).

A need to be able to be still, and find time to connect with "self", as a way to escape, amidst this bigger purpose was also discernible:

> ***Chris:*** *"I might grab some lunch and just sit by the pond and just ponder[24]. [Laughs]."* *DEM 1, FG 4.1*

As well as using spaces in the city, **Chris** spoke of creating green spaces within the campus – specifically zen gardens - to maximise exposure to nature, reflect and relax. This speaks to a desired degree of separation whilst still being on campus, which I have termed "together-apart". It was appreciable elsewhere in the data and was consistent with reported ways of using the library, canteen and coffee shops – of being surrounded by people with whom you shared common goals and a greater purpose, but, in that moment, you needed to step back (slightly). At other times, the need to clearly carve out space, to be removed and be able to "rant" or process dissonant events was plain. Whilst campus spaces may provide this, it remains likely that an "escape valve" away from the university is valuable.

FG Theme 4: Authenticity and Experientiality

In the first three themes, I chronicled how students realise they are embarking on a journey, make connections and situate themselves as part of something bigger. This

[24] There is a large park with a pond, very near the city centre campus. It is heavily used by students, residents and visitors to the city. See Appendix 9, Figure 46 pg. 303.

fourth theme and its sub-theme, articulate the impact of core authentic experiences in furtherance of professional development and progression.

These included a wide range of activities, including the expected, big "set piece" purpose-built spaces such as the anatomy room, or specialised simulation tutorial rooms for medicine students:

> ***Chris: "****what I guess being in an environments like these tutorial rooms and in my experience of the anatomy room, those were places that reminded me of what I was doing and that served as a big motivator"*
> *DEM 1, FG 4.1*

and for pharmacy students, the *mise-en-scène* of the mock-dispensary signified learning as health professionals:

> ***Taj:*** *"our first Patient Care Lab, where we were dispensing medications ……………. I was so nervous. I was like, "I have to do this in real life, as well." You know, it's not just learning the stuff - it's applying the knowledge, as well"* *Pharm 1, FG 5.3*

Other sessions were also meaningful, as they enabled a sense of being "*hands-on" (Fedha, FY Med, FG 5.1)* through lab work, and the usage and presence of smaller pieces of kit such as skeletons and examination couches, acted in a talismanic way, even when not being used in the actual session:

> ***Jo:*** *"There's a skeleton, like things that are medical, and that kind of helps you set yourself in the right frame of mind and, kind of, I guess, makes us want to be more professional and as a result, we are."*
> *GEM 1, FG 2.1*

The presence of this kit was motivational, both in the moment to convey expected behaviours and afterwards:

> ***Dara:*** *"all the shelves with all the medicines, and that motivates you more to go and look at them and read more about them." Pharm 1, FG 5.2*

These learning experiences where equipment and kit are used, and the presence of kit to signal potential future experiences, allowed meaning to be created by the individuals, both individually and collectively. A desire for more exposure to authentically equipped spaces was expressed by **Taj**, who wished for somewhere:

> *"So that you could practise. Maybe if you go in with your friends, or something, and practise counselling and practise dispensing"*
> *Pharm 1, FG 5.3*

demonstrating an understanding of the role of peers and self-directed learning, important characteristics in professional practice, that was not being facilitated by the current access arrangements to the built environment.

Congruent with Theme 1, their past lives created different points of meaning from similar experiences, i.e., **Suni** felt "authentic" during labs, whereas **Farif** felt the labs were just like high-school and as a result said, "*I feel like a Science student*".

In much the same way art and artefacts acted as high-level navigational aids and portals to connect to something bigger in Theme 3, authentic experiences with and in the presence of smaller artefacts, pieces of kit and "*the proper medical tool" (Eddie, FY Med, FG 1.1)* provide learners with opportunities to orientate, collaborate, and visually connect and focus on their future, and in so doing, make meaning of their current positionality:

> ***Mel:*** *"It was the tutorial groups in N-Building where we would do, like, clinical skills, like they were the rooms that I found myself, like, I would get excited going into them because I liked the atmosphere that was in there. And it was more what I expected a medical school to be like."*
> *DEM 1, FG 2.4*

The use of teaching spaces on clinical sites was a powerful early experience with **Jo** remarking *"you're not only surrounded by doctors, but you're at the hospital. You know that the floors are above you, there are patients who actually might need your help at*

some point" (GEM 1, FG 2.1). The excitement to learn in these places, to have been present in the clinical environment (**Jo**) or tutorial rooms equipped to teach clinical skills (**Mel** and **Chris**) is unmistakable, meeting expectations and facilitating views of their envisaged future selves.

At its best, experiences such as these create frames of reference and build scaffolding for future spiralisation (Harden and Stamper, 1999; Wald *et al.,* 2015) of learning. Conversely, where learning is divided literally and figuratively between "clinical" and "campus" it can create an artificial divide and hamper progression, leaving only their sense of destination to provide hope and hold on to in the interim:

> ***Farif:*** *"I know that there are rooms and there are places on campus that are inspiring and they make you feel that you're really going into the profession."* *FY Med, FG 1.2*

The influence of faculty and professional staff on participants meaning making from experiences included many positive opportunities, whilst others created dissonance: feeling rushed into the "first" anatomy session; lab technicians and demonstrators being "dismissive"; professors lack of humanity when asked for more information in the anatomy room about the donors. Others had their preconceptions reinforced about culture in the professions, given the modalities, set-up and layout on campus:

> ***Jo: "****when it's lecture time, there is clearly the professor area and the students' area. So it's hierarchical, which is true for medicine. (Laughs)".*
> *GEM 1, FG 2.1*

Overall, it is clear that spaces reciprocally contribute to authenticity and are conferred with meaning because of events that happen in them. The loss of many non-learning events, moved online due to COVID-19, and the symbolic resonance of those events was felt:

> ***Rami**: "what I've heard from people in older years is that they associate a lot of areas with events, like 'This is where we have the freshers' event or the White Coat Ceremony' and I think it's important to have something to associate it with because then you have this idea of this is ……………..Important, exactly. So we don't have anything to associate areas with … it's very difficult to determine how we feel about them."*
> *FY Med, FG 3.1*

Subtheme: Sense of Development and Progression

The acquisition of knowledge, skills and vocabulary is used to evidence progression, to signal separation and even to start to "show off". This transition happens with family and friends:

> ***Temi:** "my friends here who are in different degrees, whenever you get anything health related, I'm like okay, I do know, show off, but yes, I know what's going on, or I can explain to a degree that I know"*
> *FY Med, FG 4.2*

Things that were previously shared and familiar, with everyone on equal terms, become understood in a new way, which began setting participants apart. As hoped for when selecting FGs as the preferred method for data collection, the exchange below, between Suni and Rami, allows them to share stories of individual skill development with resultant separation from their families, which in turn creates a social context for their joint development of professional identity:

> ***Suni:** "I remember learning about …… the blood pressure checking machine…..and then learning how it actually works and I was like wow, that's crazy."*
> ***Rami:** "Oh yes, me too! [laughter]"*
> ***Suni:** "We have one at home and I'm constantly checking my parents' blood pressure …... So I was like wow, this is so cool, I know how this works. And I remember I called my parents and I was like 'I know how to check your blood pressure properly now; I know what's happening.'*

> *……….it took something I have seen forever and broke it down into a medical sense for me, instead of it being a procedure I knew how it actually happened.”* *FY Med, FG 3.2 and 3.1*

Having kit available – in this case a simple blood pressure machine - to authenticate learning, allows participants to begin to assume and inhabit a new position, a transition which is entangled with their past self, pride at learning and a growing ability to help. Participants valued these authentic learning experiences, both for the technical skills and professional competence and for providing markers of progress along the journey:

> ***Taj:*** *“I think after [the pharmacy patient care lab] was more of a sense of fulfilment, as well. To feel like I finally did something.”*
> *Pharm 1, FG 5.3*

This connection to their former and future self through experientiality allowed them to both validate their learning, and create and share joy at the progression being made.

FG Theme 5: Reasons to Linger

Participants clearly articulated the need for places to linger, to spill out - after anatomy classes, lectures, and labs - into spaces that encouraged them to pause and hang-out. Spaces needed to signify welcome and the “right to remain” including through comfortable, informal, seating; large tables; the presence of coffee; that cumulatively created a sense of community, where collaboration and fun could be had:

> ***Rami****: “It had a bunch of different play areas downstairs and collaborative spaces and tables and stuff…. That to me … it is an idea of what I have in my head when I think of a collaborative space built for students who are looking to better their education. I think it’s a very well set up area in the sense that there are many different places to choose from, it looks like it’s made for students, it’s lovely and colourful, and ………it’s convenient and fun and makes learning looks accessible.”* *FY Med, FG 3.1*

These spaces did not need to be complex or expensive, rather it was appreciable that participants welcomed simplicity signalling clarity of purpose, i.e., round tables for collaboration; couches for lounging; enclosed spaces to work on presentations and discuss opinions, etc. Participants appreciated design cues influence and setting of the tone for spaces.

During the period of data collection, access to campus was restricted and attendance was for distinct and discrete purposes, i.e., going to the gym, attending a taught session, which removed most opportunity for spontaneity. This created a need amongst individuals for somewhere to hang out, a third-space, which was voluble in its absence on campus, causing individuals to go *"straight back home." (**Temi**, FY Med, FG 4.2)*. Spaces, furniture and layouts that were available and conducive to creating cultures of collaboration were recognised:

> ***Adel:*** *"in N-Building, there's like these blue seats that are very round ……….And it's really nice because they're socially distance, but it's like a circle. And you could all sit and talk to each other and it's just easier. And when it's convenient to sit beside each other, you're more likely to and you could just go to a random group and sit there and start a conversation I think"* *FY Med, FG 2.2*

The opportunities for peer support on campus which had been snatched by participants during Theme 3, was amplified when these spaces existed. Creation of community, through occupation, proximity, density and congregation helped ensure welcome, and an ability to be recognised, in what could otherwise have been a lonely time:

> ***Dara:*** *It's [the canteen] like where all the pharmacy students used to go. …………It was kind of small, so we all get to see each other. And there are tables there and a cafeteria, so that we could get something to drink, as well. ……………And lockers were just very close to us."*
> *Pharm 1, FG 5.2*

The need to inhabit, go somewhere they can be known and know others, to belong and be with their "tribe" was exposed, and when these spaces were found, the importance was clear:

> ***Jo:*** *I know I keep talking about it, but a coffee place [laughs]. Honestly, like, even when we're in [teaching hospital], this is where things happen. This is where if you want to discuss something, this is where you go, and knowing that there's a space where you can sit down, get a coffee and just spend some time is, I think, great."* *GEM 1, FG 2.1*

Whilst proximity to lockers was helpful in creating a primary reason to go somewhere (**Dara** and **Jo**), it wasn't enough on its own and participants wanted more than just locker rooms as places to congregate for professional socialisation and discussion of events:

> ***Shaz:*** *"Not really a useful place to discuss that [after anatomy], in a locker room, to be honest, because it's just a brief take your bag and then you walk away."* *DEM 1, FG 2.3*

Campus spaces created an equity conducive to learning, removing possible comparisons and responsibility for the spaces / food / coffee, which instead became the university's:

> ***Rami:*** *"I do like campus as opposed to going over to people's apartments or living rooms sometimes because that way it's no one's responsibility to take care of the place and so you're able to focus on the educational or collaborative part. That's definitely a pro of being on campus."*
> *FY Med, FG 3.1*

Participants fundamentally recognised jointly working on tasks, sharing food, co-creating knowledge and a growing appreciation of other's perspectives was enhanced by having welcoming and inclusively laid out communal spaces in the built environment:

> ***Adel:*** *"I think everything that I said is related to, obviously, the setting, because obviously the way you're seated, it's really weird to think about,*

> *but the way you're seated or the place that you're in can really determine how easy it is for you to talk to someone."* *FY Med, FG 2.2*

A critical insight is the need to create space to linger both pedagogically through having some space in the timetable **and** physically, to allow for creation and assimilation of learnings, to "practice at being", at the individual and group level. This was manifest both through its absence:

> ***Mel:*** *"when I had those longer study weeks, I was more likely to actually go out onto the campus facilities, like the libraries and that kind of thing. And that was when I would kind of like meet people up the stairs…..and talk to them there….I feel like the more free time you have, the more likely you are to use those kinds of facilities in the college, whereas if everything feels like it's like falling down around you, you're not going to…………..*
> *I was just, like, rolling out of bed and straight over to my desk. I didn't care where I was or who I was with because I was just that stressed. Whereas I think there's no point having floors and floor of collaboration rooms if you have no time to use them. So I think it's all, like, interconnected."* *DEM 1, FG 2.4*

and appreciated when it was present:

> ***Jo****: "I actually thought at least the GEM programme did an amazing job facilitating teamwork online. They had allocated time slots for us to meet with our teams. We didn't have to do it at this at this time, but being very busy with the curriculum, it really helped. For example, at [teaching hospital], we didn't do any teamwork there yet, but even at the [teaching hospital] they would have university student lounges, and those are clearly set up for that kind of stuff because you have separate rooms, you have round tables with comfortable chairs, these types of things"*
> *GEM 1, FG 2.1*

The interplay between socialising, as something distinct from individual study, and social learning facilitated by spaces, manifested strongly within and across the FGs and hence across the data set, and has been captured in this theme as lingering, sometimes with a

purpose and sometimes without. Providing spaces for and reasons to linger through the built environment is therefore important.

Subthemes: Agency, Choice and Control

Given the prevalence of COVID-19, the imperative to keep clinical access available to students was prioritised by the university, resulting in social distancing and access on the university campus being controlled throughout AY 20/21 (Strawbridge et al., 2022). For some participants, this resulted in frustrations, annoyance, and feelings of being watched:

> ***Chris:*** *"The campus felt very surveilled [sic] and there was security everywhere telling us where to go and where not to go ………………So instead of campus being a place where we're supposed to work our best and feel most comfortable, it became a place that some students were avoiding."* *DEM 1, FG 4.1*

Whilst there was an understanding of the need for restrictions, the issue was compounded when they couldn't make sense of the application of restrictions on campus, particularly as they had been grouped into learning and living communities:

> ***Mel: "****I was told to stand two metres away from my roommates for appearances sake and obviously we were living together, so it didn't make sense to me that way***.** *So we just wanted a space where we could make our own logical decisions about it, I guess."*
>
> *DEM 1, FG 2.4*

COVID-19 restrictions limited exploration within and between buildings, with **Fedha** commenting *"it was difficult to walk freely inside the campus".* The cumulative effect was students ultimately exercised their agency and chose not to attend, reducing usage further resulting in a feeling epitomised by **Suni**:

> *"Every place was very clean and felt very empty almost, not in the sense of people but the energy was empty, it felt hollow almost."*
>
> *FY Med, FG 3.2*

When students did attend, the importance of variety and the ability to choose spaces for different tasks was unmistakable across the data. This exertion of control of oneself facilitated by variety in the built environment can be an indicator of professional self-determination and development:

> ***Shaz:** "…. the study area on the second floor. I came here a few times during exam period just to focus, because when I'm in my room, I'll just be like lying on the bed instead of sitting on the desk. I just cannot go away from the bed. I don't know why."* *DEM 1, FG 2.3*

Whilst the pandemic was a once in a life-time event (hopefully!) the learnings from this sub-theme relate to student agency, choice and control. The implementation of COVID-19 restrictions removed and reduced agency, impacting their ability to choose where and when to linger, build connections, feel part of something bigger and create early authentic experiences particularly around collaboration and teamwork.

Situational Theme: Lemons and lemonade

The final theme generated from the FG data relates to participant experience of university during the pandemic. In attempts to make the campus COVID-19 safe, we have seen that for some participants, the university had made it unwelcoming to the point of avoidance (Theme 5, subtheme 1), which impacted attendance further due to under-occupancy and de-densification (Theme 3) and the lack of a tribe. Primarily this was interpreted as a loss of control and a lack of choice and is discussed above.

More prevalent across the data are examples of pragmatism, optimism and making the best of things, reminiscent of the saying "if they give you lemons, make lemonade".

Nearly 75% of participants had travelled from overseas, during periods when mandatory quarantine was compulsory and before vaccination was an option. Mitigation of the impact of COVID-19 was intrinsically through their own desire to stay focussed on the destination:

> ***Mel:* "***It wasn't negative or anything like that. It was pretty much what I expected it to be from the outset, and we still had as much on-campus activities as we could."* *DEM 1, FG 2.4*

and by the steps taken to facilitate safe professional socialisation through on-line groups, learning and living communities, and events:

> ***Adel:*** *"sometimes accommodation would have these socially-distanced challenges in the courtyard, which were really nice" FY 1 Med, FG 2.2*

This ability to make the best of things, carving out joy, friendships and memorable experiences, and holding on to the prospect of a better future, is interwoven through the preceding five themes and typified in this extract:

> ***Chris:*** *"in anticipation of next year and hopefully lockdown and restrictions being lifted, I joined a few committees of some societies, you know, hoping to meet new people and get involved…………that's been nice, you know, collaborating with other students, with the same vision in mind. There's just the sense of optimism for next year, which is nice."*
> *DEM 1, FG 4.1*

Whilst this was a smaller theme in the data, it nevertheless was present, and worthy of a standalone theme, as participants repeatedly showed stoicism and a desire to make the best of the situation, using the extraordinary circumstances to create shared experiences:

> ***Suni:* "***The pro was really the friendships we made and it's a good experience to look back on. When I talk to my friends now, we still think*

about it, like 'Remember when we did this and this?' And I'm like 'Yes, I remember that; that was fun" *FY Med, FG 3.1*

Their testimonies of laughter and hanging out, of awe, progress and learning, speaks to their resilience and their finding upsides (Slivkoff et al., 2021) and "silver linings" during this extraordinary time (Broner et al., 2022). Given the challenges of being a health professional, it would be hoped this bodes well for their future development.

5.4. Summary of themes from the focus groups

Participants shared their stories aided by the skilled facilitator. These were reviewed systematically and iteratively, then coded, prior to the active generation of themes and subthemes. Quotes were used from across the 5 focus groups and 13 participants, to illustrate the themes, as evidenced in Table 5.

TABLE 5 QUOTE UTILISATION BY PARTICIPANT BY FOCUS GROUP

FG1	No. of Quotes	FG2	No. of Quotes	FG3	No. of Quotes	FG4	No. of Quotes	FG5	No. of Quotes
Eddie	6	Jo	7	Rami	11	Chris	7	Fedha	5
Farif	10	Adel	8	Suni	11	Temi	6	Dara	4
		Shaz	4					Taj	7
		Mel	9						

Themes appeared across FGs, sometimes more prominent in one than in another, given the discursive nature that can arise in FGs. Different participant's quotes were used to illustrate themes, with quotes from 12 (of 13) participants used in Theme 1 and its subthemes; 11 (of 13) contributing to Theme 2; 10 participants to Themes 3 and 4 and their subthemes; and 9 different participants in Theme 5.

These quotes brought to life the themes, discussed in the preceding sections, which were generated by a deeply reflexive thematic analysis of the data. Collectively, these themes tell stories of learners embarking on a journey to become part of the health professional community, recognising the need to make supportive connections as they learn and are challenged by experiences, in their bid to contribute to society.

In the next part of this chapter, I report on my analysis of the observations, before linking both and presenting my final amalgamated themes.

5.5. Themes generated from the Observations

In Chapter 4, I described the activities in the pilot (Thurs evening Nov 2021) and two additional observations (Friday evening and Saturday morning January 2022), and the subsequent thematic analysis process conducted. This process generated 7 themes which are presented below.

In ethnographically informed studies, it is important to consider and portray an holistic view of the "terrain", the impressions this evokes, and how this then reflexively influenced my analysis and findings (Somekh and Lewin, 2011, Ch. 4, pgs. 34 - 42). By way of reminder, this research was undertaken in an urban, single faculty university of medicine and health sciences[25] in a capital city in the EU. In addition to being a university, it is the professional postgraduate training body for certain medical specialities[26] and other health professions[27]. Prior to commencement of my study, significant investment had been made to develop the campus, and N-Building was the location for the observations.

---

[25] Registered students during AY 20/21 and AY 21/22 were 4587 and 4647, split approx. 65:35 UG:PG

[26] Surgery, Radiology, Sports and Exercise Medicine

[27] Dentistry, Pharmacy, Nursing and Midwifery

The usage and occupancy of N-Building varied over the course of the pilot and two sessions of observations totalling 7 hours. I recorded[28] in my research diary that the weather on the Saturday morning was a particularly miserable wet January day, and in contrast to the other sessions, resulted in N-Building being sparsely populated, whereas previously areas including the closed coffee shop contained *[plenty of students]*. The busyness of the previous evenings, recorded in my journal, was replaced by a more single-minded or purposeful intent, as users mainly used the gym or study areas. It is not clear if that was a result of the weather, or the usual pattern of usage.

[28] My observations, notes and musings from field work are presented in *italics* and between *[…]*. Direct quotes from participants are presented as such in "*italics".* Photographs in this section are taken during the observations.

Observation Theme 1: Communication and Control

Communication – and hence control - in relation to COVID-19 was mainly through signage and other non-human means (Figure 27), e.g., big yellow seat drapes on the blue couches limiting places to sit, as well as university security staff. The signage introduced boundaries and limitations for the students on the spaces and on how to use them through seating plans, room capacities etc.

FIGURE 27 ASSERTING CONTROL THROUGH NON-HUMAN MEANS

It appeared that compliance overall was strong, particularly in relation to social distancing, although this could have been a factor of the relatively light utilisation of the building during the observations.

Mask wearing was observed universally, with only one “breach” when a security guard asked a student who had removed their mask, to put it back on, which they did readily

and with a polite apology. My notes record this particular student later *[holding court]* and *[chatting loudly - in a language other than English]*. A short while after, the same student went to the vending machine to buy a snack, once again removing the mask and leaving it off for an extended period, pushing the boundaries to their limits. However, the mask was back on by the time the staff member returned later.

Students were seen sitting[29] beside each other on benches in study pods (Figure 33 pg. 197), and sharing food in the cafeteria (Figure 34 pg. 199). It wasn't possible to determine if these students were in a "bubble" or if they were ignoring the signage. During the observations, security staff did not ask these students to socially distance, something which had been reported during the FGs. The COVID-19 signage felt restrictive and incongruent with the purposes for which student were using the spaces, creating a number of tensions (mine), for example the flow of people and the use of the staircases; the fluidity of groups with people coming and going; and the use of the study pods to co-create and learn through congregation, which are discussed later. It is also possible that nearly two years after the start of the pandemic, with the improving COVID-19 situation, soon-to-be loosening of restrictions[30] which was known, and the likelihood that all these students were vaccinated, the signage had simply retreated for the students and was no longer as unwelcome or oppressive as it was to my eyes.

Observation Theme 2: See you at the Blue Couches

The blue couches were a mainstay – for gathering, for connecting, for socialisation - with people arriving from outside, coming downstairs from studying or up from the gym, to linger and hang out (Figure 28 pg. 190). Chance opportunities and pre-planned interactions for reconnection after being apart during the week were observed.

---

[29] Student faces have been inked out in all photographs using blue dots

[30] Irish Government Announcement 22nd January 2022

People who arrived into this space had a choice: to pass though or pause. They joined pre-existing groups or sat separately. Often, if they had sat on their own, others came to join them or acknowledged them as they walked past. Observed interactions demonstrated shared histories and pre-existing connections between students – a passing greeting called out *"How are you doing? Surviving?*" to which was replied a cheery *"Just about!*".

Sometimes convergences seemed pre-arranged but often it was informed chance, as the behaviours were suggestive of knowing where to find someone or to be found.

FIGURE 28 SEE YOU AT THE BLUE COUCHES: VIEWS FROM INSIDE AND OUT

Groups were fluid, with people coming and going. This was an easy, comfortably occupied space, with my field diary notes recording *[v. v. relaxed – one lying across top of band of seating]* and *[nice vibe about the place]* (Recorded Field Notes November 2021). It was lively and active, as students shared stories, a mixture of their everyday lives including discussions about grocery and food shopping; the Lotto. Experiences of learning and *[study strategies]* flowed: "*oh ours is online*"; checking programme requirements "*that's only worth 20%"* was followed by *[a relieved] - "is it?"*; *"heard its*

mad" and a question relating to *"Moodle – any need*" was answered with a "*Yes – very good*" (Recorded Field Notes January 14th 2022). Their conversations rolled and evolved. These were supportive, sharing past knowledge of activities and assessments to help each other, and seemed to help with constructive benchmarking and creating commonality of learning across experiences.

Students stayed standing or pulled chairs across, but no-one moved the yellow drapes - visible in the photographs and which were being used by the UoH to support social distancing - rather they worked around the restrictions, maintaining connectivity. Notable conversations within the groups exposed the importance of having a place where the day's events could be unpacked safely and supportively "*outpatients clinic ….. not really going to let you do that"* as they discussed *[other doctors behaviours]* and *[response of patients]* (Recorded Field Notes January 14th 2022).

Students did not ignore the instruction to socially distance, but at times, did lean in to be closer during periods of intense discussion and support:

> *[17.31: One single conversation now. Something has happened. Changes mood of group completely – carefree (re)connection has gone. Conversation level dropped and dropped again;*
>
> *17.34 -Conversation continued. Full attention. Much much quieter. One person talking. Others listening, appear to be offering support.*
>
> *no tech / no phones. Seem to be full attention. Still mainly one talking with curious, gentle questions from another.*
>
> *Conversation moves on – discussing challenging cases (Psych)*
>
> *U[31]1a "What she has …."*
>
> *U1b "Why is so obvious?" …*

---

[31] In my notes, each of the sections of the blue couches were classed as U1, U2 etc, given their shape as they convolute round the concrete struts see Figure 40 pg. 298 and Figure 41 pg. 299. Participants in that zone were then assigned a, b, c etc.

U1c "Were you afraid?"

Unclear if issue was with patient or with how patient was dealt with by staff – or possibly both. Can't hear all of the discussion]

(Recorded Field Notes 14th January 2022).

Conversations were mainly supportive, and my impressions captured are of sharing *[war stories]* and hearing from people who had been on the rotation before *"I love that one"* and *"all the nurses love him".*

One exchange however, indicated perhaps a different history, was passive aggressive or needling between peers:

18.25 U2a - "Where are you for xxxx?"

Stands and chats / replies

U2a - "Ah – they give good grades! Very easy!" [Laughing (at?)]

[did not linger or join U2. Query history]

(Recorded Field Notes 14th January 2022)

Whilst this could be considered banter between peers, it was discernible in the tone and body languages in the exchange this should be understood in a different way, demeaning of the person's placement and belittling any future good grade as somehow not being earned. This speaks to a competitive, judgemental culture, lurking beneath the surface.

During all these exchanges, users who continued to be solo in the communal space arrived, appearing happy to be peripherally connected but not involved. Some took calls and it was clear they had been upstairs studying, given they arrived with no bags or coats into the blue couch space. Others arrived with bags and coats and sat on their own for

a while, not obviously waiting for anyone, just being in that communal space, with views out on to the street, and surrounded by peers.

FIGURE 29 STREET VIEW - SEE AND BE SEEN

The intentional choice being made to gather and linger at the blue couches was unmistakeable. Although on the ground floor, they are to the left of the main entrances (Appendix 9, Figure 48, pg. 308). Given who was using them and when, the blue couches should be considered a destination, not just in the building, but within the university. The people sitting here want to be seen – by those in the building and by those walking past - and want to be able to see out (Figure 29). They are part of this community and culture inside, **and**, still, part of the world outside. The conversations ebbed and flowed, participants joined and left, groups merged and split, but the overall sense was of a welcoming space, visible from inside the building and transparent from outside, which was occupied and inhabited by students as they wished, in mainly respectful ways.

Students on the blue couches, lounged, sat, ate, but primarily reconnected with each other and their various groups at the end of their individual week:

> *18.10: [Cheery greetings exchanged] "Just finished ward round"*

> *[newcomer - joined a pre-existing group U1 – has come in through front door and come round - welcomed expectantly - let the rest know they've been busy until now (!)*
>
> *– sits slightly apart as has brought food – mask off - and then eating hungrily. Once finished, mask back on, cleans up and then moves nearer group – showing respect (?) for fellow students whilst mask was down.*
>
> *Meanwhile some other people left group.]*

Students tidied up after themselves, throwing away rubbish and wiping surfaces, maintaining the standards of the space. They came and went, responding to and interacting with the other inhabitants and the various typologies of furniture and the built environment available. Students using this area appeared representative of the nationalities in the programmes, and whilst English was the predominant language used, and always between groups, Arabic and other languages were also evident within groups.

Observation Theme 3: Studying "together-apart"

For students engaged in "formal" studying, the total numbers using the building was low, which I ascribe to the timing early in semester. Their choices of where they studied was interesting. The workbenches and chairs around the outside of the building had occupants at all times, enabling those students to have views of the street, the other university buildings opposite (mainly labs and offices) and the wider city (Figure 30)[32].

On these upper floors, students inhabited these spaces, albeit in a quieter, more studious way, probably in response to design cues and peer behaviours, as signage was limited. Often sitting alone, but within eyeshot of the next person, echoing the messages

[32] The red arrows in Figure 30 are used to indicate where students, hidden by the chairs, are actually seated.

from the FG participants of how they envisaged they would use these spaces when COVID-19 restrictions allowed.

FIGURE 30 LOOKING OUT....

Students also chose to study in more traditional, designated "silent" study spaces. The most popular room was on the second floor, with dual aspect large windows, looking out to the city to the south and to the north, and views across an internal atrium and major stairwell connecting the entire building, which can be seen on the right-hand side of Figure 31. Another, larger room was also used, although much less frequently (top left-

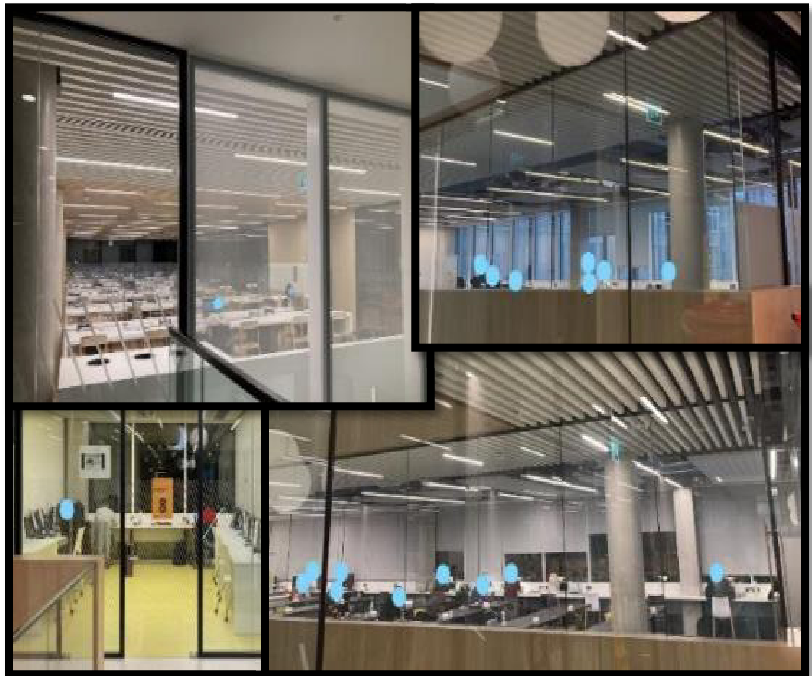


FIGURE 31 STUDYING TOGETHER

hand picture Figure 31. This room looks out on to the street and the university buildings opposite. It also has views internally, albeit more limited, and it is interesting to consider why its usage would be less. It could be due to the lack of visibility into the building, but, given the popularity of other external only facing spaces, I concluded this was unlikely the key driver of student choice. The larger room was extremely under-occupied, and as seen during the analysis of the focus group data, under occupancy gives rise to feelings

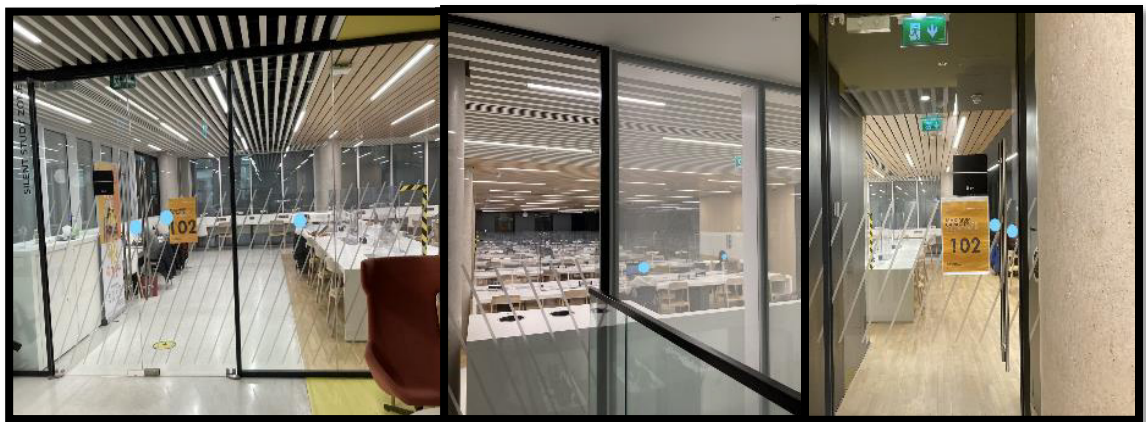


FIGURE 32 UNDER - OCCUPANCY

of self-doubt and of questioning one's choices. Studying by oneself, in a large empty room speaks of solitude and loneliness, rather than studying alone but being part of something in a common space, which is reflected in the distribution of students in the smaller room. Even in the larger room, students who did chose it tended to congregate near the entrances Figure 32. It becomes clear students are choosing to study “together – apart”, motivated and encouraged by the presence of others to perform in an ascribed way, i.e., working hard.

One other aspect which may have influenced students, is that in the larger room, COVID-19 screens had been installed as dividers on the existing furniture, whereas in the smaller more popular room, social distance was achieved through removing furniture.

The Perspex screens seem to have created unwelcome barriers, perhaps constraining students, with resultant influence on learner choice.

Observation Theme 4: Collaborations

Students actively collaborated on course work and to support each other's learning, using the blue couches, and for more formal or structured work in the Study Pods (Figure 33). Study Pod 3 and 4 have built in screens, housed in wooden furniture at the end of the seating, whereas Pods 1 and 2 (where I was based) have their tables horizontally to the communal space. Both types of pods were used by students to collaborate during the observations. One group's use of Pod 3 was notable. When my observations started, there were bags in Pod 3, but no people. After about 30 minutes, three people returned, with food and drink, having reheated the food using the microwaves at the Dispensary café (see Figure 34 pg. 199). This group chatted and there was a real sense of quiet companionship amongst them, but no attempt to connect with others using the space beyond the Pods. After a further 15 minutes, my field work diary notes

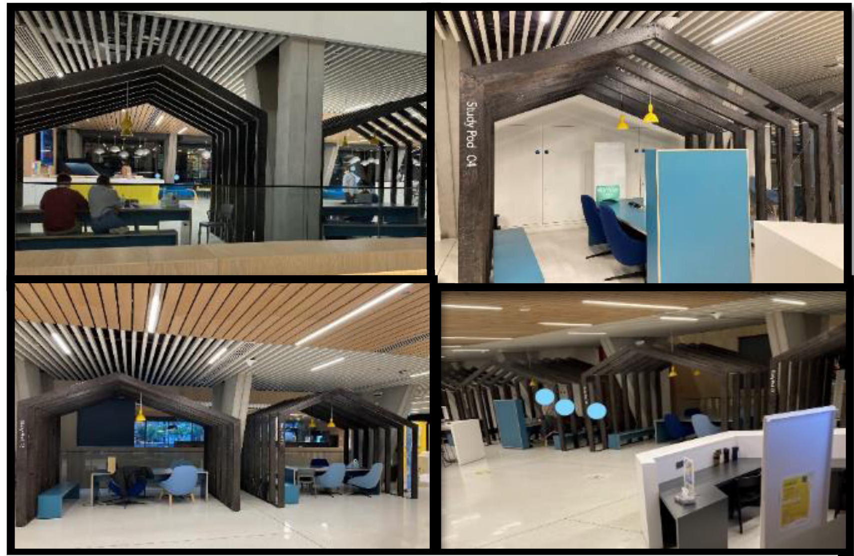


FIGURE 33 COLLABORATING IN THE STUDY PODS

[18.15 Booth 3 – still really quiet – on phones – jointly watching something]

and again later, my recorded sense is:

[18.30 Booth 3 – group are working together on something - quiet laughter. Studying. (talking Malay?) Catching only Snippets]

and

[18.48 Booth 3 – quiet – watching screen- working or social?].

(Recorded Friday 14th January 2022)

Because I could neither see their screen nor understand the language being spoken, it's entirely possible this group was completely social, hanging out on a Friday night, streaming a movie from a laptop. Either way, they were inhabiting this little corner of the building, their way. Later, they got an additional chair and brought it over to the booth, and after about 10 minutes another person joins them, where their quiet companionship and gentle laughter continues in Malay. By 19.23 the chat has moved on, and as they relive their day through a mixture of Malay and English, I am able to record snippets including "*neurosurgery*" and "*as a student*" and "*paediatrics*". They were still there when I leave.

These Pods (recorded as booths in my field notes) were also used for hybrid collaborations, with students making video calls, sharing material and coaching each other:

[18.38 Booth 1 – Video call "What I want you to do - orbit around …… underneath"
18.40 Booth 1 – seems to be coaching other person, as I can hear words of encouragement - "brilliant"
18.48 – still on video call – agree to meet at 3pm.
18.52 – call ends. Caller leaves.]

Observation Theme 5: Food

Kitchens, coffee, eating together and sharing of food had featured strongly in the FG. The ability to purchase food was not available during the observations, but the café area (Dispensary) is not cordoned off out of hours and remains accessible (Figure 34). Microwaves, hot water boilers and vending machines were available, and students used the area to prepare and eat food they brought into the building. A number of DeliveRoo

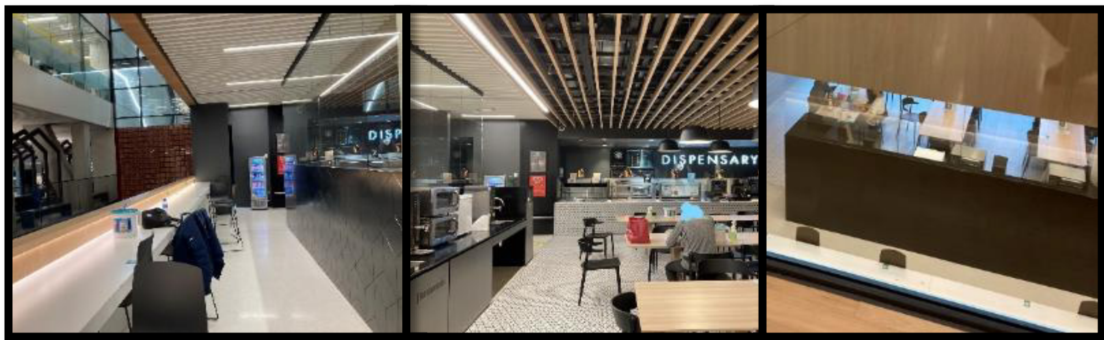


FIGURE 34 SOMEWHERE TO EAT ...

and JustEat drivers made deliveries. Students cleared up after themselves, throwing away rubbish and using the sprays and cloths to wipe down tables. Students used the facilities to prepare food *[Booth 3 come back to their belongings with food and drink reheated @ disp]* often engaging in chat with others who happened to be there at the same time, and sometimes arranging to meet others in the building, *[two – sitting in catering area eating * 1 had arrived in and 1 had arrived down – an arranged meeting. Self catering]* to share food.

Observation Theme 6: My Space

It was noticeable the safety and security assumed by the occupants, who left their laptops and bags etc., on workspaces when they went to the bathroom or grabbed a coffee etc. (Figure 35). Students changed their location, or came downstairs to make /

FIGURE 35 LEAVING MY STUFF ....

take calls, indicating respect for each other, and appreciating the behaviours expected, anticipated and conveyed in these areas (quiet study) by peers and by the design. This shows high degrees of trust and respect between students, a sense of ownership of their surroundings, and of belonging to their community.

Observation Theme 7: Arrive "ta-da" - or Escape, my choice

As part of the COVID-19 controls, one-way systems had been created for stairwells throughout campus. Accessing the blue couches was one area where this signage was not followed. During the design of N-building, considerable time had been invested in thinking about the stairs, as part of a strategy to encourage walking, and to create connections throughout the entire building, and within sub-sections of the building, i.e., a spiral stairs connects the top three floors; west facing stairs go top to bottom and are

visible through the atrium on every floor; and cantilevered stairs connecting ground to second floor depositing library users at the blue couches (Figure 36).

Despite floor signage designating these last stairs as “one way” and attempting to limit

FIGURE 36 STAIRWAY TO ..... ARRIVE OR ESCAPE

usage, blue-couch users continued to come and go using the nearest stairs Figure 37, so they “arrived” into the blue couch communal area, enabling interactions between those already there (if wished) as had been envisaged by the original building design to foster connectivity and noted here: *[one comes down stairs on way to catering area, chats to most recent arrival, before the second goes back up in the lift]*.

This was interesting. Having watched the users and their compliance with the majority of directional signage, I concluded that it was not due to a disregard for COVID-19 instructions, nor could it be fully explained by changing attitudes given the improving situation, rather it was simply a result of the compelling building design, and users being naturally funnelled down these stairs.

FIGURE 37 STAIRS TO THE BLUE COUCHES

This conclusion was partly influenced by my own descent of the building during the observations, when I too ended up at the bottom of these stairs, arriving to the blue couches, without thinking – and in breach of the instructional signage!

Others chose to come down different stairs or use lifts, allowing them to leave / arrive without ever going through the communal, activated spaces. This was particularly noticeable for gym users who predominantly availed of a separate entrance just inside the building, again speaking to the potential for exercise to be an escape valve, connected but separate to the rest of their day and responsibilities. Direct access routes were purposefully used by some of those heading to the silent study areas. In these ways, the physical layout, design of access and walk-flows, and connections between floors, facilitated leaner agency, choice and variety of activity. The zones spilling into each other yet being able to be kept separate seemed to be welcomed, understood and utilised by students. The purposeful or "single-minded" use of the gym entrance was

particularly evident on the morning observation, leading me to conclude that the time of entry i.e., early weekend morning, was also a lever for agency.

5.6. Consolidating the Findings

Having completed the analysis of each data stream separately, the final step was to review, compare and compile the findings into a coherent whole (see Combining the data sets, pg. 94). There was significant interconnectivity and entanglement between the two sets of findings, as can be seen in Table 6 pg. 204. For example, the importance of connections for the future, spoken about during the FGs and typified by Eddie (FY Med, FG1.1) "*I'm probably going to know them for the next five years"* was appreciable in the observed exchanges and quiet companionship between senior students. These relationships had been formed and maintained over the course of their studies, enabling the creation of visible communities within the broader culture of the university. The desire to see out and to stay connected to the world outside, both as individuals and as groups, was tangible in their choices of where they sat, to see and be seen, internally and externally, and is symbolic of the connections between them, their city and society.

TABLE 6 CONNECTING THE THEMES

Focus Groups	Common Descriptors	Observed
The Destination …. and the Journey, Including **Past Lives.**	Quiet companionship, indicative of enduring connections made over their previous shared journey, was displayed by students eating and / or working together. Sometimes a nod or wave on the way past was the simple acknowledgement of the shared community between users of the building. Very comfortable in the building and with each other – they and their bags were safe.	**See you at The Blue Couches** **Collaborations** **Food** **My Space**
Building Connections for Now and for the Future.	Animated and warm greetings were offered and reciprocated. Arrangements were made to meet, with people coming down from upper floors; or on departure, people checking and making plans about the following day. Students in quiet areas moved to take calls so as not to disturb others.	**See you at The Blue Couches** **Studying together-apart** **Collaborations** **My Space**

Focus Groups	Common Descriptors	Observed
Part of Something Bigger including **Pointers help us find our way** and **Escape Valves.**	Consciously choosing spaces to inhabit that were transparently connected to the outside world and clearly signalling connections to each other. Together-apart spaces for solo study were occupied and popular, including those against the outside windows and inside stair wells, providing views of each other and the connection to society. Sharing of experiences and offering tips and advice (benchmarking) provided signposts to others coming behind. Single purpose activity – an escape valve – of going to the gym or not engaging with others in the communal areas by using different stairs or the lifts.	**See you at The Blue Couches** **Study together-apart** **Collaborations** **Arrive or Escape**
Authenticity and Experientiality including **Sense of Development and Progression.**	Sharing of “war stories” and events that had happened whilst on placement. People shared their past experiences. Attentive listening and supportive discussions occurred.	**See you at The Blue Couches** **Collaborations**

Focus Groups	Common Descriptors	Observed
Reasons to Linger including **Agency, choice and control.**	The building itself acted as a congregational aid, attracting students back when there was no reason other than to meet those with common goals and experiences.	**Communication and Control**
	Laughter was commonplace and discussions animated and warm, with social matters interspersed with weightier conversations.	**See you at The Blue Couches**
	Within the building, design cues and furniture created "hot" zones to congregate and linger. Other areas were clearly for different uses, creating variety and options for the learners.	**Study together-apart** **Food**
	Groups were formed, joined and then evolved as people came and went. People had usual spaces – friends knew where to find them.	**My Space**
	High levels of agency and of inhabiting spaces existed.	**Arrive or Escape**

5.7. The Final Themes

This review resulted in further theme refinement, before definitively naming and describing the final themes (

Table 7 pg. 205). As described in Chapter 3, the consideration of these themes utilising the framework of SI, kept the focus on exploring how participants interpreted the events and associated symbols, their interactions with each other and with others e.g. on placement, or during formal learning activities.

It was the meaning and significance ascribed to those interactions which ultimately shaped the final themes. Recognising this, during the final review and consideration of the separate data stream from which I had already generated themes; I noticed that a

number of themes complimented and nested within each other, while others enriched my understanding and fleshed out subthemes, i.e., the longitudinal journey students were on which was glimpsed during the FG, was conspicuous in the observations; and ways in which to exert choice and agency reverberated in the observations, resulting in these two becoming themes in their own right. These final themes are the synthesis and amalgamation of findings from the stories told (FGs) and observed. Through the combined, interwoven review of the two streams collected some months apart, it unexpectedly provided longitudinal understanding of students' professional identity formation as they progressed through higher education.

TABLE 7 FINAL THEMES

1	**The Destination ….** Always conscious of the final destination, of "becoming a…"	Subtheme **1a. Past Lives and Experiences:** influence how I understand my current world. I value them. They got me here.
2	**Our Shared Journey – we are all in this together.** The scale of what we are undertaking is manageable because it's shared.	
3	**Building Connections for Now and for the Future**: Making connections motivate and sustain me. Those connections make sense of what's already gone and what lies ahead.	
4	**Becoming Collaborators…** …through working, laughing and eating together.	**Subtheme** **4a. Food and Coffee** Sharing food, grabbing coffee, cements connections and helps facilitate collaboration.
5	**Part of Something Bigger** …. Together-apart, making internal connections and collaborations is great, but this is always about something bigger	**Subthemes** **5a. …… but still able to get away** using escape valves such as exercise and layouts **5b. Navigational aids help us find our way**
6	**Developing through authentic experientiality.** Getting to practise "being" and "becoming" is powerful. Talking about it afterwards makes it meaningful.	
7	**Agency, Choice and Control.**	

	Learners are participants and agentic, able to exercise control. They want variety.
8	**Reasons to Linger and Connect.** How campus places feel can be supportive and provide reasons to connect and linger. Having somewhere to occupy and inhabit, making it mine, helps me to belong.

The first theme of "**The Destination**" with a subtheme reminding us of the importance of students "**past lives"**, provides an anchor in how they make sense of their current worlds, through looking forward and looking back. Given all the participants were enrolled on programmes leading to the award of a primary healthcare qualification, there was a sense of a common and "**Shared Journey"**, of being in it together and running the same race. These first two themes flow forward, imprinting vertically through the remaining six themes as scaffolding. The common destination and shared journey resulted in **"Building Connections"** for now and the future and having established those, theme 4 identified participants "**Becoming Collaborators"** through working together but also in laughing, socialising, playing sports, and repeatedly, through the sharing of "**Food or Coffee"** (subtheme).

A connectivity to wider society and the realisation and acceptance of being **"Part of Something Bigger"** manifested alongside two related subthemes of having escape valves "**still able to get away"** on one hand, whilst on the other the need for pointers to assist and act as **"Navigational aids"**. The next two themes "**Developing through authentic experientiality"** of learning and being able to exercise **"Agency, Choice and Control"** were informed as much by what was lost or limited, as what was available.

Finally, in the last theme, **"Reasons to Linger and Connect"** it is possible to see the previous seven streams intertwined, as students create and respond to cues, literally and figuratively, to linger, dawdle, and hangout in places thus joining others and making connections. In the very act of lingering all sorts of interesting interactions might happen, helping them on their way.

5.8. Chapter Summary

These were not normal times, not even a "new normal" for students attending university for the first time or progressing through health care settings (Fuller et al., 2020, Menon et al., 2020, Slivkoff et al., 2021, Deshetler et al., 2021, Papapanou et al., 2022, Consorti and Consorti, 2023). Life and our personal narratives changed in the pandemic. The lived experiences of participants, and of me as researcher, were unfamiliar, with different priorities shaping our socially constructed worlds. In making the decision to keep going with the study and the data collection, I considered and recognised the pluralities of knowledge, what counts as knowledge and whose knowledge counts, and the importance of capturing the stories of these learners during this oddest of times. In analysing the data and presenting these findings, I acknowledge:

> *"the subjective nature of interpretation; and the emotional life of both researcher and researched. The role of serendipity in guiding the research journey demonstrates how important it is for the researcher to think on their feet ….. and to see diversions from the planned research techniques not as wrong but simply as different"*
>
> (Mannay and Morgan, 2015, pg. 178)

This was not a study about COVID-19, but the interruptions and disruption caused opened up different opportunities. Whilst COVID-19 was, as the facilitator said in one focus group, "*the elephant in the room*", the students continued to be enrolled and progressed on their programmes, having experiences, acquiring new skills and knowledge, making friends, grabbing coffees, exercising, laughing, getting frustrated, being stressed, and all the while, being part of the university and something bigger.

This chapter presented the results of the data collected during these disruptions, first through focus groups whose participants where new entrants or first years and later by way of observations, when participants comprised of students in later years of their

programmes. Excerpts presented from the focus groups allowed the voices and stories of the participants to breathe and be heard – their excitement, optimism and frustrations. The extracts from the field diary alongside recorded observations and photographs, illuminated how students interacted with each other and the built environment.

My findings, expressed as eight themes and three sub-themes, were generated through reflexive thematic analysis. The findings reported in this chapter are confirmative and redolent of other research discussed next in Chapter 6. However, they also generate new insights into everyday experiences of students, their choices and their community, and through this, offer illumination and amplification of the importance of supporting and nurturing professional identity formation through every means possible. Consideration of this in light of my research question, conclusions and recommendations, are shared in the final Chapter 7, alongside personal reflections of my own changed professional identity.

6. Discussion

6.1. Introduction

This chapter provides the space to integrate the threads of my research project. Symbolic Interactionism remains the key theoretical framework through which the findings and themes have been generated and hence is the basis for this discussion. I also utilise Communities of Practice (CoP) (Cruess et al., 2018) as participation in a CoP is intertwined with Professional Socialisation and the processes of learning (Condron and Eppich, 2022). As participants learn and develop *"the self emerges"* through these multifaceted interactions and the actual process of being amongst others, stimulates learning about who we each are as individuals (Sandstrom et al., 2001, pg. 219). These concepts, of CoP and Professional Socialisation, explored in my review of literature, are used as additional scaffolds here.

This study was an exploration of the interaction between professional identity formation and the campus built-environment in health professions education. My primary aim was to investigate the development of professional identity through the voices of the students. The review of literatures clarified that professional identity formation, the backbone of health professions education (Cooke et al., 2010a), cannot be developed in isolation (Sarraf-Yazdi et al., 2021) nor in the absence of knowledge and competence (Cruess et al., 2015). There is no single intervention delivering professional identity formation (Moseley et al., 2021, Mount et al., 2022), although authentic (Wilson et al., 2013, Noble et al., 2014, Cruess et al., 2015, Wald, 2015, Shochet et al., 2015) and symbolic (Monrouxe, 2010, Goldie, 2012) experiences, reflection, (Wald, 2015, Sharpless et al., 2015, Findyartini et al., 2020), and storytelling (Dornan et al., 2015) are all important. The literature on learning environments (Strange and Banning, 2015, Ellis

and Goodyear, 2016, Cox, 2018, Irby, 2018, McNeil and Borg, 2018, Leijon et al., 2022) provided further insights into the complex, multifaceted influences on ways of learning. Previous work demonstrates a holism and comprehensiveness to the curriculum (Genn, 2001a, Genn, 2001b); that learning is and occurs everywhere (Bennett, 2011, Strange and Banning, 2015, Cox, 2018, Morieson et al., 2018, Elkington and Bligh, 2019) and the student and teaching experience mutually contribute to the learning space (Ellis and Goodyear, 2016). For health professionals, learning fundamentally includes the development of professional identity.

My research study exposed a range of interactions across the themes generated that had meaning for the participants: learner-learner, learner-staff, learner-built environment, situated within the realm of the learning environment, itself a manifestation of the social, physical and on-line lives of participants (Ellis and Goodyear, 2016, van Schaik et al., 2019). These everyday interactions, the social lives of participants, allows for the presentation and representation of self, and the manipulation of "*props: settings, clothing and symbols to achieve advantageous outcomes, notably smooth interactions which lead to valued selves*" (Sandstrom et al., 2001). It is my interpretation of these interactions and meanings which led to the themes presented in Chapter 5, and which will be emphasised in the remainder of this Chapter as I discuss how the themes relate to the research study's aim and objectives.

As a result of this study, I contend one common aspect to all the interventions shared previously (Wald, 2015, Gruppen et al., 2018, Yakov et al., 2021, Bremer et al., 2022, Mount et al., 2022) is they all happen **somewhere,** i.e., the physical realm. From my findings, meaningful interactions for participants occurred even when consuming content on-line. Students are not "virtual" but instead physically located **somewhere** interacting with the built environment**.**

The rest of this chapter discusses how the 8 themes and 3 subthemes (Table 8), are considered in the context of previous literature, revealing the contribution made by this research project as it addressed four research objectives:

- Examine how variations in the built environment influence professional identity formation and development.
- Explore the interactions of diverse multi-national learners with the built environment.
- Based on insights from existing literature explore how learners interact with the built environment in relation to Professional Socialisation.
- Assess the impact the built-environment design has on reinforcing or disrupting pre-existing personal identities.

TABLE 8 REMINDER OF FINAL THEMES

1	The Destination ….	Subtheme: 1a. Past Lives and Experiences
2	Our Shared Journey – we are all in this together.	
3	Building Connections for Now and for the Future:	
4	Becoming Collaborators…	Subtheme: 4a. Food and Coffee
5	Part of Something Bigger ….	Subtheme: 5a. …. but still able to get away and 5b. Navigational aids help us find our way
6	Developing through authentic experientiality.	
7	Agency, Choice and Control.	
8	Reasons to Linger and Connect.	

Finally, I review and highlight potential gaps and limitations, and suggest areas for future research. Conclusions and recommendations arising from the study are presented in the final Chapter 7.

6.2. Interpreting the findings

Space does matter (Soro and Nordquist, 2017a, Soro and Nordquist, 2017b) but my research posits that place matters more. Place is space with purpose (Temple, 2018),

and as witnessed in the findings, places can be set up in ways to influence professional identity formation through congregation, connectivity and meaning making by learners, which I will now discuss.

Objective 1

Examine how variations in the built environment influence professional identity formation and development.

Views: inside and out

Facilities designed to support learner wellbeing, teamwork and collaboration, were prevalent in the themes **Our Shared Journey** (Theme 2), **Building Connections** (Theme 3), **Becoming Collaborators** (Theme 4) and sharing **Food and Coffee** (Theme 4a), being **Part of Something Bigger** (Theme 5) and its subthemes, and are all important in the development of professional identity formation. It was also clear that they can be diminished if students are busy elsewhere, i.e. in formal curricula and pedagogic space is not provided to enable students enjoy and utilise the places prevalent in my themes. The lack of congruence between the provision of these typologies of built spaces and time available to use them was called out by learners.

Cox (2018) discussed the importance of internal and external views. Whilst appreciating the role a view outside could play in alleviating a claustrophobic atmosphere, he opined inside views of others working were possibly more important to assist learners' goal of studying. In my findings, participants also derived motivation from internal views alongside other design cues they called "*studious*".

A darker, comparative, almost judgemental (Lovell, 2015) side was alluded to within my study, including being perceived as not making the grade or being good enough, and stress from workload was apparent in the focus groups and observation findings

manifesting as a need to be able to **escape** (Theme 5a). There is a risk that feelings such as these contribute to a competitive atmosphere amongst students rather than the collaborative team-based values (Royal College of Physicians and Surgeons of Canada, 2011, General Medical Council, 2020) required of modern healthcare practitioners (Condron and Eppich, 2022).

Participants also articulated being too busy at certain points in the year. When workload was too great participants felt compelled to prioritise solo-study. They stopped going to places or engaging in activities that assist with stress and anxiety (Theme 5a), or with other factors that positively influence professional identity development e.g., peer support (Cruess et al., 2019) and seen across a number of themes in this study. Participants were concerned with the quantum of knowledge required to be successful, and the subsequent feeling of being tied to the desk, resonating depressingly with those comments of Fred, 65 years earlier (Becker et al., 1961, pg. 97) who had already fallen behind by Monday evening each week. More recently, AUDE has reported the universality of workload negatively impacting engagement (AUDE and Sodexo, 2022) of students across higher education.

Whilst concerns were present, positive values were more appreciable in my findings as students went about **Building Connections for now and for the future** (Theme 3), **Becoming Collaborators: through working laughing and eating together** (Theme 4), and **Developing through authentic experiences** (Theme 6). The aspects of the built environment imbued with meaning and involved in underpinning these themes, such as the big, street-level windows and the blue couches, study spaces in N-building and at home where they could see out or see others, created supportive, social norms and expected behaviours of hard-working students on **Our Shared Journey – we are all in this together** (Theme 2) and as **Part of Something Bigger (**Theme 5). In so doing, the tasks involved in getting to **The Destination** (Theme 1) remained mostly manageable,

even enjoyable for participants, as they recognised a commonality of purpose and of being together in their joint endeavour (Theme 2).

My findings and themes suggest the built environment cannot be divorced from the rest of the curriculum. My data illustrates that external views (being able to see out from within) are important in this regard, whereas a preponderance of internal views could fuel a hot-house environment, counterproductive to wellbeing and professional identity formation. We know that learner wellbeing and ratings of the overall learning environment improved in medical schools implementing pass / fail grading practices (Rohe et al., 2006, Bloodgood et al., 2009, Reed et al., 2011, Slavin et al., 2014). Whereas

> "*students in schools using grades had higher levels of stress, emotional exhaustion and depersonalization, were more likely to have burnout*"
> (Gruppen et al., 2018, pg. 11).

This speaks to the complex nature of learning, wellbeing and development of professional identity, and that the totality of the learning environment must be considered and appreciated.

Conversely, supportive meanings from the built environment's delivery of external views, essentially being within a building but being able to look and see through both to other parts of the building, the campus, and outside, symbolically allowed participants to derive meaning and created a sense of **Building Connections** (Theme 3) and **Becoming Collaborators** (Theme 4). Permeability and views reduced feelings of isolation and separation. This was true for participants when learning was on-line in a study bedroom, as well as when on campus in bigger, shared or communal spaces, with resultant feelings of being **Part of Something Bigger** (Theme 5), an essential element to healthcare professional identity. Creating and preserving this connectivity, to peers and wider society, was achieved by variations of the built environment, most notably the relationship between the seating arrangements (blue couches) and the use of glass at

street level to provide transparency, views through, and outside; and further up the building through the many areas benefiting from multiple or dual-aspect views, which were preferentially occupied.

Where acquisition is the goal of learning then internal views of other students studying may take primacy (Cox, 2018). When professional identity formation is the backbone (Cooke et al., 2010a), with the ultimate aim to serve society (Frenk et al., 2010), my themes, support the contention that outside views, which signal the importance of, and the link to something bigger, are key. The same student activities of study, learning, and socialisation, are repositioned, and are, I suggest, indicative of a positive conceptual shift (Kay et al., 2018). Alignment of the built environment with pedagogical **and** philosophical principles, in this case commonality of **Journey** and purpose (Themes 1 and 2), and **Connection** with and service to society (Themes 3, 4 and 5), may assist learners through the adaptive process of professional identity formation. Put simply, the ability to deliver connectivity through creating and maintaining opportunities for external views, to see and be seen, becomes a core part of my contribution through this research to the discourse.

Permeable Buildings vs Fortresses

Lovell (2015) talks of extrinsic and intrinsic influences on community formation within medical students, accepting geographical separation leads to "Enforced Isolation" and states the "*separation of medics and non-medics is generally seen as a positive aspect of training*" (Lovell, 2015, pg. 1020). This is contrary to my research findings of the importance of **connectivity** (Theme 2 and 3), **collaborations** (Theme 4) and recognising the importance of being part of **something bigger** (Theme 5). Hawick (2018) discovered benefits and challenges of having a dedicated building, near clinical facilities but removed from the university, seeking to create a CoP and facilitate inter-professional opportunities via landscapes of practice (Stalmeijer and Varpio, 2021). However, a

number of unanticipated challenges arose, both from the location of the building and the actual layout and flow within the building, leading to isolation. Consorti and Consorti (2023) also reported medical students feeling detached from being an undergraduate student and the wider university when unable to study in the university library due to COVID-19.

My research illustrates achievement of connection with **society** (Theme 5) and other parts of the university fostering **collaborations** (Theme 3 and 4) through the built environment is possible. The glass fronted blue couch area was a destination for students who exerted **Agency, Choice and Control,** (Theme 7) by travelling to N-Building. The building and its design, with the glass front and bright frit, gave them **Reason to Linger and Connect** (Theme 8), it acted symbolically as a beacon during the dark winter months, drawing them in to town, to meet and to congregate. The building's power was in making these connections, in providing a safe and welcoming harbour. Coming to this destination (Figure 29, pg. 193) after their clinical rotations kept them connected to the wider university and their city, facilitated **Collaborations** (Theme 4), informal meet ups to laugh and eat together (Subtheme 4a) and the use of sports facilities (Subtheme 5a), even on dark winter evenings and dreary wet January mornings. Thus, the design and relationship of university buildings to each other and their city (Nordquist, 2016) is an important consideration and as established, can create reasons to connect (my study) or be a cause of isolation (Lovell, 2015, Hawick et al., 2018).

The light coming in to a building, and refracting or not, off its surface, has an impact on those inside and on those on the street. For those street-side, being able to see in cemented a sense of welcome, connection and communal space. It allowed for animation and a sense of activity at street level and a glimpse of a world, of healthcare and health professions, that is often hidden and which historically, has sometimes been seen as separate and inaccessible. When the world stopped because of the pandemic,

this too was absent, but as soon as they could, participants came back to N-Building, exerting their **Agency** (Theme 7), drawn by its power and potential to act as a place to **Linger** (Theme 8), to **Collaborate** (Theme 4) and to **Escape** (Theme 4a) in a safe and welcoming environment.

Choosing where a building starts and stops is influenced by the materials used, the opaqueness of the glass, the darkness or lightness of the bricks. N-building was appreciated by students as bright, welcoming and transparent. My themes show that participants' interactions with these elements helped create meaning, allowing them to develop their sense of self, (Sandstrom et al., 2001) professional identity and their CoP (Strange and Banning, 2015).

Training to be a health professional is demanding and the experiences can be intense. My themes suggest that the creation of a fortress, hard to penetrate from outside or hard to escape from inside, was not desirable. Participants spoke of needing to vent frustrations and the importance of having **escape** valves (Subtheme 5a) such as exercise and places to be for activities other than study; whilst continuing to understand (Frenk et al., 2010) and be connected to the needs of society (Monrouxe, 2010) through being **Part of Something Bigger** (Theme 5). Nature and natural features, which when included in a university built environment can have positive physical and psychological impacts (Oliveira et al., 2022), was called out as being something that could be amplified in this city-centre campus by participants. They wanted more green spaces and exercise facilities to facilitate wellbeing and reflection.

However, this does not necessarily mean moving university campuses to green field sites. Separation from society, either through distance or walls, can, my findings suggest, perpetuate an "us and them", leading to identity loss through suppression and dissonance (Frost and Regehr, 2013, Kay et al., 2018); and prolong existing hegemonic paradigms and inequities (Beagan, 2001), a persistent concern in adopting CoPs as the

foundational framework for health professions education (Cruess et al., 2019, Morris and Eppich, 2021, Condron and Eppich, 2022).

Instead, these findings and my themes proffer that campus permeability and an awareness of the relationship between a building and its surroundings and streetscape, can be used as a way to encourage beneficial outside influences (Cruess et al., 2015, Kay et al., 2018, Sarraf-Yazdi et al., 2021) and reduce isolation. Designed to look welcoming and connected from the street (Figure 47, pg. 307) buildings can help remind and reinforce **Connections** (Theme 3) and of being **Part of Something bigger** (Theme 5). Leveraging accessibility to nearby city parks and outside spaces (Figure 46, pg. 306) by consciously blurring where a campus starts and stops, creates opportunities to pause, and allowed participants to escape and **get away** a core part of Subtheme 5a, and hence to breathe and to process events.

Places to Reflect

Reflection is core to personal and professional identity change (Goldie, 2012, Bennett et al., 2017, Leedham-Green et al., 2020), helping learners make meaning from experiences (Moseley et al., 2021). Most of the research relates to formal interventions in curricula such as guided reflection and reflective diaries. This keeps the focus on the individual rather than the collective development of professional identity (Mount et al., 2022). My findings illustrate reflection happens outside of formal interventions, in many places. Sometimes it was prevented from happening by the lack of place. Activities including commuting, walking home, walking between buildings, or between places in buildings, created opportunities to mull things over. Reflection happened in surprising spaces, including lecture theatres and while out walking in the city. The lack of provision of appropriate proximal spaces on campus for reflection to seminal events e.g., anatomy, was also present in the data, resulting in students finding other places,

including the in-between on the walk home, to make sense of a discordant experience with a professor.

Reflection spaces do not have to be quiet rooms - this was not suggested by participants - who wanted to feel **connected** (Theme 3), reminded of their **shared journey** (Theme 2) and the **common destination** (Theme 1). Instead, I suggest places to allow students to slow down and digest events would be helpful, including outside spaces and transitioning between classes and buildings, through design cues and furniture.

Whilst reflection was sometimes a solo activity, it was regularly carried out with others. They reflected on the **destination** (Theme 1) and what **experiences and events** (Theme 1a) had gotten them to their current place on their **journey** (Theme 2). Variations in the built environment were imbued with meaning by the activities and interactions of the students - lounging on the blue couches, hanging out in kitchens, getting coffee, walking between buildings – either alone or with others, to ponder events or talk things out, helping make **connections (Theme 3)** and with the realisation of being **part of something bigger** (Theme 5). This work has revealed factors in the built environment can facilitate learners to pause, reflect, review their and their peers' assumptions, values, and beliefs; and confront organisational and CoP culture as they experience intersectional events (formal and informal). My study supports providing a place to discuss and unpack these moments and events with peers (Leedham-Green et al., 2020), helping students to integrate new ways of knowing and being. Whilst it may not be possible to force serendipitous interactions (Soro and Nordquist, 2017b), my findings support designing places so that fortuitous get-togethers are more likely to happen. These places contribute to students being able to **Linger and Connect** (Theme 8), which in turn allows talk, exploration and reflection, and meaningful contact with other community members. This may further assist **Developing through authentic experientiality** (Theme 6), and hence professional identity formation.

In supporting calls to create "space" pedagogically (Monrouxe, 2010, Goldie, 2012) i.e., time in the programme to facilitate reflection, my thesis **adds** the need to match this space literally. Reflection happens in a variety of ways and places. The built environment's design, within buildings and across the wider campus, can help.

Summary

This thesis demonstrates that variations in the built environment through the creation of views, a permeable campus, and provision of places to muse and contemplate, can facilitate "*meaningful contact with members of the community*" (Cruess et al., 2019, pg. 647). **Connections** (Theme 3) can be forged to assist in the development of self, by foregrounding the **destination** (Theme 1), and supporting professional identity formation through **collaborations** (Theme 4). In so doing, the built environment influences development of professional identity by assisting learners to reflect and connect, thus reminding them they are part of **something bigger** (Theme 5) and on a **shared journey** (Theme 2) to serve patients and society.

Objective 2

Explore the interactions of diverse multi-national learners with the built environment.

In the previous section, I discussed how variations in the built environment positively and negatively influenced factors known to support development of professional identity formation. In this section, I consider how multi-national participants interacted with the built environment. Data was not gathered in relation to ethnicity or gender, so a true exploration of interactions of diverse learners with the built environment was not possible. This limitation is discussed in Section 6.4 pg. 244.

Chapter 6 Discussion

The UoH has a large international student population[33]. For many students, they are already displaced from the society in which they have grown-up and are also coping with a new culture of health professions, which I labelled the double-whammy in my review of literatures (McKimm and Wilkinson, 2015). The cultural values, norms (Hatem and Halpin, 2019) and preconceptions of what it means to "be a doctor" or to have chosen a career in health are not universal (Noble et al., 2014, Stubbing et al., 2018, Monrouxe et al., 2022). Alignment with the CoP is not guaranteed. We know a learner's past matters (Goldie, 2012, Fink, 2013, Wilson et al., 2013, Dornan et al., 2015, Sharpless et al., 2015), and the transformation should not amount to "erasure" (Frost and Regehr, 2013). Cruess et al. (2019) suggested a welcoming community must be created to maintain effective CoPs. My thesis suggests ways in which the built environment can be used to bridge learners' pasts whilst welcoming them to their future CoP, and these are discussed below.

Celebrate to acculturate

This need to connect the past, present and future, articulated in Theme 1 **The Destination** and it's subtheme 1a **Past Lives and Experiences,** reverberated most strongly in the "Thanksgiving Dinner Incident" offered by Eddie and discussed with Farif (FG 1). Analysing it through the lens of symbolic interaction contextualised the episode differently to how it was deemed at the time by the university as unprofessional. Instead, it was a cultural celebration, bridging their past and new cultures. Their building's large communal kitchen facilitated the social event where horizontal and vertical connections were made by inviting students from other years, who lived upstairs, helping them to move forward on their **Shared Journey** (Theme 2), to **Build Connections for Now and for the Future** (Theme 3) and **Become Collaborators** (Theme

[33] In academic year 22/23, there are 101 different nationalities, Albania to Zimbabwe, registered to the institution's programmes.

4). Hosting a Thanksgiving event allowed them hold on to **their past** (Theme 1a) and **build new relationships** (Theme 3); and foster a sense of belonging (Cruess et al., 2016, Cruess et al., 2019) all while they transitioned to being healthcare students (Kay et al., 2018). A crucial aspect was the ability to prepare and share food together, in the communal kitchens that then allowed the event to spill out into other communal spaces, helping to facilitate the multi-layered and multi-year event, the making of memories and stories to tell, many months after the fact. This simple act, of creating food from home was so infused with meaning, that they risked sanctions by breaching public health guidelines. Whilst this example relates to Thanksgiving, my thesis proposes having spaces available to host events across a range of cultural traditions may contribute to making a CoP more welcoming, acting against erasure and for diversification. Creating places where **food** (Subtheme 4a) can be prepared, sampled, tried and tested, speaks to the importance of respecting **Past Lives and Experiences** (Theme 1a) whilst creating places for them to progress on their **Shared Journey** (Theme 2), **Build Connections** (Theme 3) and provide a **Reason to Linger and Connect** (Theme 8).

Navigational Aids

This study revealed multi-national participants' linked ways to overcome displacement directly with displays of art and history. In this way the built environment's design and decor can act as **Navigational aids** (Subtheme 5b) and, I suggest, have a positive effect on providing a sense of place, geographically and chronologically, which helps provide a bridge between them to their **past** (Theme 1a) and their future profession (Theme 1). Consideration must always be given to issues that can arise from the selection and design of the decor, as they can either reinforce issues of standardisation and power structures within the CoP (Beagan, 2001, Frost and Regehr, 2013). Curated appropriately, displays of historical and modern art and artefacts (Figure 51, pg. 311)

can instead assist with making connections and raising awareness of the societal context including past and current challenges in healthcare.

Places where I am known

Moving away from home created fears and concerns, and a heightened need to ensure the built environment was welcoming. My findings on spaces that facilitated communal events, large and small, e.g., watching the WCC on a shared TV, sofas for group work, co-studying round a table, suggest welcoming communal places can play a role in managing anxieties and overcoming fears. Creating somewhere where learners were known and expected, e.g., the blue couches on a Friday evening or the canteen for pharmacy students was a contributory factor in making the CoP more welcoming, in **Building Connections** (Theme 3) and providing a reason to **Linger and Connect** (Theme 8).

Summary

Ways to create a welcoming community for all learners were supported by the built environment. These findings suggest levels of discomfort were managed by maintaining connections to **Past Lives and Experiences** (Subtheme 1) whilst embarking on a **Shared Journey** (Theme 2). The value they placed on **Building Connections** (Theme 3), **Becoming Collaborators** (Theme 4) sharing **Food** (Subtheme 4a) and **Agency, Choice and Control** (Theme 7) was conspicuous and strongly related to the design, function and availability of the built environment. It can support multinational learners to settle in to their new learning environment by attending to the societal, geographical and historical context of the CoP. Providing spaces to celebrate events, recognising past traditions alongside creating new ones for their future, to make meaning, memories and to have stories to tell to others who weren't there and amongst themselves, facilitates development of the CoP. These findings suggest using the built environment for

celebrations and acknowledgments could assist with acculturation through raising awareness, mutual influencing, and adaptation of the culture of the CoP.

Objective 3

Based on insights from existing literature explore how learners interact with the built environment in relation to Professional Socialisation.

Opportunities to come together during the study were impacted by COVID-19, however my themes set out in Chapter 5 presents evidence of accumulation of experiences, connections, and collaborations, albeit within a context shaped by the pandemic. These are all part of professional socialisation and instrumental in the development of professional identity (Cruess et al., 2019), which are discussed next.

Participation

My findings demonstrate the built environment was leveraged by students as the interactional setting to support participation and thus development of identity. Opportunities to participate were created in places that enabled **Authentic Experientiality** (Theme 6), or **Collaboration** (Theme 4) through formal and informal learning, as well as the social and serendipitous day to day events of their daily lives, which reinforced the chance to share their **Past Lives and Experiences** (Theme 1a) and their progress on their **Shared Journey** (Theme 2). Learners' chose and were enabled by the built- environment variations prevalent in the themes, to amplify activities known to support professional identity, right from the beginning e.g., the WCC (Monrouxe, 2010, Kay et al., 2018, Sarraf-Yazdi et al., 2021) became an opportunity to celebrate together by using shared sitting rooms to congregate (**Shared Journey,** Theme 2) and watch the recordings, making the symbolism of the event more meaningful as it reminded them of their **Destination** (Theme 1) and that they are **Part of Something**

Bigger (Theme 5). It also created memories for them to share and draw upon as they progressed.

Despite COVID-19 and the absence of third-places (Tate, 2023), participants demonstrated they were not solitary (Sarraf-Yazdi et al., 2021) and continued to value the interactions afforded to support each other through horizontal learning (Lovell, 2015) by using kitchens and common areas. This **Building Connections** (Theme 3) and **Becoming Collaborators** (Theme 4), demonstrates a conceptual understanding of the importance of teamwork for their development towards the **Destination** (Theme 1), which could be both facilitated and inhibited by the availability and design of the built-environment.

The meaning articulated and derived across this range of interactions was consistent with identity formation occurring during informal exchanges (Goldie, 2012). Behaviours supportive of participation (Gruppen et al., 2018) and forming social connections, crucial to the development of and participation in the complicated, social organisation that is the world of healthcare, and to their development of self (Sandstrom et al., 2001) was evident across many of the themes. This suggests they recognised the sustainability and wellbeing to be derived in future from these networks, of creating links with others heading the same way (Theme 1) and on the same **Shared Journey** (Theme 2); **Connecting** with others to meet their current needs and help make sense of the future (Theme 3), and **Collaborating** (Theme 4). In effect they used places on campus to build out their own CoP, creating "*opportunities for cooperation, trust and empathy towards others*" (Goldie, 2012 pg. e646). This worked best when they felt a sense of ownership (Carnell, 2017) and could inhabit spaces, lounging and feeling comfortable, making them their own.

After-hours

Importantly, the themes suggested by my study provide insights into the role the built environment plays to support senior health professional students at risk of identity dissonance, crisis and vulnerability (Jarvis-Selinger et al., 2012) arising from dispersal through clerkships and rotations (Beagan, 2001); exposure to the economic realities of healthcare delivery; and exposure to professional practice and practitioners (Kay et al., 2018). N-building's power to draw people in, is woven through many of the themes. They came back to the city centre, after hours, when no teaching or formal instruction was on; they chose to hang-out there in-between formal sessions, as soon as it was available, with even the strong social distancing instructions through signage unable to dissuade them from coming to the blue couches. People exerted **Agency, Choice and Control** (Theme 7) by going to N-Building to avail of peer support, part of sharing the same **Destination and Journey** (Theme 1 and 2) and of becoming **Collaborators** (Theme 4), not just through working beside each other, but by laughing, **Exercising** and **Eating** together (Theme 4 sub-themes and Theme 5), and through the sharing of **Authentic Learning Experiences** (Theme 6), in an environment where they felt safe (Leedham-Green et al., 2020). These are all essential parts of the socialisation processes (Cruess et al., 2015) included in professional identity formation. The design of the blue couches and the pods, the intimacy of the spaces, but still semi-public and hence part of **something bigger** (Theme 5), contributed to students sharing of their "big stories" (Goldie, 2012), alongside smaller everyday tales (Monrouxe, 2010). This oral learning (Soro and Nordquist, 2017b) is a key part of professional socialisation, community building and professional identity formation, and I suggest was positively impacted by these elements of the built environment.

Welcoming **Reasons to Linger** (Theme 8) in places were created in a number of ways throughout campus buildings: through the provision of coffee; sharing food by bringing

it to each other's apartments or on to campus; and particularly simple kitchenettes (Morieson et al., 2018) which enabled students prepare food using the hot-water boilers and microwaves.

The act of preparing and sharing of **Food** (Theme 4), including food that may involve sharing one's culture and hence **Past lives and Experiences** (Theme 1 a), creates another layer of social interaction and meaning between students as they associate with each other, draw inferences and hence actively shape their identities and their society (Sandstrom et al., 2010). In my findings, the ability to engage in these activities clearly links to the provision of appropriately equipped spaces. Without these spaces, the chances of key interactional moments and the creation of meaningful experiences becomes harder to create (Denzin, 2001). The confluence of activities and spaces evident across my themes create the right environment (Gruppen et al., 2018) for participation and belonging, and hence professional socialisation.

These safe, welcoming, buildings and spaces, appropriately equipped, created reasons to **Linger** (Them 8). Talk and dialogue occurred, and stories were told. Learners could discuss their **Experiences** (Theme 6), successes, events and struggles. They decompressed (Lovell, 2015) after intense events, appropriately separate from "lay" people (Beagan, 2001), knowing they weren't at risk of being overheard (Hawick et al., 2018). Thus, community was developed by providing a place where they are known and welcome, even expected, by their peers at the end of a long week. They were amongst people who could understand and empathise as they shared the **Destination** (Theme 1) and the **Journey** (Theme 2), but given the design and location of N-Building in particular, they were not isolated nor removed, but instead were **Part of Something Bigger (**Theme 5) and continued to be connected to **society** (Theme 8).

The built environment cemented **Reasons to Linger and make Connections** (Theme 8), allowing reflection and processing of authentic learning experiences (Theme 6). Whilst

these interactions helped participants make meaning from the interactions and events, they were not necessarily about “fitting in” to the world they had experienced that day. I suggest the location, design and accessibility of places may support the development of the quasi-subversive workforce proposed by (Hafferty et al., 2016): i.e., it provided somewhere for them to reframe those experiences and to resist enculturation, to plot how to respond and in return, adapt the CoP. At the very least, it helped minimise dissonance as a place in which to get and give support (Theme 2, Theme 3, Theme 4 and 5).

Congregational Learning: Online or In-person

The value of professional socialisation in medical education (Emanuel, 2020) was placed in stark relief by the **actions and agency** (Theme 7) of students in my study during COVID-19. Their sense of **shared journey** (Theme 2), **connections** (Theme 3) and **collaborations** (Theme 4), were created using whatever places were available to engage in-person, during a period when the majority of formal learning was online. Lost opportunities were keenly felt but kept in perspective by participants, who continued to appreciate the impact the pandemic was having on their future colleagues and society (Theme 5).

In a post-COVID-19 technology rich world, I suggest it would be easy to underestimate the power of in-person events such as large group teaching and the lecture theatres in which they are held. As an academic, giving a lecture in a lecture theatre is an everyday experience. But my research showed it could be transitional, particularly for new entrants, as most had not experienced learning at that scale previously. They spoke of grandeur, and awe felt when they realised the talent and diversity amongst their classmates who had embarked on the same **Shared Journey** (Theme 2); and of finding or being reminded of their commonality of purpose (Theme 1, 2 and 4), by all being in the same room, interacting together, seeking to accomplish common goals.

This allows for an interesting reframing of these spaces, from didactic and passive, to privileged and liminal (Taylor and Hamdy, 2013), where learners are afforded chances to (re)build connections, reflect, and be assisted through identity formation. I suggest the students positioned large group learning emblematically as a means of congregating together **as and for** the development of their professional socialisation, woven through many of the themes generated. In addition to what was lost – the chance cup of coffee (Theme 4a) or ability to make individual C**onnections** (Theme 3), it was the scale of the endeavour, the **being part of Something Bigger** (Theme 5) that had added power and meaning for them. Moving online, whilst it had other benefits, reduced opportunities for the symbolism conveyed by larger congregations and communal learning, and hence the scale and breadth of a meaningful CoP.

This reframing of lecture theatres and a call to explicitly use these congregations to learning as a way to make connections (to self, others and society) is part of my contribution to how learning spaces and the built environment can support professional identity formation and is part of the recommendations in Chapter 7.

InterProfessional Learning (IPL)

Lecture theatres also enabled co-teaching across the professions. Whilst this may be considered the bare minimum for IPL, through this use of large lecture spaces participants realised the importance in their future of connecting with other healthcare professionals (Goldie, 2012, Moseley et al., 2021, Condron and Eppich, 2022) and the requirement to see them as future **Collaborators** (Theme 4). Simply sharing the space opened up the possibility of making **Connections** (Theme 3). Learning across InterProfessional boundaries remains complex but multi-disciplinary teamwork is essential in healthcare. Students recognised and appreciated “boundary-crossing” opportunities (Morris and Eppich, 2021), even in this simplest of formats. I suggest my findings indicate that having spaces big enough to deliver collocation of teaching with

other professions' students, contributes to the socialisation process inherent in IPL, as it assists with identification of one's own tribe (Moseley et al., 2021), expressed in my themes 1 and 2 of **The Destination** and the **Shared Journey**, as well as comparison with the role other professions will play in their future. Sharing lecture spaces for IPL is not without challenges (Hawick, 2018) but opportunities exist to remind individual professions to engage with future colleagues through these large spaces.

Outside of living together, shared teaching is the beginning for much of the socialisation discussed (Goldie, 2012) and presented in my findings. In addition to collocation of teaching, designing spaces to hang-out after formal sessions, grab a coffee and chat (van der Meer et al., 2021), or having shared communal spaces to linger and connect, contributes to chance encounters (Carnell, 2017, Soro and Nordquist, 2017b) within and across the professions. Whilst N-Building and others were clearly identified as powerful destinations for these activities when generating the themes, much smaller spaces were also described and desired. These were noticeable by their absence as much as presence, impacting opportunities for incidental and accidental learning, amongst peers and with others. My themes suggest designing places in this way may be an important factor in the creation of opportunities across "*professional, disciplinary and hierarchical*" divides (Eppich and Schmutz, 2019, pg. 758).

Agency: Occupancy vs Hollowness

Modern medical education prioritises learner centeredness (Cooke et al., 2006, Watling et al., 2021, Condron and Eppich, 2022). Switching the emphasis from what is being taught, to what the learner learns through social and participatory activities is believed to assist with intrinsic motivation, agency and responsibility, ultimately feeding forward to life as a practitioner committed to life-long learning (O'Connell, 2009). Concerns about the forced standardisation (Frost and Regehr, 2013) of professional identity formation were somewhat allayed by understanding the role agency conveyed in

facilitating students' self-authoring of an identity uniquely theirs (Bennett et al., 2017) and being able to resist or push limits (Hafferty et al., 2016, Watling et al., 2021). Sarraf-Yazdi (2021) proposed fostering agency, through mentoring and guided reflections, could smooth tensions between personal and professional identities, with beneficial impacts for the individual and society. Individuals are participants and agentic in their learning (Billett and Pavlova, 2005). Agency matters in learner centred health professions education (O'Connell, 2009, Monrouxe, 2010, Richards et al., 2013, Bennett et al., 2017, Cruess et al., 2019, Morris et al., 2021), assisting as it does negotiation of a path in support of the development of professional identity and participation in the CoP.

And yet, during the depths of the pandemic, agency was curtailed, particularly in relation to building usage. COVID-19 restrictions placed students at the UoH into learning sets, removing and reducing choices about where to go and when. Although participants had spaces assigned, including through the provision of additional venues hired to achieve social distanced learning, I suggest a loss of agency contributed to poor attendance alongside feelings of not being welcome and under surveillance.

The loss of agency created an interesting dynamic and ultimately a vicious circle. Students wanted agency in how and where they learn, socialised and hung-out (Theme 7). When absent, they exerted it in other ways, including choosing to learn on-line when campus access was possible. Why was this? My research illustrates how the effects of underutilisation and under-occupancy of campus generally, and formal teaching spaces in particular, was a contributory factor. As people stayed away, campus occupancy and density were further impacted, through, I suggest, negative peer-pressure, including feelings of being the only one, or the odd one out. The downward spiral of non-attendance became an inhibitory factor resulting in further negativity and feelings of campus being empty and hollow. Low-density usage affected the likelihood of chance

encounters and cheery greetings. Instead, emptiness became the enemy (Soro and Nordquist, 2017b).

The need to conform to a "new norm", in this case non-attendance, was at variance to reported enjoyment of in-person learning earlier in the semester and the appreciation of it being a shared activity (Theme 3, 4 and 5). I submit that experiences such as these, where a student's choice (to attend) is at perceived variance to their peers, may contribute to feelings of being judged (Lovell, 2015), periods of vulnerability (Jarvis-Selinger et al., 2012) and the creation of contested environments during periods of self-authoring (Stubbing et al., 2018). This speaks to the strength of professional socialisation, the existing CoP structures, and an underlying pull to conform.

The vacant seats in under-occupied classrooms became symbols of loss, for students who had gone home or who were learning online, leading to reframing of the CoP. The need to fit in (Lovell, 2015, Hafferty et al., 2016) and find a way to standardise with their nascent identity as a health professional learner was, I contend, influenced by the meaning they took from their interactions with the built environment. For those who continued to attend, it was not clear from the data why, i.e., what aspect of their personal and professional identity influenced their choice to go "against the grain" (Watling et al., 2021).

This was in significant contrast to the agency and choice demonstrated during the observations (Theme 7). Restrictions had eased and access rights restored to N-Building. Students attending in the evenings had not been taught there during the day and had to travel significant distances. These students were older, and likely had built up stronger **Connections** (Theme 3) on their **Shared Journey** (Theme 2) as in effect their **past lives** (Theme 1 a) now included time spent as health professional students and hence had become more intertwined with others in the CoP. My findings suggest the design and location of the built environment was a factor. It overcame isolation (Lovell, 2015,

Hawick et al., 2018) by creating a destination worth **choosing** (Theme 7), a welcoming place, which students could occupy and **inhabit** (Theme 8), to “see and be seen” as they gathered in communal areas (Theme 4) , tell stories of their **Experiences** (Theme 6), **Exercise** (Theme 5a) , or **Study Together**-apart (Theme 5) in solo spaces throughout the building, but within eyeshot of others.

Summary

Having a reason to be somewhere was created by the built environment: N-Building’s pods and Dispensary café facilitating **Collaboration** and preparing and sharing of **Food** (Theme 4 and Subtheme 4a); the blue couches where people made and remade **Connections** (Theme 3); the balance of external and internal through-views reminding learners of their **Shared Journey** (Theme 2); the streetscape scale windows as **Part of Something Bigger** (Theme 5); and the sports facilities providing **Escape valves** (Subtheme 5a). Cumulatively these created **Reasons to Linger and Connect** (Theme 8) across the core interactions and processes required for participation, intra- and inter-professional community building and professional socialisation.

These findings suggest students’ occupation and use of the space reciprocally created a place facilitating discourse, socialisation, peer support and hence professional identity formation. I proffer the potential that as well as minimising feelings of discomfort, it creates opportunities for review, and perhaps, evolution of a CoP.

Objective 4

Assess the impact the built environment design has on reinforcing or disrupting pre-existing personal identities.

Chapter 6 Discussion

Getting Started

Students arrived with unique, multifaceted personal identities and past experiences. The fulfilment at gaining a place and the ability to envisage themselves as practitioners in the future was evident (**The Destination**, Theme 1), just as it had been documented in Boys in White many years prior:

> *"freshmen enter medical school full of enthusiasm, pride, and idealism about the medical profession…..it is the realization of a dream……… and find it difficult to imagine themselves anything else but future practitioners"* (Becker et al., 1961 pg. 79)

This realisation that getting in to the programme is only the beginning of the journey and their future responsibilities was palpable.

Medicine and the other health professions, whilst not yet being reflective of wider society are no longer homogenous (Cruess et al., 2019). The crafting of a new professional identity entwined as it is with pre-existing identity or aspirations for a future is not without challenges (Monrouxe, 2010, Frost and Regehr, 2013, Bennett et al., 2017). Support for the first-year learning experience through these periods of vulnerability and dissonance (Jarvis-Selinger et al., 2012, Kay et al., 2018, Stubbing et al., 2018) is essential. Symbolic events, such as the WCC, play a role in helping learners begin to acculturate **and** spaces on campus form part of these memories and meaning making. The themes generated demonstrated the symbolic importance of the WCC, both the actual ceremonial act **and** the amplification of meaning through interaction with peers (Theme 2 and Theme 3) and family (Theme 1 a) if spaces can be found to facilitate bigger congregations and more interactions occurring.

An interesting aspect of the WCC was Farif's discomfort when making the oath, clearly a marker of dissonance as they painted a picture of acting. Role playing (Monrouxe, 2010, Goldie, 2012) and the use of props (Beagan, 2001) is an important aspect of health

professions education and a legitimate part of professional identity formation. Appreciating role playing, and considering participants as actors can be an aspect of understanding and interpreting interactions with symbolic interactionists (Sandstrom et al., 2001). The role the built environment plays in supporting role playing is discussed next.

Progress through Authenticity and Experientiality

Through simulation, the built environment on campus provides a rich vein to legitimise role playing, creating learning through participation in low-risk yet authentic scenarios supporting becoming a healthcare professional (Leedham-Green et al., 2020, Moseley et al., 2021, Condron and Eppich, 2022). Whilst exposure to real work-based learning experiences remains a crucial facet of health professions education and identity formation (Cruess et al., 2015, Bolier et al., 2018), facilitating A**uthentic Learning** on campus (Theme 6) can be achieved through variations in the built environment (O'Shea et al., 2023).

In my study, specialist rooms assumed near mythical properties for students who had not yet experienced them. The creation of authentic "*mise-en-scène*" such as the Patient-centred Pharmacy (mock pharmacy) (Figure 53, pg. 312), operating rooms (Figure 52, pg. 312) for simulated learning (Cruess et al., 2019), and at smaller scale examination couches to practice physical exams skills, video recording for communication skills, task trainers (Figure 54, pg. 313), stethoscopes and blood pressure monitors (Figure 55, pg. 313), was called out as beneficial by learners. I suggest these were valued because it allows them legitimately participate at their current periphery of the CoP. It helped them picture themselves as belonging, to their chosen future **Destination** and as part of the collective **Journey** (Themes 1 and 2), as they tried and then adopted the tools of their trade. They recognised being able to learn in these spaces, helped them to become **Collaborators** (Theme 4) as well as impacted their skill

development and built their confidence and competence. This **Authentic experientiality** (Theme 6) was credited with a sense of progress and achievement, of beginning to "become".

Through these spaces, I propose participants demonstrated a commitment to self-improvement and CPD, further indicative of professional identity formation. They recognised the potential these spaces had outside of faculty led sessions for peer-to-peer teaching and **Collaborations** (Theme 4) and individual acquisition of competence. Students wished to be given increased opportunities to experience this **Authentic Learning** (Theme 6) and practise skills by **exercising their Agency** (Theme 7) and choosing when and where to learn. This reflects the call for "*opportunities to be more autonomous and less controlled by academics*" by Mylrea (2017), cited by Moseley at al. (2021, pg. 16).

My findings suggest ways to meet this and the call by Nobel et al. (2014) to provide opportunities to experiment and validate their "new selves". Allowing more access to rooms and kit would require a change in how these spaces are conceived and managed, but my findings suggest it could enhance student autonomy (Kay et al., 2018) **Choice and Agency** (Theme 7). It introduces potential to further deliver on personalised learning (Irby et al., 2010, O'Brien and Irby, 2013). Access to these places facilitated through near-peer tutoring, acting as mentors and role models, (Moseley et al., 2021) would I suggest assist in the reciprocal development of professional identity across multiple layers of the CoP, by fostering that continued sense of common **Destination** (Theme 1) **Shared Journey** (Theme 2), **Becoming Collaborators** (Theme 4) and providing further reasons to **Linger and Connect** (Theme 8).

Places such as these on campus helped **situate learning** (Subtheme 5b). They allow development of the skills and competence (Theme 6) which is known to be necessary to progress through the CoP (Cruess et al., 2015, Condron and Eppich, 2022) and enhance

feelings of belonging. The props necessary to support this progression and role playing are discussed next.

Props and Stagecraft

In the same way as is understood in stage and film, props, whether they be buildings, furniture, art, artefacts, white coats or stethoscopes, food or coffee, create signals, providing reasons to “be somewhere” and more importantly, to “be someone”. The impact of these symbols varies based on how individuals interact with them, their lived experiences and the meanings they ascribe to them. My findings and themes have made these interactions and their meanings more visible, as participants progressed in circumstances not always of their own choosing, and influenced by a global pandemic (Denzin, 2001, Sandstrom et al., 2001).

Acknowledging all these factors is reminiscent of Genn’s expansive concept of curriculum (2001a pg. 338). It takes further the notion of “*Objects, artefacts, tools and text*” (Ellis and Goodyear, 2016 pg. 159) provided across campus, as being essential to successful delivery of learning activities. My thesis develops and validates Ellis and Goodyear’s premise that props play a greater role when their “*assemblages and activities co-configure each other, guided by a sense of curricula and co-curricular purposes and values*” (2016 pg. 160).

My study shows the correct props act as navigational aids (Subtheme 5b), orienting learners to their chosen professions reminding them of the **Destination** (Theme 1) and providing motivation by helping them to get into the right frame of mind to sustain themselves and colleagues on the Journey (Theme 2).

Simulation based learning fundamentally relies on props and stagecraft to produce authentic learning away from the workplace. It can remove barriers and enable learner identity development (Condron and Eppich, 2022). Anxieties can be managed in a non-

critical setting and with gained efficacy and confidence (Moseley et al., 2021) minimise risk to patients and support the learner in their achievements, through **Collaboration** (Theme 4) and the **authenticity of the experience** (Theme 6). Even with low-fidelity equipment, participants connected symbolically to their **Destination** (Theme 1) and being part of **Something Bigger** (Theme 5).

The notion of "playing at" prior to "playing with" and "playing as" was appreciated by participants, who used their growing skills to signal to friends and family members their new identities as healthcare students, thereby connecting their **past lives** with their **destinations** (Themes 1a and 1). Examples of props and illustrations from the study are presented in Table 9. Conceptualising props in this way appreciates learners' uniqueness and supports the adaptive and individual processes involved in professional identity formation, achieved in stages (Jarvis-Selinger et al., 2012, Sarraf-Yazdi et al., 2021).

TABLE 9 PROPS AND STAGECRAFT: EXAMPLES

Type	Examples
Art	As inspiration, awe inducing, or joyful e.g. "The Ever Present Dead" installation in the anatomy room.
Art	Navigational aids signalling "where" you are, literally and figuratively. Depicting stories of the past and / or creating a shared vision of the future.
Art	Creating the climate through showcasing diverse role models. (Figure 56, pg. 314)
Artefacts	Historical tools connecting past and reframing the future.
Circulation routes and stairways	Designed to give choice for arriving and leaving, providing connections intra-building as well as through e.g., "arriving" down to the blue couches or "escaping" using the direct access to the gym
Classroom layouts	Lectern position either promoting equity or hierarchy.
External views	Reminded of the rest of the world, never alone always feeling part of something bigger.
Food, Coffee, and kitchenettes	Reheating food in the microwaves. Preparing and sharing food with and around each other. Grab a coffee – a reason to pause, or connect, your choice.
Internal views	Connecting with other like-minded people sharing the same goals.
Kit	Mock operating rooms and pharmacy - high-fidelity simulation to develop skills and competence

Type	Examples
Kit	As accessible tools of the trade e.g., stethoscopes, BP machines (Figure 55, pg. 313), labs
Kit	As décor marking out places as healthcare learning e.g., skeletons.
Lecture theatres	Spaces to congregate as and for learning, reminding people of common purpose and goal. Intentional interprofessional collocation.
Nature	Gardens providing a lung to breathe and connect to society.
Signage and surveillance	Welcoming or Controlling Discrete or invasive.
Spaces for events	Common rooms and large kitchens to facilitate making connections through celebrating together, e.g. Thanksgiving, WCC And Pop-up spaces to showcase cultural events e.g. Figure 56, pg. 315
Sports and Exercise facilities	Acting as escape valves. Building connections through shared activities. Collaborate and laugh.
Third spaces	Places to lounge and hang out
Walkways	Between buildings and across campus; and between classrooms, encourage lingering, both to make connections and to be together-apart.

Given professional identity development is non-linear, I submit the same prop - pieces of kit, art and artefacts – can convey different meanings and appear differently to individuals, even at the same time. A prop might:

- provide stability in periods of dissonance e.g., somewhere familiar to get a coffee where people know them, and they will be welcome;
- or act as a means of escape e.g., anatomy room art providing a moment of awe;
- or assist learners to perfect and hone techniques, e.g., the use of task trainers.

Each of these is interchangeable depending on the learner and the context, e.g. stability in periods of dissonance could be provided by using a task trainer to do a familiar skill when challenged by more advanced techniques; escape from an intense clinical encounter could be achieved by grabbing a coffee somewhere familiar; and the anatomy room might be used to practice and revise.

I propose the selection of which props speaks to the aspired collective institutional and societal culture and norms (Hafferty, 1998). Therefore, it can play a role in promoting inclusion and equity or not. Props and building design are assets that shape a learning culture (Oliveira et al., 2022), either cultural stability / stagnation (Hafferty et al., 2016), or permeability and progressiveness (Figure 56, pg. 314) seeking cultural fusion and assisting with evolution of the CoP. Getting it wrong is problematic (Irby, 2018), creates risks of assimilation (Goldie, 2012), submission of positive characteristics (Kay et al., 2018) and hence enculturation in service of the profession rather than society.

Summary

My findings suggest ways to increase learner autonomy and individualise learning pathways can be created by utilising learning environment assets differently, thus assisting learners to try out and make sense of their protean identity. There is evidence in my themes that aspects of the built environment, the choice of what imagery and art to include, furniture design, the position of the lectern, can reinforce already problematic (hierarchical, gendered, and heteronormative) cultures. Alternatively, when gotten right, they can enable participation and agency, making it easier to acculturate.

6.3. Opportunities for further research

During the period of the study, the social world of a university was stretched beyond recognition. Institutions implemented many initiatives to keep students engaged (Daniel et al., 2021, Strawbridge et al., 2022, De Santi et al., 2023). But students' access was limited with implications for agency and socialisation. Subsequent non-attendance led to lost opportunities with peers, sharing of learning experiences and reflection. Re-

engaging with students to capture a longitudinal perspective on the impact on professional socialisation and formation of CoP should be an area of future research.

Patient and public involvement in education and research is growing. Greater permeability and ease of access for patients and public in the education of future healthcare professionals through variations in the built environment should be researched. The role the campus built environment and the hidden curriculum (Hafferty, 1998) plays in welcoming patients and the public into HEIs as co-creators of knowledge and in support of professional identity formation is worthy of further study.

Generations have spoken about diversity and equity in health professions education. Whilst not a focus in this study, partly because the university student record system did not record ethnicity, no conclusion on its absence can be drawn, i.e., although participants of colour were present in the study, they were not asked explicitly how this influenced their experiences, making it "*hard to interpret this negative finding*" (Cox et al., 2022, pg. 161). What is clear is that choices made in the built environment either support or inhibit development of relationships. Understanding how the built environment can express allyship to assist harmonious participation and reduce micro-aggressions, and thus development of professional and personal identity formation to promote diversity, minimise ventriloquation and requirements to "standardise" to outdated norms, should be an area of further research.

Not requesting participants to indicate their preferred gender identity meant it was not appropriate to discuss the findings through a gendered lens. It was impossible to determine if any transgender or non-binary students participated. This was a significant limitation and oversight as under-research is part of the challenge in supporting already marginalised groups in society (Cameron and Stinson, 2019). Research on ways to promote connectivity, provide meaningful places to linger, and minimise dissonance

through the provision of appropriate places and props, should be undertaken with marginalised groups.

Future work on campus developments and identity formation should explicitly consider intersectional perspectives (Mount et al., 2022) alongside gender usage in creating welcoming places. More work to assess participation in CoP through these lenses, and the impact of the hidden curricula on access and equity within the built environment is needed.

6.4. Limitations

My view of the world, my ontological and epistemic foundations, mean what I chose to code or not had an impact (Miles and Huberman, 1994, pg. 11). The stories I have woven, the findings and final conclusions are as a result of my analytic choices. High levels of reflexivity, using my research question, aims and objectives as tethers, and discussions with my supervisors, assisted reflexively in making the thesis reliable.

At the UoH all enrolled learners are either studying for a primary healthcare qualification, undertaking taught programmes as qualified practitioners or are learning and researching as scientific innovators and scholars in the field of health sciences. Learners involved in this study come from a diverse set of countries, with over 75% of the FG coming from outside the EU. It may create a unique context, with resultant impact on generalisability of the findings and transferability of recommendations. Universality of themes was achieved through recursively and reflexively returning to the literature and hence broad applicability of the recommendations for practice is possible.

As the FGs were conducted by the facilitator, Connor, the potential loss of hearing participants first hand, and the ability to begin the analysis of the data in real-time which

"*makes focus group research simultaneously so demanding and so exhilarating"* (Barbour, 2018, pg. 101) was a necessary limitation.

The observations took place at particular times and dates within the academic cycle, limiting users of the building and how they used it. Having only one weekend morning was a limitation, particularly given the adverse weather conditions, as usage of the building was lighter than the previous evening, which could not be interpreted as either the usual pattern at that time / day, or a factor of the weather, or something else.

Medical education is the pre-eminent source of literature used in this thesis, and the dominant programme of FG participants. Whilst there is much transferability in the multi-faceted social construction of professional identity, it may be that some of the inferences drawn are not applicable outside of medicine.

6.5. Summary

My thesis exposes the importance of explicit alignment of pedagogy, institutional imperatives and the societal contract, with the built environment. This chapter explored how the built environment, a core part of the learning environment (Gruppen et al., 2018, Irby, 2018, van Schaik et al., 2019), reciprocally (Wald, 2015, Damşa et al., 2019) affected the accumulation of experiences (Cruess et al., 2015) over time and across the continuum of health professions education (Hilton and Slotnick, 2005). Reviewing the built environment and my findings through a socio-constructivist lens within the framework of symbolic interactionism and with relation to the literature, has enabled me to illuminate the interconnected nature of the learner, their learning environment and the built / physical realm.

This chapter discussed how the built environment is conceived, designed, and executed creates or inhibit encounters and opportunities, supportive of core principles (Cruess

and Cruess, 2006) and processes (Shochet et al., 2015) involved in professional identity formation. Hafferty (1998) called out the importance of the hidden curriculum in terms of investments made, and how these convey meanings. My thesis demonstrates what is invested in or not emerges and becomes tangible. Messages conveyed at institutional level through investments i.e., building spaces for rest, relaxation, exercise, and socialisation, although welcomed, were called out as inconsistent when the curriculum was too busy. Spaces in curricula were equally jarring and dismissed when students did not have places on campus to hang-out. Campus and building designs demonstrate what is valued: somewhere to reflect (or not), to become (or not), to forge connections between students (or not), and links with society (or not).

The interior layouts and design, best illustrated by N-building, created reasons to linger and fortuitous community building through socialisation from planned and chance encounters. In addition to reasons to linger being created within buildings, a building can itself be a powerful destination, itself a reason to connect.

Learners will choose where to spend time and these findings propose an appropriate built environment can be curated to facilitate these choices and build a culture of support, learning orally and socially, connected to society. It is created reciprocally by students through their interactions and usage of the physical realm. Professional socialisation and formation of communities can be supported or inhibited by the design and location of the built environment.

In the final Chapter 7, I address the research question, draw conclusions and make recommendations, before finally reflecting on the impact this research has had on me, my institution and beyond.

7. Conclusions and Recommendations

7.1. Introduction

In this concluding chapter, I specify how I addressed my research question and hence my contribution to knowledge. I include recommendations and a framework to assist those involved in campus developments where professional identity formation should feature. A reflexive account of my personal learning and professional journey completes this thesis.

7.2. Answering the Research question

My research question, driven by curiosity post-opening of a campus development project in which I had been heavily involved was:

> *(How) Is professional identity formation in health professionals' education influenced by the built environment on campus?*

Having used Reflexive Thematic Analysis (Braun and Clarke, 2006, Braun and Clarke, 2021), I submit there is sufficient evidence showing professional identity formation in health professionals' education **is** influenced by the built environment, and in a myriad of ways. These influences can be positive and supportive, or alternatively, inhibitory and negatory. In Chapter 6 I explicated how my research was effective in addressing my research objectives and thus answering this question. My findings were woven through those research objectives, helping to illuminate and magnify (Bordage, 2009) the intersection of the built environment and factors influencing professional identity formation. I have summarised those aspects of the built environment present in my findings which impact influences of professional identity formation from the literature (Cruess et al., 2019, Sarraf-Yazdi et al., 2021, Mount et al., 2022) in Table 10.

TABLE 10 ASPECTS OF THE BUILT ENVIRONMENT IMPACTING ON PIF

PIF influences	Built Environment													
	Art and Artefacts	Nature	Circulation routes	Classroom layouts	Food, Coffee and Kitchenettes	Spaces for cultural events	Kit	Lecture theatres	Sports and	Third spaces	Walkways	Internal views	External views	Signage and Surveillance
Agency and Choice	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Existing identity	✓			✓	✓	✓	✓	✓					✓	✓
Experiential Learning	✓			✓			✓			✓			✓	✓
Formal teaching			✓	✓	✓		✓	✓				✓	✓	✓
Hierarchy and hegemony	✓			✓	✓	✓		✓				✓	✓	✓
Patient Interaction	✓	✓	✓	✓	✓	✓		✓			✓		✓	✓
Isolation from peers			✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
Isolation from society	✓	✓	✓			✓			✓				✓	✓
Mentorship			✓	✓	✓	✓				✓				
Other professions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Peer to Peer support			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Reflection	✓	✓	✓	✓			✓	✓		✓	✓			
Rituals	✓	✓			✓	✓	✓		✓	✓			✓	✓
Role modelling	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Sharing stories	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
Symbolic events	✓			✓	✓	✓	✓		✓					✓
Workload		✓		✓	✓			✓	✓	✓		✓	✓	

Answering the "(How)" part of the research question has created recommendations and implications which are already being enacted organisationally and are shared in the next section. Dissemination of these findings to a wider audience is an ongoing process.

7.3. Recommendations

The findings from this research indicate the importance learners place on collective learning and the relationships they will have with the public and society. This is consistent with an evolution away from professional identity as a “sole practitioner” to one which, while still autonomous, is grounded in a collective purpose. Recommendations of practical ways to deliver this are suggested below:

Implications for Practice: Practical Recommendations

Views: Transparency and positioning of furniture to create meaningful views internally and externally can create and maintain connections to society. Understanding and promoting the need for connection through transparency should be part of the design brief. A preponderance of internal views in study spaces should be avoided.

Permeability: In addition to views and transparency, finding ways to welcome in outside influences to limit insularity and increase permeability should be planned across campus, always remembering that what is invested in conveys meaning.

Reflection: Places for reflection should be supported by the built environment. Design cues, such as quiet gardens, seating nooks, etc., help. Places proximal to key “firsts” e.g., anatomy and mock-pharmacy rooms, should be designed to facilitate musing or garner peer support. Understanding when these firsts occur can create opportunities for additional congregations, facilitated through the design of spaces, e.g., pop-up events sharing food / coffee to encourage lingering, participation, decompression or celebration.

Art and Artefacts: Art has the ability to inspire, provoke awe and act as navigational aids. It can also be a means of escape. Working with learners to curate existing or produce new art would be advisable to ensure it enhances the climate.

Role Playing, Authentic Experientiality and Agency: Spaces and equipment for simulated learning exist already on campus, albeit likely under-utilised outside of staff led teaching. Students should be facilitated to use these places, outside of formal scheduled activity, to self-identify and address gaps, individually and with peers.

Large group lectures: Awareness raising for faculty (Leijon et al., 2022) of the potential for reframing lecture theatres (LTs) as liminal spaces supportive of PIF would be advisable. I suggest using LTs in this way is likely to be most beneficial in the first few weeks of each new academic session as learners settle in to the new stage of learning. The benefits of recorded or streamed lectures post-pandemic (Yang, 2021, Broner et al., 2022) should be balanced with the lost opportunities for communal learning at scale and its ability to assist with transition and development of professional identity. Further fragmentation of the learning environment (Ellis and Goodyear, 2016) into virtual vs physical in the post-pandemic era as a result of hybrid, asynchronous content, locations, and learners, will I suggest not serve the development of professional identity and is counterproductive to its formation through collaboration, socialisation[34] and connecting to wider society.

Spaces to congregate: Destinations on campus need to be provided for the creation of communities and provision of peer-support. Having spaces designed to promote vertical integration across years, as well as inter-professional socialisation, through communal teaching or social activities would be desirable. Provision of food, coffee and simple kitchenettes, where people can prepare and share food, can create places for

[34] Within the UoH streaming of lectures continued through AY 22/23. However, concerns in relation to student engagement, poor attendance and a lower than usual first sitting progression rate in some programmes, has resulted in the university deciding to cease streaming for AY 23/24. In communicating this to the student body, the benefits of congregating "as and for" learning, and asking faculty to use the spaces to encourage interaction or moments of reflection will be incorporated.

professional socialisation, including, after-hours is essential. Furniture should encourage lounging, inhabitation and ownership, and above all be welcoming.

Acculturation through celebration: Places can be infused with cues to support desired behaviours including issues of equity, in a developing, socially derived culture. Designated places for students to share and celebrate other facets of their identity, including cultural connections to their past, should be provided.

Occupancy and Hollowness: When assigning rooms to cohorts, care should be taken to match the numbers of users to room capacities and configurations, when possible, to avoid under-occupancy and emptiness.

This section has given some practical recommendations for incorporating my findings into a HEI built environment to assist with professional identity formation. Post COVID-19, learners, faculty and staff may need assistance to dwell, reflect, linger and participate on campus.

Implications for Practice: Internal impact

Institutionally I have been using my research findings to influence the project team and wider stakeholders in a current significant campus development (Figure 46 pg. 306)[35]. Discussions have included ensuring spaces are generous but not under occupied; the ratios of spaces to linger and connect for students and faculty have increased; and views and connectivity across the city and the university campus are being maximised. Six rooms / places are being created as physical spaces to be occupied by six-designated learning communities, all with kitchenettes, furniture to lounge and big tables to collaborate. They have views over a garden courtyard connecting the campus.

[35] The project was also delayed due to COVID-19.

In particular the importance of art and nature have been amplified through this work back into the project, resulting in an additional design brief and funding for the commission of art / water feature in the garden courtyard.

Aligning with current research and educational trends, insights into permeability have been welcomed. Public engagement has been prioritised and I have been asked to chair a group looking at how a space can be created in a prime street-level location to engage the public in conversations about science and health that will have societal impact. I hope to conduct future research on its impact with possible comparisons between existing campus buildings and the new spaces.

In the next section, I depict a conceptualised framework envisaged to support dialogue between educators and campus planners.

7.4. Defined Contribution: The “A” Framework

In seeking to align campuses with curricula, my thesis recommends going beyond the provision of spaces for active or informal learning. These are still important, but deeper intentional alignment to support identity formation through authentic, participatory, connected learning, in service to society, is possible. In programmes where graduates have professional responsibilities it is imperative. In order to assist dissemination, I have created a conceptualised framework, Figure 38, pg. 253, from this study, comprising of the following elements:

- ✓ **Alignment**: the totality of the curriculum, learning environment, resources, and the institutions philosophical imperative, should be tangibly aligned in the built environment. This manifests in investment choices.

- ✓ **Authentic** activities and learning experiences, where students can learn shoulder-to-shoulder, with real kit and equipment, in-situ or remotely, assist progression, agency and feeling like they are "becoming". These spaces should be designed to be accessible for student-led sessions.

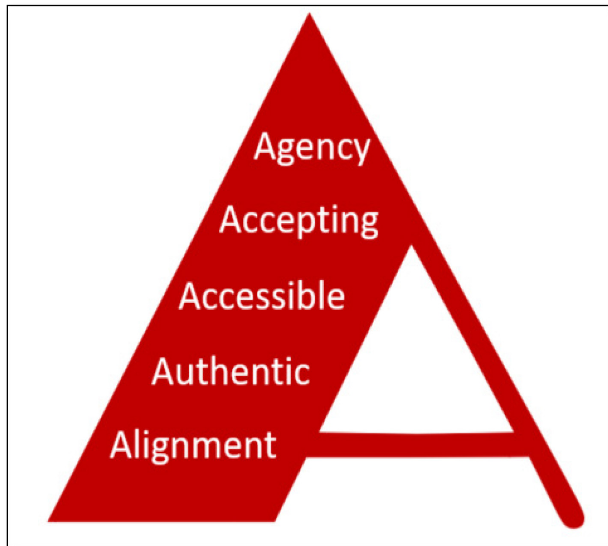


FIGURE 38 THE "A" FRAMEWORK:

- ✓ **Accessible**. Campus built environment needs to be a welcoming, transparent and open place for learners and wider society. Keeping connected is essential.
- ✓ **Accepting** of students as and who they are, linking to their dreams for themselves, for each other and the future. In conceiving of spaces in this way, permeability is created, aiding connections, flow and exchanges of ideas, ensuring a culture and a place of acceptance.
- ✓ Throughout this, the **Agency** of all users – students, faculty, staff, and patients – must be nurtured and facilitated. Variety of spaces, and of places within spaces, through campus master planning, will create opportunities for learner choice. How spaces are designed and managed day to day; the selection of art; arrangements of furniture; signage and access controls; must all be appreciated as factors that can encourage autonomy, inhabitation and impact agency.

The framework should be useful as a synopsis and accessible way to engage stakeholders in dialogue about the built environment on campus to support what is still a loosely defined field of interventions in support of professional identity formation.

Plans for dissemination include collaboration with an academic architect for a seminar within their architectural practice and possibly within their educational programme. I also hope to author potential journal articles emanating from this study, including a possible future paper, with a working title of "*Anchors, Rafts and Floats: using art and artefacts as navigational aids through medical school*".

7.5. Conclusions

Are supporting learning, and supporting becoming, different things? In the case of health professional education, I conclude they are inextricably linked and reciprocal. Classic learning – knowing, skills and behaviours – is essential to professional identity and its formation, as it drives the individual psychological development to facilitate learners move to new roles and participate in new activities (Jarvis-Selinger et al., 2012). But it is not enough. We must support learners' ways of being (Dall'Alba and Sandberg, 2006) too as professional identity is about collective learning and a reciprocal relationship to society (Hafferty et al., 2016). I have argued an insular-only CoP focus, cemented through the built environment's design, is inconsistent with meeting societal needs.

It is neither architectural nor behavioural determinism that has primacy (Berman, 2020), rather I conclude we need intentional (Bennett, 2011) entanglement (Leijon et al., 2022) of these in support of the adaptive processes required by health professional students for the formation of values and norms wanted by society (Frenk et al., 2010, Monrouxe, 2010, Jarvis-Selinger et al., 2012). Variety is required (Carnell, 2017), and a matrix approach (Temple, 2007) when designing learning spaces may best serve professional identity formation.

From my social constructivist perspective, the whole campus is a learning space. What we invest in and do with those spaces, how and when we involve students and give

agency, matters. The impact of the interventions discussed in this thesis can be lessened, loosened and undone when learner agency is compromised or removed, as happened through the natural experiment (Breen et al., 2010) of COVID-19.

My thesis concludes that professional identity formation is influenced by the built environment on campus, primarily through the facilitation of professional socialisation and the provision of places to reflect, tell stories and scaffold the CoP for participants at the periphery. Permeable buildings, more coffee lounges, gardens, art on walls, or gyms on their own won't make better health professionals, able to compassionately care whilst attending to their own wellbeing. Where investment is being made then the totality of the built environment should be intentionally considered and aligned to contribute positively to individuals' development. Acculturation to an evolving CoP is enhanced which should serve future patients and professions well.

7.6. The making of a doctor ….

In writing this thesis I wondered did the interruptions of study – COVID-19, personal - make for a better or worse research study? Over time, I realised those events made it different, rather than better or worse. Recent studies published (Cox et al., 2022, Leijon et al., 2022, Mount et al., 2022) added to the landscape. COVID-19, with the world pivoting online, socially distanced and PPE wearing, necessitated new ways of being and learning, generating new insights (Findyartini et al., 2020, Slivkoff et al., 2021, van der Meer et al., 2021, Strawbridge et al., 2022, Consorti and Consorti, 2023) including what was absent and lost. Limitations of the study, as in any research, exist and have been shared in Chapter 6. What I do know is that in re-reading the original papers from my project proposal, new meanings were derived and further illuminations possible. Does this mean I started in the wrong place or asked the wrong questions? No. It means I

appreciated the variety of knowledge available and generated new insights that reframes, expands and supports others work.

This doctoral adventure has helped me to reframe my past and to articulate and situate this project in my current professional ambit. My understanding of the field has developed and is having immediate impact on my organisation as we commenced another campus expansion. This research has changed me and how I think about learners and staff on campus. Hearing the participants' voices and seeing the world through their eyes was humbling. It was a privilege to share their delight derived from experiences using the campus and to hear of their frustrations.

In sharing their learning journey to become a doctor [sic] they helped me on mine.

I am deeply grateful.

Researching and writing about professional identity formation whilst one's own identity is evolving has been enjoyable. It has both validated past approaches and challenged my naiveté of hegemonic and asymmetrical structures (Bassot, 2015). This research project has further awakened me to the inherent ways bias can be baked-in to everyday activities and I am emboldened to strive for equity in all realms of my role. I learnt throughout my working life by a variety of means: everyday activities and interactions at work (Bourner, 2003), reflection (Bassot, 2015), formal training, and through the mimetic processes of observation, imitation and action (Billett, 2014). I am also who I am because of what I have not learned (Bassot, 2015). Becoming "a professional" is not about a label of being a pharmacist or a doctor, but I recognise that having that moniker, being "a something", was helpful for me during periods of dissonance in my own life. Understanding all this, having all these stories, allows me to weave together my own narratives and continue to craft my professional identity.

7.7. Summary and concluding comments

The results presented in this thesis show the development of professional identity should not be left to stochastic processes or pedagogic interventions alone. Rather, the totality of the curriculum including its campus built-environment and associated investments can, through thoughtful and intentional arrangement, achieve more when conceptualised through the proposed framework in pursuit of professional identity formation.

Reflexivity requires an appreciation of the context and situation. When I started this doctoral adventure, I could not have envisaged the turmoil that would envelop the world. COVID-19, Black Lives Matter and the various dreadful wars raging have caused horrendous damage to individuals and societies. Amazing researchers created vaccines and treatments to combat the virus. By comparison, my research study could appear insignificant. However, in Chapter 1 I shared one of my hopes for this study was to understand if marginal gains in learner attainment could be achieved through better alignment of the investments made on campus. Our graduates are going out into an ever more challenging world. We owe it to them to leverage everything we have to assist their professional identity formation, because of the impact health professions graduates have on generations of patients, families and societies.

.... ENDS ....

References

ACKER, S. R. & MILLER, M. D. 2005. Campus Learning Spaces: Investing in How Students Learn. *Educause Center for Applied Research Bulletin,* 2005.

AL-ERAKY, M. M. & MAREI, H. F. 2016. Medical professionalism: When in Rome,… Romans should help visitors. *Medical Teacher,* 38 (2)**,** pp. 214-214.

ALEXANDER, A. 2010. What are the attributes required to become tomorrow's pharmacists. *The Pharmaceutical Journal,* 284**,** pp. 458-459.

ALZEER, G. 2019. Spatializing higher education: Emirati women learners' hot and cold spaces. *International Studies in Sociology of Education,* 28**,** pp. 46-62.

AMERICAN MEDICAL ASSOCIATION 2017. *Creating a Community of Innovation*. Chicago, IL: American Medical Association.

AMERICAN MEDICAL ASSOCIATION. 2019. *Accelerating Change in Medical Education. Innovation Grant Programme* [Online]. Chicago, IL.: American Medical Association. Available: https://www.ama-assn.org/education/changemeded-initiative/370000-ama-grants-will-help-drive-rigorous-med-ed-innovations [Accessed April 2019].

ANDERSON, L. 2000. *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives: complete edition,* Portland, Pearson.

APPLETON, J. J., CHRISTENSON, S. L. & FURLONG, M. J. 2008. Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools,* 45**,** pp. 369-386.

ATKINSON, P., COFFEY, A., DELAMONT, S., LOFLAND, J. & LOFLAND, L. 2001. *Handbook of Ethnography*. SAGE.

ATKINSON, P. & PUGSLEY, L. 2005. Making sense of ethnography and medical education. *Medical Education,* 39**,** pp. 228-234.

AUDE 2019. *Higher Education Estates Management Summary Report 2018*. Loughborough, UK: Association of University Directors of Estates.

AUDE & SODEXO 2022. *Social and Informal Learning Spaces report*. Loughborough University: Association of University Directors of Estates.

BARAB, S.A., BARNETT, M. and SQUIRE, K., 2002. Developing an empirical account of a community of practice: Characterizing the essential tensions. *The Journal of the Learning Sciences*, 11(4), pp.489-542

BARBOUR, R. S. 2018. *Doing focus groups*, SAGE Publications Ltd.

BARKIN, S. L., FUENTES-AFFLICK, E., BROSCO, J. P. & TUCHMAN, A. M. 2010. Unintended Consequences of the Flexner Report: Women in Pediatrics. *Pediatrics,* 126**,** pp. 1055 - 1057.

BASSOT, B. 2015. *The Reflective Practice Guide: An interdisciplinary approach to critical reflection*, Routledge.

BEAGAN, B. L. 2001. “Even if I don't know what I'm doing I can make it look like I know what I'm doing”: Becoming a Doctor in the 1990s. *Canadian Review of Sociology/Revue Canadienne de Sociologie,* 38**,** pp. 275-292.

BEATTY, B. J. 2019. *Hybrid-Flexible Course Design Implementing student-directed hybrid classes*. 1st ed.: EdTech Books.

BECKER, H. S., GEER, B., HUGHES, E. C. & STRAUSS, A. L. 1961. *Boys in white: Student Culture in Medical School*, Transaction publishers.

BENADE, L. 2021. Theoretical Approaches to Researching Learning Spaces. *New Zealand Journal of Educational Studies,* 56**,** pp. 11-26.

BENNETT, D., SOLOMON, Y., BERGIN, C., HORGAN, M. & DORNAN, T. 2017. Possibility and agency in Figured Worlds: becoming a ‘good doctor’. *Medical Education,* 51**,** pp. 248-257.

BENNETT, S. 2011. Learning Behaviors and Learning Spaces. *portal: Libraries and the Academy,* 11**,** pp. 765-789.

BERMAN, N. 2020. A critical examination of informal learning spaces. *Higher Education Research & Development,* 39**,** pp. 127-140.

BILLETT, S. 2001. Learning Throughout Working Life: Interdependencies at work. *Studies in Continuing Education,* 23**,** pp. 19-35.

BILLETT, S. 2004. Co-participation at work: Learning through work and throughout working lives. *Studies in the Education of Adults,* 36**,** pp. 190-205.

BILLETT, S. 2014. Mimesis: Learning Through Everyday Activities and Interactions at Work. *Human Resource Development Review,* 13**,** p. 462.

BILLETT, S., BARKER, M. & HERNON-TINNING, B. 2004. Participatory practices at work. *Pedagogy, Culture & Society,* 12**,** pp. 233-258.

BILLETT, S. & PAVLOVA, M. 2005. Learning through working life: self and individuals' agentic action. *International Journal of Lifelong Education,* 24**,** pp. 195-211.

BLOODGOOD, R. A., SHORT, J. G., JACKSON, J. M. & MARTINDALE, J. R. 2009. A Change to Pass/Fail Grading in the First Two Years at One Medical School Results in

Improved Psychological Well-Being. *Academic Medicine,* 84**,** pp. 655-662.

BLUMER, H. 1969. *Symbolic Interactionism: Perspective and Method,* Berkeley, University of California Press.

BOLIER, M., DOULOUGERI, K., VRIES, J. & HELMICH, E. 2018. 'You put up a certain attitude': a 6-year qualitative study of emotional socialisation. *Medical Education,* 52**,** pp. 1041-1051.

BORDAGE, G. 2009. Conceptual frameworks to illuminate and magnify. *Medical Education,* 43**,** pp. 312-319.

BOUD, D. & MIDDLETON, H. 2003. Learning from Others at Work: Communities of Practice and Informal Learning. *Journal of Workplace Learning,* 15**,** pp. 194-202.

BOUD, D. & WALKER, D. 1998. Promoting reflection in professional courses: The challenge of context. *Studies in Higher Education,* 23**,** pp. 191-206.

BOURNER, T. 2003. Assessing reflective learning. *Education and Training,* 45**,** pp. 267 - 272.

BRAUN, V. & CLARKE, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology,* 3**,** pp. 77-101.

BRAUN, V. & CLARKE, V. 2012. Thematic Analysis. *In:* COOPER, H. (ed.) *APA Handbook of Research Methods in Psychology.* American Psychological Association.

BRAUN, V. & CLARKE, V. 2019. Reflecting on reflexive thematic analysis. *Qualitative research in sport, exercise and health,* 11**,** pp. 589-597.

BRAUN, V. & CLARKE, V. 2021. *Thematic Analysis | a reflexive approach* [Online]. Available: https://www.psych.auckland.ac.nz/en/about/thematic-analysis.html [Accessed November 2021].

BREE, R. T. & GALLAGHER, G. 2016. Using Microsoft Excel to code and thematically analyse qualitative data: a simple, cost-effective approach. *All Ireland Journal of Higher Education,* 8**,** pp. 2811 - 28114.

BREEN, M. J., DEVEREUX, E., MCGEE, H., O'BOYLE, C. & GOODE, H. 2010. Suing the Pope and Scandalising the People: Irish Attitudes to Sexual Abuse by Clergy Pre-and Post- Screening of a Critical Documentary. *Irish Communications Review,* 11**,** pp. 77 - 92.

BREKHUS, W. H., DEGLOMA, T. & FORCE, W. R. 2021. *The Oxford Handbook of Symbolic Interactionism*, Oxford University Press.

BREMER, A. E., VAN DE POL, M. H. J., LAAN, R. F. J. M. & FLUIT, C. R. M. G. 2022. How an EPA-based curriculum supports professional identity formation. *BMC Medical*

Education, 22**,** pp. 1-8.

BRONER, S. E., HARELI, M., GONZALES, C. H., CONLEY, C. S. & RUGGIERI, A. L. 2022. Finding Silver Linings: A Mixed Methods Analysis of COVID-19's Challenges and Opportunities for College Students' Functioning and Outlook. *Emerging Adulthood,* 10**,** pp. 491-510.

BRYANT, J., MATTHEWS, G. & WALTON, G. 2009. Academic libraries and social and learning space: A case study of Loughborough University Library, UK. *Journal of Librarianship and Information Science,* 41**,** pp. 7-18.

BUCKLEY, A., SOILEMETZIDIS, I. & HILLMAN, N. 2015. *2015 HEPI-HEA Student Academic Experience Survey* [Online]. York, UK: The Higher Education Academy and The Higher Education Policy Institute. Available: https://www.hepi.ac.uk/2015/06/04/2015-academic-experience-survey/ [Accessed May 2019].

CAMERON, J. J. & STINSON, D. A. 2019. Gender (mis)measurement: Guidelines for respecting gender diversity in psychological research. *Social and Personality Psychology Compass,* 13**,** pp. 1-14.

CARNELL, B. 2017. Connecting Physical University Spaces with Research-Based Education Strategy. *Journal of Learning Spaces,* 6**,** pp. 1-12.

CARNEMOLLA, P., DEBONO, D., HOURIHAN, F., HOR, S., ROBERTSON, H. & TRAVAGLIA, J. 2021. The influence of the built environment in enacting a household model of residential aged care for people living with a mental health condition: A qualitative post-occupancy evaluation. *Health & Place,* 71.

CARTER, B., BRUNSON, B., HATFIELD, C. & VALUCK, R. 2000. Description of an Introductory Course Designed to Socialize Pharmacy Students. *American Journal of Pharmaceutical Education,* 64**,** pp. 166-172.

CASSIDY, D., BRUEN, C., CREHAN, M., EDWARDS, G., MOFFETT, J., KELLY, H., ILLING, J., DOYLE, A., CULLEN, M., OFFIAH, G. & HILL, A. 2021. Experiential learning: lessons learned from the COVID pandemic. *National Forum Insights* [Online]. Available: https://hdl.handle.net/10779/rcsi.18551039.v1 [Accessed March 2023].

CHANG, H. 2016. Autoethnography in Health Research: Growing Pains? *Qualitative Health Research,* 26**,** pp. 443-451.

CLARKE, A. 2003. Situational Analyses: Grounded Theory Mapping After the Postmodern Turn. *Symbolic Interaction,* 26**,** pp. 553-576.

CLARKE, A. E., FRIESE, C. & WASHBURN, R. 2016. *Situational analysis in practice: Mapping Research with Grounded Theory,* Oxford, UK, Routledge.

COHEN, L., MANION, L. & MORRISON, K. 2007. *Research Methods in Education,* London, Routledge.

CONDRON, C. & EPPICH, W. 2022. Communities of Practice and Medical Education. *In:* DEBRA NESTEL, G. R., LISA MCKENNA, SUZANNE GOUGH (ed.) *Clinical Education for the Health Professions.* Singapore: Springer Live.

CONSORTI, F. & CONSORTI, G. 2023. Elements and Determinants of Professional Identity During the Pandemic: A Hermeneutic Qualitative Study. *Teaching and Learning in Medicine,* 35**,** pp. 422-435.

COOKE, M., IRBY, D. M. & O'BRIEN, B. C. 2010a. A Summary of Educating Physicians: A Call for Reform of Medical School and Residency. Available: http://archive.carnegiefoundation.org/publications/elibrary/educating-physicians-summary.html [Accessed April 2019].

COOKE, M., IRBY, D. M. & O'BRIEN, B. C. 2010b. *Educating Physicians: a Call for Reform of Medical School and Residency,* San Francisco, CA, Jossey-Bass.

COOKE, M., IRBY, D. M., SULLIVAN, W. & LUDMERER, K. M. 2006. American Medical Education 100 Years after the Flexner Report. *New England Journal of Medicine,* 355**,** pp. 1339-1344.

COSTLEY, C., ELLIOTT, G. & GIBBS, P. 2013. *Doing Work Based Research: Approaches to Enquiry for Insider-Researchers*, Sage.

COX, A. M. 2018. Space and embodiment in informal learning. *Higher Education,* 75**,** pp. 1077-1090.

COX, A. M., BENSON MARSHALL, M., BURNHAM, J. A. J., CARE, L., HERRICK, T. & JONES, M. 2022. Mapping the campus learning landscape. *Pedagogy, Culture & Society,* 30**,** pp. 149-167.

CRUESS, R. L. & CRUESS, S. R. 2006. Teaching professionalism: general principles. *Medical Teacher,* 28**,** pp. 205-208.

CRUESS, R. L., CRUESS, S. R., BOUDREAU, J., SNELL, L. & STEINERT, Y. 2014. Reframing Medical Education to Support Professional Identity Formation. *Academic Medicine,* 89**,** pp. 1446-1451.

CRUESS, R. L., CRUESS, S. R., BOUDREAU, J. D., SNELL, L. & STEINERT, Y. 2015. A Schematic Representation of the Professional Identity Formation and Socialization of Medical Students and Residents: A Guide for Medical Educators. *Academic Medicine,* 90**,** pp. 718-725.

CRUESS, R. L., CRUESS, S. R. & STEINERT, Y. 2016. *Teaching Medical Professionalism: Supporting the Development of a Professional Identity*, Cambridge University

Press.

CRUESS, R. L., CRUESS, S. R. & STEINERT, Y. 2018. Medicine as a Community of Practice: Implications for Medical Education. *Academic Medicine,* 93**,** pp. 185-191.

CRUESS, S. R. & CRUESS, R. L. 1997. Professionalism must be taught. *BMJ,* 315**,** pp. 1674-1677.

CRUESS, S. R., CRUESS, R. L. & STEINERT, Y. 2019. Supporting the development of a professional identity: General principles. *Medical Teacher,* 41**,** pp. 641-649.

DALL'ALBA, G. & SANDBERG, J. 2006. Unveiling Professional Development: A Critical Review of Stage Models. *Review of Educational Research,* 76**,** pp. 383-412.

DAMŞA, C., NERLAND, M. & ANDREADAKIS, Z. E. 2019. An ecological perspective on learner-constructed learning spaces. *British Journal of Educational Technology,* 50**,** pp. 2075-2089.

DANIEL, M., GORDON, M., PATRICIO, M., HIDER, A., PAWLIK, C., BHAGDEV, R., AHMAD, S., ALSTON, S., PARK, S., PAWLIKOWSKA, T., REES, E., DOYLE, A. J., PAMMI, M., THAMMASITBOON, S., HAAS, M., PETERSON, W., LEW, M., KHAMEES, D., SPADAFORE, M., CLARKE, N. & STOJAN, J. 2021. An update on developments in medical education in response to the COVID-19 pandemic: A BEME scoping review: BEME Guide No. 64. *Medical Teacher***,** pp.253-271.

DE SANTI, C., CAVALLERI, G. L., KERRIGAN, S. W., FITZPATRICK, F., MCGROGAN, K., GILROY, J., BAXTER, R., QUADU, V., RYAN, K. & HUMPHREYS, H. 2023. Screening medical students for SARS-CoV-2 to facilitate face-to-face clinical teaching and prevent onward spread to patients. *Journal of Hospital Infection***,** pp. 1-3.

DENSEN, P. 2011. Challenges and Opportunities Facing Medical Education. *Transactions of the American Clinical and Climatological Association,* 122**,** pp. 48-58.

DENZIN, N. 2001. *Interpretive Interactionism*. 2 ed. Thousand Oaks, California: SAGE.

DESHETLER, L., GANGADHAR, M., BATTEPATI, D., KOFFMAN, E., MUKHERJEE, R. K. & MENON, B. 2021. Learning on Lockdown: A Study on Medical Student Wellness, Coping Mechanisms and Motivation during the COVID-19 Pandemic. *MedEdPublish,* 10**,** 50.

DINGWALL, R. 2021. The Historical Foundations of Symbolic Interactionism. *In:* BREKHUS, W. H., DEGLOMA, T. & FORCE, W. R. (eds.) *The Oxford Handbook of Symbolic Interactionism.* Oxford University Press.

DONETTO, S., MALONE, M., SAYER, L. & ROBERT, G. 2017. New models to support the professional education of health visitors: A qualitative study of the role of space and place in creating 'community of learning hubs'. *Nurse Education Today,* 54**,**

pp. 69-76.

DORNAN, T. 2005. Osler, Flexner, apprenticeship and 'the new medical education'. *Journal of the Royal Society of Medicine,* 98**,** pp. 91-95.

DORNAN, T., BOSHUIZEN, H., KING, N. & SCHERPBIER, A. 2007. Experience-based learning: a model linking the processes and outcomes of medical students' workplace learning. *Medical Education,* 41**,** pp. 84-91.

DORNAN, T., PEARSON, E., CARSON, P., HELMICH, E. & BUNDY, C. 2015. Emotions and identity in the figured world of becoming a doctor. *Medical Education,* 49**,** pp. 174-185.

DUFFY, B., TULLY, R. & STANTON, A. V. 2023. An online case-based teaching and assessment program on clinical history-taking skills and reasoning using simulated patients in response to the COVID-19 pandemic. *BMC Medical Education,* 23**,** pp. 1-11.

DUFFY, T. P. 2011. The Flexner Report—100 years later. *The Yale Journal of Biology and Medicine,* 84**,** pp. 269-276.

DUNHAM, L., DEKHTYAR, M., GRUENER, G., CICHOSKIKELLY, E., DEITZ, J., ELLIOTT, D., STUBER, M. L. & SKOCHELAK, S. E. 2017. Medical Student Perceptions of the Learning Environment in Medical School Change as Students Transition to Clinical Training in Undergraduate Medical School. *Teaching and Learning in Medicine,* 29**,** pp. 383-391.

EIGENBRODT, O. 2017. Learning space and campus planning: Theoretical deliberations and practical implementations. In: WALTON, G. & MATTHEWS, G. (eds.) *Exploring Informal Learning Space in the University.* Routledge.

ELKINGTON, S. & BLIGH, B. *Future Learning Spaces: Space, Technology and Pedagogy*. 2019. Advance HE, pp.1-69.

ELLIS, R. A. & GOODYEAR, P. 2016. Models of learning space: integrating research on space, place and learning in higher education. *Review of Education,* 4**,** pp.149-191.

EMANUEL, E. J. 2020. The Inevitable Reimagining of Medical Education. *JAMA,* 323**,** pp. 1127-1128.

EPPICH, W. J. & SCHMUTZ, J. B. 2019. From 'them' to 'us': bridging group boundaries through team inclusiveness. *Medical Education,* 53**,** pp. 756-758.

ERAUT, M. 2004. Sharing practice: problems and possibilities. *Learning in Health and Social care,* 3**,** pp. 171-178.

EUROPEAN INVESTMENT BANK. 2018. *EIB Factsheet: Investing in education* [Online]. Available: https://www.eib.org/products/documents/mooc-factsheet-education.htm [Accessed June 2019].

EUROPEAN INVESTMENT BANK. 2021. *Education Overview 2021* [Online]. Available: https://www.eib.org/en/projects/sectors/education-and-training/index.htm [Accessed Nov 2022].

FARRELL, L. 2017. When I say … autoethnography. *Medical Education,* 51**,** pp. 11-12.

FARRELL, L., BOURGEOIS LAW, G., REGEHR, G. & AJJAWI, R. 2015. Autoethnography: introducing "I" into medical education research. *Medical Education,* 49**,** pp. 974-982.

FIELD, R. & SCOTLAND, A. 2004. Medicine in the UK after Shipman: Has "all changed, changed utterly"? *The Lancet,* 364**,** pp. 40-41.

FINDYARTINI, A., ANGGRAENI, D., MIKHAEL HUSIN, J. & GREVIANA, N. 2020. Exploring medical students' professional identity formation through written reflections during the COVID-19 pandemic. *Journal of Public Health Research,* 9**,** pp. 4-10.

FINK, L. D. 2013. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses,* San Francisco, CA, John Wiley & Sons.

FITZPATRICK, B**.** 2019. Validity in qualitative health education research. *Currents in Pharmacy Teaching and Learning,* Volume 11**,** pp. 211-217,.

FLEXNER, A. 1910. Medical Education in the United States and Canada Bulletin Number Four (The Flexner Report). *In:* BULLETIN, C. (ed.) 3rd ed. New York: The Carnegie Foundation for the Advancement of Teaching.

FLOYD, A. & ARTHUR, L. 2012. Researching from within: external and internal ethical engagement. *International Journal of Research & Method in Education,* 35**,** pp. 171-180.

FRENK, J., CHEN, L., BHUTTA, Z. A., COHEN, J., CRISP, N., EVANS, T., FINEBERG, H., GARCIA, P., KE, Y., KELLEY, P., KISTNASAMY, B., MELEIS, A., NAYLOR, D., PABLOS-MENDEZ, A., REDDY, S., SCRIMSHAW, S., SEPULVEDA, J., SERWADDA, D. & ZURAYK, H. 2010. Health Professionals for a New Century: Transforming Education to Strengthen Health Systems in an Interdependent World. *The Lancet,* 376**,** pp. 1923-1958.

FROST, H. D. & REGEHR, G. 2013. "I am a doctor": Negotiating the Discourses of Standardization and Diversity in Professional Identity Construction. *Academic Medicine,* 88**,** pp. 1570-1577.

FUKS, A., BRAWER, J. & BOUDREAU, J. D. 2012. The Foundation of Physicianship.

Perspectives in Biology and Medicine, 55**,** pp. 114-126.

FULLER, K. A., HELDENBRAND, S. D., SMITH, M. D. & MALCOM, D. R. 2020. A Paradigm Shift in US Experiential Pharmacy Education Accelerated by the COVID-19 Pandemic. *American Journal of Pharmaceutical Education,* 84**,** pp. 692-696.

GENERAL MEDICAL COUNCIL. 1993. Tomorrow's Doctors: Recommendations on Undergraduate Medical Education Issued by the Education Committee of the General Medical Council in Pursuance of Section 5 of the Medical Act 1983. *In:* GENERAL MEDICAL COUNCIL (ed.). General Medical Council.

GENERAL MEDICAL COUNCIL. 2015. *Promoting excellence: standards for medical education and training* [Online]. Available: https://www.gmc-uk.org/education/standards-guidance-and-curricula/guidance/professional-behaviour-and-fitness-to-practise [Accessed April 2023].

GENERAL MEDICAL COUNCIL. 2020. *Outcomes for graduates* [Online]. General Medical Council. Available: https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/outcomes-for-graduates/outcomes-for-graduates [Accessed November 2022].

GENN, J. M. 2001a. AMEE Medical Education Guide No. 23 (Part 1): Curriculum, environment, climate, quality and change in medical education–a unifying perspective. *Medical Teacher,* 23**,** pp. 337-344.

GENN, J. M. 2001b. AMEE Medical Education Guide No. 23 (Part 2): Curriculum, environment, climate, quality and change in medical education–a unifying perspective. *Medical Teacher,* 23**,** pp. 445-454.

GIBBS, G. 1988. *Learning by Doing : A Guide to Teaching and Learning Methods,* London, FEU.

GOLDIE, J. 2012. The formation of professional identity in medical students: Considerations for educators. *Medical Teacher,* 34**,** pp. e641-e648.

GOVERNMENT OF IRELAND. 2023. *Ireland's COVID-19 Data Hub* [Online]. Ireland: Tailte Éireann, Phoenix Park, Dublin 8, D08 F6E4. Available: https://covid-19.geohive.ie/pages/detailed-profile-of-cases [Accessed March 2023].

GRAETZ, K. A. 2006. The Psychology of Learning Environments. *In:* OBLINGER, D. G. (ed.) *Learning spaces.* Educause Boulder, CO.

GRIX, J. 2002. Introducing Students to the Generic Terminology of Social Research. *Politics,* 22**,** pp. 175-186.

GRUPPEN, L., IRBY, D. M., DURNING, S. J. & MAGGIO, L. A. 2018. Interventions Designed to Improve the Learning Environment in the Health Professions: A Scoping

Review. *MedEdPublish,* 7**,** p. 211.

GUILLEMIN, M. & GILLAM, L. 2004. Ethics, Reflexivity, and "Ethically Important Moments" in Research. *Qualitative Inquiry,* 10**,** pp. 261-280.

GUTTING, G. 2005. *Foucault: A Very Short Introduction,* Oxford, UK, Oxford University Press.

HAFFERTY, F. W. 1998. Beyond Curriculum Reform: Confronting Medicine's Hidden Curriculum. *Academic Medicine,* 73**,** pp. 403-7.

HAFFERTY, F. W., MICHALEC, B., MARTIMIANAKIS, M. A. T. & TILBURT, J. C. 2016. Alternative Framings, Countervailing Visions: Locating the "P" in Professional Identity Formation. *Academic Medicine,* 91**,** pp. 171-174.

HAMMER, D. 2006. Improving Student Professionalism During Experiential Learning. *American Journal of Pharmaceutical Education,* 70**,** p. 59.

HAMMERSLEY, M. 2006. Ethnography: problems and prospects. *Ethnography and Education,* 1**,** pp. 3-14.

HANSON, J. L., BALMER, D. F. & GIARDINO, A. P. 2011. Qualitative Research Methods for Medical Educators. *Academic Pediatrics,* 11**,** pp. 375-386.

HARDEN, R. & STAMPER, N. 1999. What is a spiral curriculum? *Medical Teacher,* 21**,** pp. 141-143.

HARDEN, R. M., DAVIS, M. H. & CROSBY, J. R. 1997. The new Dundee medical curriculum: a whole that is greater than the sum of the parts. *Medical Education,* 31**,** pp. 264-271.

HARTMAN, J., MOSKAL, P., DZIUBA, C., OBLINGER, D. G. & OBLINGER, J. L. 2005. Educating the Net Generation. *In:* OBLINGER, D. G. & OBLINGER, J. L. (eds.). Educase.

HATEM, D. S. & HALPIN, T. 2019. Becoming Doctors: Examining Student Narratives to Understand the Process of Professional Identity Formation Within a Learning Community. *Journal of Medical Education and Curricular Development,* 6**,** pp.1-7.

HAWICK, L. 2018. *Understanding the Relationships between Curriculum Reform, Space and Place in Medical Education.* PhD, University of Aberdeen.

HAWICK, L., CLELAND, J. & KITTO, S. 2018. 'I feel like I sleep here': how space and place influence medical student experiences. *Medical Education,* 52**,** pp. 1016-1027.

HAYES, C. & FULTON, J. A. 2015. Autoethnography as a method of facilitating critical reflexivity for professional doctorate students. *Journal of Learning Development*

in Higher Education.

HEALY, C., RYAN, Á., MORAN, C. N., HARKIN, D. W., DOYLE, F. & HICKEY, A. 2023. Medical students, mental health and the role of resilience – A cross-sectional study. *Medical Teacher,* 45**,** pp. 40-48.

HENDELMAN, W. & BYSZEWSKI, A. 2014. Formation of medical student professional identity: categorizing lapses of professionalism, and the learning environment. *BMC Medical Education,* 14**,** p. 139.

HICKEY, A. 2022. To jettison acquiring resilience skills would be a mistake. *BMJ,* p. 378.

HIGGS, M. 2021. *"How can we measure the value of the Higher Education built environment in terms of impact on students and student outcomes? What types of campus and what campus facilities deliver the most benefit for our students? AUDE Press release* [Online]. Available: https://www.aude.ac.uk/Resources/News/View?g=c34314f8-7eca-459f-abfb-cad888de4f44&t=New%20research%20programme%20launched [Accessed April 2022].

HILTON, S. R. & SLOTNICK, H. B. 2005. Proto-professionalism: how professionalisation occurs across the continuum of medical education. *Medical Education,* 39**,** pp. 58-65.

HODGES, B. D., MARTIMIANAKIS, M. A., MCNAUGHTON, N. & WHITEHEAD, C. 2014. Medical education... meet Michel Foucault. *Medical Education,* 48**,** pp. 563-571.

IGLESIAS-PRADAS, S., HERNÁNDEZ-GARCÍA, Á., CHAPARRO-PELÁEZ, J. & PRIETO, J. L. 2021. Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers in Human Behavior,* 119**,** pp. 1-18.

ILLERIS, K. 2009. *Contemporary Theories of Learning: Learning theorists ... in their own words,* London, Routledge.

IRBY, D. M. Improving Environments for Learning in the Health Professions. *Proceedings of a conference sponsored by Josiah Macy Jr. Foundation in April 2018*, 2018 New York, NY. Josiah Macy Jr. Foundation, 2018, 1-271.

IRBY, D. M., COOKE, M. & O'BRIEN, B. C. 2010. Calls for Reform of Medical Education by the Carnegie Foundation for the Advancement of Teaching: 1910 and 2010. *Academic Medicine,* 85**,** pp. 220-227.

JARVIS, P. 2012. *Towards a Comprehensive Theory of Human Learning*, Routledge.

JARVIS, P. 2018. Learning to be a person in society: Learning to be me. *In:* ILLERIS, K. (ed.) *Contemporary theories of learning.* Routledge.

JARVIS-SELINGER, S., PRATT, D. D. & REGEHR, G. 2012. Competency Is Not Enough: Integrating Identity Formation Into The Medical Education Discourse. *Academic Medicine,* 87**,** pp. 1185-1190.

JISC 2006. *Designing Spaces for Effective Learning: A guide to 21st century learning space design*. Bristol, UK: JISC Development Group. Available at: https://webarchive.nationalarchives.gov.uk/ukgwa/20140703004833/http://www.jisc.ac.uk/media/documents/publications/learningspaces.pdf. [Accessed March 2019].

JONES, S., SUTCLIFFE, M. J., BRAGG, J. & HARRIS, D. 2016. To what extent is capital expenditure in UK higher education meeting the pedagogical needs of staff and students? *Journal of Higher Education Policy and Management,* 38**,** pp. 477-489.

JOWSEY, T. 2018. Place and space inform medical professionalism. *Medical Education,* 52**,** 996-997.

KAY, D., BERRY, A. & COLES, N. A. 2018. What Experiences in Medical School Trigger Professional Identity Development? *Teaching and Learning in Medicine***,** pp. 1-9.

KENNY, J. 2009. Work-Based Research in a Large Organisation: The Transformation from Change Agent to Researcher. *Research in Post-Compulsory Education,* 14**,** pp. 369-385.

KITTO, S., NORDQUIST, J., PELLER, J., GRANT, R. & REEVES, S. 2013. The disconnections between space, place and learning in interprofessional education: an overview of key issues. *Journal of Interprofessional Care,* 27**,** 5-8.

KOLB, D. A. 2014. *Experiential learning: Experience as the Source of Learning and Development*, FT press.

KUNDU, S. 2021. How will artificial intelligence change medical training? *Communications Medicine,* 1**,** pp. 8.

KUNTZ, A. M., PETROVIC, J. E. & GINOCCHIO, L. 2012. A Changing Sense of Place: A Case Study of Academic Culture and the Built Environment. *Higher Education Policy,* 25**,** pp. 433-451.

LAMBERT, C. 2011. Psycho classrooms: teaching as a work of art. *Social & Cultural Geography,* 12**,** pp. 27-45.

LAVE, J. & WENGER, E. 1991. *Situated Learning: Legitimate Peripheral Participation*, Cambridge university press.

LECOMPTE, M. D. 2000. Analyzing Qualitative Data. *Theory into practice,* 39**,** pp. 146-154.

LEE, I. F. 2018. *Joyful: The surprising power of ordinary things to create extraordinary happiness,* New York, Random House.

LEEDHAM-GREEN, K., KNIGHT, A. & IEDEMA, R. 2020. Developing Professional Identity in Health Professional Students. *Clinical Education for the Health Professions: Theory and Practice.* Springer.

LEIJON, M., NORDMO, I., TIEVA, Å. & TROELSEN, R. 2022. Formal learning spaces in Higher Education–a systematic review. *Teaching in Higher Education*, pp. 1-22.

LIAISON COMMITTEE ON MEDICAL EDUCATION. 2019. *Standards, Publications and Notifications Forms.* [Online]. Available: http://lcme.org/publications/#Standards [Accessed March 2019].

LIBERATI, E. G., GORLI, M., MOJA, L., GALUPPO, L., RIPAMONTI, S. & SCARATTI, G. 2015. Exploring the practice of patient centered care: The role of ethnography and reflexivity. *Social Science & Medicine,* 133, pp. 45-52.

LONG, P. D. & HOLETON, R. 2009. Signposts to a Revolution? What We Talk about when We Talk about Learning Spaces. *Educause Review,* 44, pp. 36-49.

LOVELL, B. 2015. 'We are a tight community': social groups and social identity in medical undergraduates. *Medical Education,* 49, pp. 1016-1027.

MACHIKAN, A. J. & MARMION, C. 2020. Is partnership really possible over Covid-19? *WonkHE.*

MANNAY, D. & MORGAN, M. 2015. Doing ethnography or applying a qualitative technique? Reflections from the 'waiting field'. *Qualitative Research,* 15, pp. 166-182.

MAXWELL, J. A. 2012. *Qualitative Research Design: An Interactive Approach*, Sage publications.

MCGEE, H. 2021. How to deliver healthcare education in a hybrid world. *Times Higher Education Campus.* THE.

MCGRATH, C., PALMGREN, P. J. & LILJEDAHL, M. 2021. Beyond brick and mortar: Staying connected in post-pandemic blended learning environments. *Medical Education*.

MCKIMM, J. & WILKINSON, T. 2015. "Doctors on the move": Exploring professionalism in the light of cultural transitions. *Medical Teacher,* 37, pp. 837-843.

MCNEIL, J. & BORG, M. 2018. Learning spaces and pedagogy: Towards the development of a shared understanding. *Innovations in Education and Teaching International,* 55, pp. 228-238.

MEDICAL COUNCIL OF IRELAND. 2010. *Good Professional Practice* [Online]. Available:

https://www.medicalcouncil.ie/Existing-Registrants-/Good-Professional-Practice/ [Accessed Web Page 2019].

MENON, A., KLEIN, E. J., KOLLARS, K. & KLEINHENZ, A. L. W. 2020. Medical Students Are Not Essential Workers: Examining Institutional Responsibility During the COVID-19 Pandemic. *Academic Medicine*.

MERCER, J. 2007. The challenges of insider research in educational institutions: Wielding a double-edged sword and resolving delicate dilemmas. *Oxford review of education,* 33**,** pp. 1-17.

MILES, M. B. & HUBERMAN, A. M. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*, SAGE.

MILLIGAN, F. & LANGHE, R. 2020. Covid-19 and Teaching Challenges. *Irish Medical Journal***,** pp. 1-2.

MONROUXE, L. V. 2010. Identity, identification and medical education: why should we care? *Medical Education,* 44**,** pp. 40-49.

MONROUXE, L. V., CHANDRATILAKE, M., CHEN, J., CHHABRA, S., ZHENG, L., COSTA, P. S., LEE, Y.-M., KARNIELI-MILLER, O., NISHIGORI, H. & OGDEN, K. 2022. Medical Students' and Trainees' Country-by-Gender Profiles: Hofstede's Cultural Dimensions Across Sixteen Diverse Countries. *Frontiers in Medicine,* 8**,** pp.1-13.

MORIESON, L., MURRAY, G., WILSON, R., CLARKE, B. & LUKAS, K. 2018. Belonging in Space: Informal Learning Spaces and the Student Experience. *Journal of Learning Spaces,* 7**,** pp.12-22.

MORRIS, M. & EPPICH, W. J. 2021. Changing workplace-based education norms through 'collaborative intentionality'. *Medical Education,* 55**,** pp. 885-887.

MORRIS, M. E., KUEHN, K. S., BROWN, J., NURIUS, P. S., ZHANG, H., SEFIDGAR, Y. S., XU, X., RISKIN, E. A., DEY, A. K. & CONSOLVO, S. 2021. College from home during COVID-19: A mixed-methods study of heterogeneous experiences. *PloS one,* 16**,** pp. e0251580.

MOSELEY, L. E., MCCONNELL, L., GARZA, K. B. & FORD, C. R. 2021. Exploring the evolution of professional identity formation in health professions education. *New Directions for Teaching and Learning,* 2021**,** pp. 11-27.

MOUNT, G. R., KAHLKE, R., MELTON, J. & VARPIO, L. 2022. A Critical Review of Professional Identity Formation Interventions in Medical Education. *Academic Medicine,* 97**,** pp. S96-S106.

MURPHY, E. & DINGWALL, R. 2007. Informed consent, anticipatory regulation and ethnographic practice. *Social Science & Medicine,* 65**,** pp. 2223-2234.

MYLREA, M. F., GUPTA, T. S. & GLASS, B. D. 2015. Professionalization in Pharmacy Education as a Matter of Identity. *American Journal of Pharmaceutical Education,* 79**,** pp. 1-9.

MYLREA, M. F., GUPTA, T. S. & GLASS, B. D. 2017. Developing Professional Identity in Undergraduate Pharmacy Students: A Role for Self-Determination Theory. *Pharmacy,* 5**,** pp.1-9.

NATIONAL SURVEY OF STUDENT ENGAGEMENT. 2012. *Promoting Student Learning and Institutional Improvement: Lessons from NSSE at 13*. Bloomington, IN: Indiana University Center for Postsecondary Research Bloomington, IN.

NEVES, J. & HILLMAN, N. 2016. *HEPI / HEA 2016 Student Academic Experience Survey* [Online]. Available: https://www.hepi.ac.uk/2016/06/09/hepi-hea-2016-student-academic-experience-survey/ [Accessed April 2019].

NEVES, J. & HILLMAN, N. 2017. *HEPI / HEA 2017 Student Academic Experience Survey* [Online]. Available: https://www.hepi.ac.uk/2017/06/07/2017-student-academic-experience-survey/ [Accessed April 2019].

NEVES, J. & HILLMAN, N. 2018. *HEPI / Advance HE 2018 Student Academic Experience Survey* [Online]. Available: https://www.hepi.ac.uk/2018/06/07/2018-student-academic-experience-survey/ [Accessed April 2019].

NOBLE, C., O'BRIEN, M., COOMBES, I., SHAW, P. N., NISSEN, L. & CLAVARINO, A. 2014. Becoming a pharmacist: Students' perceptions of their curricular experience and professional identity formation. *Currents in Pharmacy Teaching and Learning,* 6**,** pp. 327-339.

NORDENSTROM, J., KIESSLING, A. & NORDQUIST, J. 2013. Building for change: university hospital design for future clinical learning. *Journal of Interprofessional Care,* 27**,** pp. 72-76.

NORDQUIST, J. 2016. Alignment achieved? The learning landscape and curricula in health profession education. *Medical Education,* 50**,** pp. 61-68.

NORDQUIST, J., CHAN, M.-K., MANIATE, J., COOK, D., KELLY, C. & MCDOUGALL, A. J. M. T. 2019. Examining the clinical learning environment through the architectural avenue. *Medical Teacher,* 41**,** pp. 403-407.

NORDQUIST, J., KITTO, S., PELLER, J., YGGE, J. & REEVES, S. 2011. Focusing on future learning environments: Exploring the role of space and place for interprofessional education. *Journal of Interprofessional Care,* 25**,** pp. 391-393.

NORDQUIST, J., SUNDBERG, K., KITTO, S., YGGE, J. & REEVES, S. 2013. Future learning environments: The advent of a spatial turn? *Journal of Interprofessional Care,* 27**,**

pp. 77-81.

NORDQUIST, J., SUNDBERG, K. & LAING, A. 2016. Aligning physical learning spaces with the curriculum: AMEE Guide No. 107. *Medical Teacher,* 38**,** pp. 755-768.

NOVAK, D., HALLOWELL, R., BEN-ARI, R. & ELLIOTT, D. 2019. A Continuum of Innovation: Curricular Renewal Strategies in Undergraduate Medical Education, 2010–2018. *Academic Medicine,* 94**,** pp. S79-S85.

NUNES, E. D. & BARROS, N. F. D. 2014. Boys in white: a classic of qualitative research turns 50. *História, Ciências, Saúde-Manguinhos,* 21**,** pp. 1179-1196.

O'CONNELL, H. P. 2009. Spicing up medical education. *Student BMJ,* 17.

OBLINGER, D. 2006. *Learning Spaces,* Boulder, EDUCAUSE.

OLIVEIRA, S., TAHSIRI, M. & EVERETT, G. 2022. Campus spaces and places: Impact on student outcomes Review of evidence. Available at https://www.aude.ac.uk/resources/Documents/Content?g=0432a12e-2a1d-4019-b228-356ec73abff6: HEDQF, Willmott Dixon, AUDE.

O’BRIEN, B. C. & IRBY, D. M. 2013. Enacting the Carnegie Foundation call for Reform of Medical School and Residency. *Teaching and Learning in Medicine,* 25**,** pp. S1-S8.

O’SHEA, O., MULHALL, C., CONDRON, C., MCDONOUGH, S., LARKIN, J. & EPPICH, W. 2023. A qualitative study of physiotherapy educators’ views and experience of practice education and simulation-based learning. *International Journal of Healthcare Simulation***,** pp. 1-9.

PALMER, M., LARKIN, M., DE VISSER, R. & FADDEN, G. 2010. Developing an Interpretative Phenomenological Approach to Focus Group Data. *Qualitative Research in Psychology,* 7**,** pp. 99-121.

PAPAPANOU, M., ROUTSI, E., TSAMAKIS, K., FOTIS, L., MARINOS, G., LIDORIKI, I., KARAMANOU, M., PAPAIOANNOU, T. G., TSIPTSIOS, D. & SMYRNIS, N. 2022. Medical education challenges and innovations during COVID-19 pandemic. *Postgraduate Medical Journal,* 98**,** pp. 321-327.

PERCY, A. 2019. Spaces of teaching and learning: integrating perspectives on research and practice. *Higher Education Research & Development,* 38**,** pp. 430-433.

PINK, S. & MORGAN, J. 2013. Short-Term Ethnography: Intense Routes to Knowing. *Symbolic Interaction,* 36**,** pp. 351-361.

POPE, C. & MAYS, N. 2009. Critical reflections on the rise of qualitative research. *BMJ,* 339**,** pp. 737-739.

POPE, C., ZIEBLAND, S. & MAYS, N. 2000. Analysing qualitative data. *BMJ,* 320**,** pp. 114-

116.

RALPH, J. 2020. Online Learnings: How IT transformation can happen quickly in a crisis. *World 100.*

RASSIE, K. 2017. The apprenticeship model of clinical medical education: time for structural change. *NZ Med J,* 130**,** pp. 66-72.

REED, D. A., SHANAFELT, T. D., SATELE, D. W., POWER, D. V., EACKER, A., HARPER, W., MOUTIER, C., DURNING, S., MASSIE JR, F. S. & THOMAS, M. R. 2011. Relationship of Pass/Fail Grading and Curriculum Structure With Well-Being Among Preclinical Medical Students: A Multi-Institutional Study. *Academic Medicine,* 86**,** pp. 1367-1373.

REEVES, S., ALBERT, M., KUPER, A. & HODGES, B. D. 2008. Why use theories in qualitative research? *BMJ,* 337.

RICHARDS, J., SWEET, L. & BILLETT, S. 2013. Preparing medical students as agentic learners through enhancing student engagement in clinical education. *Asia-Pacific Journal of Cooperative Education,* 14**,** pp. 252-263.

ROBERTS, L. W., GEPPERT, C., CONNOR, R., NGUYEN, K. & WARNER, T. D. 2001. An Invitation for Medical Educators To Focus on Ethical and Policy Issues in Research and Scholarly Practice. *Academic Medicine,* 76**,** pp. 876-85.

ROHE, D. E., BARRIER, P. A., CLARK, M. M., COOK, D. A., VICKERS, K. S. & DECKER, P. A. The Benefits of Pass-Fail Grading on Stress, Mood, and Group Cohesion in Medical Students. Mayo Clinic Proceedings, 2006, November. Elsevier, pp. 1443-1448.

ROWLEY, J. 2007. The wisdom hierarchy: representations of the DIKW hierarchy. *Journal of Information Science,* 33**,** 163.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA. 2011. *CanMEDS: Better standards, better physicians, better care* [Online]. Royal College of Physicians and Surgeons of Canada Canada. Available: http://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e [Accessed March 2019].

RTE. 2005. *Leaving York Street Flats* [Online]. @RTEArchives. Available: https://www.rte.ie/archives/2020/0913/1160060-leaving-york-street-flats/ [Accessed February 2024].

RUBIN, P. & FRANCHI-CHRISTOPHER, D. 2002. New edition of Tomorrow's Doctors. *Medical Teacher,* 24**,** pp. 368-369.

RULLMAN, L., VAN DEN KIEBOOM, J. & VAN JURA, M. 2012. *Physical Place on Campus:*

A report on the summit on building community. Bloomington, *In*: Association of College Unions International.

RUSHDIE, S. 2014. *Haroun and the Sea of Stories*, Puffin.

RYAN, A., HICKEY, A., HARKIN, D. W., BOLAND, F., COLLINS, M. E. & DOYLE, F. 2022. Professional Identity Formation, ProfessionaLism, Leadership And Resilience (PILLAR) in Medical Students: methodology and early results. *Journal of Medical Education and Curricular Development,* 10**,** pp. 1-9.

SANDSTROM, K., MARTIN, D. & FINE, G. A. 2001. Handbook of Social Theory. *In:* RITZER, G. & SMART, B. (eds.) *Symbolic interactionism at the end of the century.* Newbury Park, CA: SAGE.

SANDSTROM, K., MARTIN, D. & FINE, G. A. 2010. *Symbols, Selves and Social Reality, A Symbolic Interactionist Approach to Social Psychology and Sociology,* New York, Oxford Univ. Press.

SARRAF-YAZDI, S., TEO, Y. N., HOW, A. E. H., TEO, Y. H., GOH, S., KOW, C. S., LAM, W. Y., WONG, R. S. M., GHAZALI, H. Z. B., LAUW, S.-K., TAN, J. R. M., LEE, R. B. Q., ONG, Y. T., CHAN, N. P. X., CHEONG, C. W. S., KAMAL, N. H. A., LEE, A. S. I., TAN, L. H. E., CHIN, A. M. C., CHIAM, M. & KRISHNA, L. K. R. 2021. A Scoping Review of Professional Identity Formation in Undergraduate Medical Education. *Journal of General Internal Medicine,* 36**,** pp. 3511-3521.

SCHREWE, B. & MARTIMIANAKIS, M. A. 2022. Re-thinking “I”dentity in medical education: genealogy and the possibilities of being and becoming. *Advances in Health Sciences Education,* 27**,** pp. 847-861.

SCOTT, D. & USHER, R. 2003. *Space, curriculum, and learning,* Greenwich, Conn, Information Age Publ.

SCOTT-WEBBER, L., STRICKLAND, A. & KAPITULA, L. R. 2013. Built Environments Impact Behaviors: Results of an Active Learning Post-Occupancy Evaluation. *Planning for Higher Education,* 42**,** 28.

SEGRE, S. 2019. Howard S. Becker’s Symbolic Interactionism. *The American Sociologist,* 50**,** pp. 378-386.

SHARPLESS, J., BALDWIN, N., COOK, R., KOFMAN, A., MORLEY-FLETCHER, A., SLOTKIN, R. & WALD, H. 2015. The Becoming: Students’ Reflections on the Process of Professional Identity Formation in Medical Education. *Academic Medicine,* 90**,** pp. 713-717.

SHEAHAN, M. 2017. Not lazing, learning! Available: https://www.hassellstudio.com/research/not-lazing-learning#0 [Accessed

September 2019].

SHOCHET, R. B., COLBERT-GETZ, J. M., LEVINE, R. B. & WRIGHT, S. M. 2013. Gauging Events That Influence Students' Perceptions of the Medical School Learning Environment: Findings From One Institution. *Academic Medicine,* 88**,** pp. 246-252.

SHOCHET, R. B., COLBERT-GETZ, J. M. & WRIGHT, S. M. 2015. The Johns Hopkins Learning Environment Scale: Measuring Medical Students' Perceptions of the Processes Supporting Professional Formation. *Academic Medicine,* 90**,** pp. 810-818.

SHULMAN, L. S. 2005. Signature Pedagogies in the Professions. *Daedalus,* 134**,** pp. 52-59.

SIEBERT, S. & MILLS, V. 2007. The quest for autonomy: a Foucauldian perspective on work-based research. *Research in Post-Compulsory Education,* 12**,** pp. 309-317.

SKOCHELAK, S., STANSFIELD, R., DUNHAM, L., DEKHTYAR, M., GRUPPEN, L., CHRISTIANSON, C., FILSTEAD, W. & QUIRK, M. 2016. Medical Student Perceptions of the Learning Environment at the End of the First Year: A 28-Medical School Collaborative. *Academic Medicine,* 91**,** pp. 1257-1262.

SLAVIN, S. J., SCHINDLER, D. L. & CHIBNALL, J. T. 2014. Medical Student Mental Health 3.0: Improving Student Wellness Through Curricular Changes. *Academic Medicine,* 89**,** 573.

SLIVKOFF, M. D., JOHNSON, C. & TACKETT, S. 2021. First-Year Medical Student Experiences Adjusting to the Immediate Aftermath of COVID-19. *Medical Science Educator,* 31**,** pp. 557-564.

SOMEKH, B. & LEWIN, C. 2011. *Theory and Methods in Social Research,* Los Angeles, SAGE.

SORO, T. & NORDQUIST, J. 2017a. Space matters! Part 1 - Formal learning. *In:* SORO, T. & NORDQUIST, J. (eds.) *MedEdTalk.* Sweden: Karolinska Institutet. [Online] Available at https://news.ki.se/space-matters-part-1-formal-learning-podcast-mededtalk?_gl=1*1bs6b0s*_ga*MjU2NDUzNjMuMTcxMDI1OTA4OQ..*_ga_VZD17KHKE3*MTcxMDI1OTA4OS4xLjEuMTcxMDI1OTI3MC4wLjAuMA..

SORO, T. & NORDQUIST, J. 2017b. Space matters! Part 2 - Informal learning. *In:* SORO, T. & NORDQUIST, J. (eds.) *MedEdTalk.* Sweden: Karolinska Institutet. [Online] Available at https://news.ki.se/space-matters-part-2-informal-learning-podcast-mededtalk?_gl=1*1xjlpoh*_ga*MjU2NDUzNjMuMTcxMDI1OTA4OQ..*_ga_VZD17KHKE3*MTcxMDI1OTA4OS4xLjEuMTcxMDI1OTMzNS4wLjAuMA..

STAHL, N. A. & KING, J. R. 2020. Expanding Approaches for Research: Understanding and Using Trustworthiness in Qualitative Research. . *Journal of Developmental Education, 44*, pp.26-28.

STALMEIJER, R. E. & VARPIO, L. 2021. The wolf you feed: Challenging intraprofessional workplace-based education norms. *Medical Education,* 55, pp. 894-902.

STERN, D. T. 1998. In Search of the Informal Curriculum: When and Where Professional Values Are Taught. *Academic Medicine,* 73, S28.

STERN, D. T. & PAPADAKIS, M. 2006. The Developing Physician - Becoming a Professional. *New England Journal of Medicine.,* 355, pp. 1794-1799.

STERNSZUS, R. & CRUESS, S. R. 2016. Learning from role modelling: making the implicit explicit. *The Lancet,* 387, pp. 1257-1258.

STOFFEL, J. M. & CAIN, J. 2018. Review of Grit and Resilience Literature within Health Professions Education. *American Journal of Pharmaceutical Education,* 82, p. 6150.

STRANGE, C. C. & BANNING, J. H. 2015. *Designing for Learning. Creating Campus Environments for Student Success,* US, Jossey-Bass.

STRAWBRIDGE, J., HAYDEN, J. C., ROBSON, T., FLOOD, M., CULLINAN, S., LYNCH, M., MORGAN, A. T., O'BRIEN, F., REYNOLDS, R. & KERRIGAN, S. W. 2022. Educating pharmacy students through a pandemic: Reflecting on our COVID-19 experience. *Research in Social and Administrative Pharmacy,* 18, pp. 3204-3209.

STUBBING, E., HELMICH, E. & CLELAND, J. 2018. Authoring the identity of learner before doctor in the figured world of medical school. *Perspectives on Medical Education,* 7, pp. 40-46.

TAGAWA, M. 2019. Development of a scale to evaluate medical professional identity formation. *BMC Medical Education,* 19, pp. 1-9.

TATE, J. 2023. Creating ‘third spaces’ will revolutionise your campus. *Times Higher Education.* Online: THE - Times Higher Education.

TAYLOR, D. C. & HAMDY, H. 2013. Adult learning theories: implications for learning and teaching in medical education: AMEE Guide No. 83. *Medical Teacher,* 35, e1561-e1572.

TEMPLE, P. 2007. Learning Spaces for the 21st Century: A Review of the Literature. London: Centre for Higher Education Studies: *Institute of Education, University of London.*

TEMPLE, P. 2009. From Space to Place: University Performance and its Built

Environment. *Higher Education Policy,* 22**,** pp. 209-223.

TEMPLE, P. 2018. Space, place and institutional effectiveness in higher education. *Policy Reviews in Higher Education,* 2**,** pp. 133-150.

TIGHE, O., STRAWBRIDGE, J., MCGARVEY, A. & MCGEE, H. 2018. The white coat ceremony – An opportunity for interprofessional socialization. *Journal of Interprofessional Care*.

TORRE, D. M., DALEY, B. J., SEBASTIAN, J. L. & ELNICKI, D. M. 2006. Overview of Current Learning Theories for Medical Educators. *The American Journal of Medicine,* 119**,** pp. 903-907.

TURNER, B. S. (ed.) 2000. *The Blackwell Companion to Social Theory, 2nd Edition*.

VAN DER MEER, G. H., MILOTA, M., DE JONGE, R. R. & JANSEN, R. S. 2021. Practical guidelines to build Sense of Community in online medical education. *Medical Education,* 55**,** pp. 925-932.

VAN SCHAIK, S. M., REEVES, S. A. & HEADRICK, L. A. 2019. Exemplary Learning Environments for the Health Professions: A Vision. *Academic Medicine,* 94**,** pp. 975-982.

VINDROLA-PADROS, C. & JOHNSON, G. A. 2020. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. *Qualitative Health Research,* 30**,** pp. 1596-1604.

VOLPE, R. L., HOPKINS, M., HAIDET, P., WOLPAW, D. R. & ADAMS, N. E. 2019. Is research on professional identity formation biased? Early insights from a scoping review and metasynthesis. *Medical Education,* 53**,** pp. 119-132.

WALD, H. 2015. Professional Identity (Trans)Formation in Medical Education: Reflection, Relationship, Resilience. *Academic Medicine,* 90**,** pp. 701-706.

WALD, H., ANTHONY, D., HUTCHINSON, T., LIBEN, S., SMILOVITCH, M. & DONATO, A. 2015. Professional Identity Formation in Medical Education for Humanistic, Resilient Physicians: Pedagogic Strategies for Bridging Theory to Practice. *Academic Medicine,* 90**,** pp. 753-760.

WALL, S. 2006. An Autoethnography on Learning About Autoethnography. *International Journal of Qualitative Methods,* 5**,** pp. 146-160.

WARWICK UNIVERSITY. 2018. *Centre for Lifelong Learning Your Study Spaces* [Online]. Available: https://warwick.ac.uk/study/cll/yourwarwick/createyourown/studyspaces/ [Accessed April 2019].

WATLING, C., GINSBURG, S., LADONNA, K., LINGARD, L. & FIELD, E. 2021. Going against the grain: An exploration of agency in medical learning. *Medical Education,* 55**,** pp. 942-950.

WENGER, E. 1999. *Communities of Practice: Learning, Meaning, and Identity*, Cambridge university press.

WHITCOMB, M. E. 2005. Medical Professionalism: Can It be Taught? *Academic Medicine,* 80**,** pp. 883-884.

WHITEHEAD, J. 1989. Creating a Living Educational Theory from Questions of the Kind, 'How do I Improve my Practice?'. *Cambridge Journal of Education,* 19**,** pp. 41-52.

WHITEHEAD, J. 2000. How Do I Improve My Practice? Creating and legitimating an epistemology of practice. *Reflective Practice,* 1**,** pp. 91-104.

WHITEHEAD, J. 2009. Generating living theory and understanding in action research studies. *Action Research,* 7**,** pp. 85-99.

WILLIG, C. 2021. *Introducing Qualitative Research in Psychology,* Maidenhead, Open University Press, McGraw-Hill Education.

WILSON, I., COWIN, L. S., JOHNSON, M. & YOUNG, H. 2013. Professional Identity in Medical Students: Pedagogical Challenges to Medical Education. *Teaching and Learning in Medicine,* 25**,** pp. 369-373.

WRIGHTON, M. S. & LAWRENCE, S. J. 2020. Reopening Colleges and Universities During the COVID-19 Pandemic. *Annals of Internal Medicine,* 173**,** pp. 664-665.

YAKOV, G., RISKIN, A. & FLUGELMAN, A. A. 2021. Mechanisms involved in the formation of professional identity by medical students. *Medical Teacher,* 43**,** pp. 428-438.

YANG, L. H. 2021. Online Learning Experiences of Irish University Students during the COVID-19 Pandemic. *All Ireland Journal of Higher Education,* 13.

ZEMBLYAS, M. 2006. Work-based learning, power and subjectivity: creating space for a Foucauldian research ethic. *Journal of Education and Work,* 19**,** pp. 291-303.

ZHANG, Z. 2014. 'Let's Go for the Chicken-Drum'. *In:* TEMPLE, P. (ed.) *The Physical University: Contours of Space and Place in Higher Education.* Routledge.

This page is intentionally blank.

Appendices

No.	Title	Pg.
1	Ethics Approval - MDX	282
2	Ethics Approval – University of Health	284
3	Consent – Qualtrics Survey	285
4	Gatekeeper Agreement	290
5	Focus Group Guide	291
6	Emails to participants	295
7	Observation Template	297
8	Focus group coding and themes	298
9	Additional Images of the Campus	300
10	Awards and Accolades	317
11	White Coat Ceremony Declaration	318

1. Ethics Approval - MDX

Health and Social Care REC

The Burroughs
Hendon
London NW4 4BT

Main Switchboard: 0208 411 5000

14/04/2021

APPLICATION NUMBER: 5544

Dear Judith Mary Gilroy and all collaborators/co-investigators

Re your application title: Qual - Professional identity formation and the Built environment

Supervisor: Michael Traynor, Gordon Weller

Co-investigators/collaborators:

Thank you for submitting your application. I can confirm that your application has been given APPROVAL from the date of this letter by the Health and Social Care REC.

The following documents have been reviewed and approved as part of this research ethics application:

Document Type	File Name	Date	Version
Agreement for data collection by proxy	1.3g Data collection by proxy collab agreement 11_2020 v2	20/11/2020	2
Materials	4.4ii Draft Focus Group guide 20 Nov 2020 v2	20/11/2020	2
Training information for data collection by proxy	1.3h Data collection by proxy training information 11_2020 v3	10/01/2021	3
Methods and data	2.5a Research Design and Approach MORE section 2.5 Summary and Observations 13_01_21 v4	13/01/2021	4
Further details	7.1c Data Management Plan M00657862 13_01_21 v3	13/01/2021	3
Debriefing Sheet	5.14a MU Debriefing Guide and Template M00657862 JMG 13_01_20 v3	13/01/2021	3
Disclosure of Potential Conflict of Interest form	7.5 MU Conflict of Interest Form M00657862 JMG 13_01_21 v3	13/01/2021	3
Data Protection Declaration	5 MU Data Protection Checklist M00657862 JMG 03_2021 response to fb v3	10/03/2021	3
Informed Consent Form	5.11 MU Participant Information Sheet with Privacy Notice Guide JMG M00657862 10.03.21 v5	10/03/2021	5
Participant Recruitment Information	4.3ai Text for invitation to participate 31_3_21 v5	31/03/2021	5
Materials	4.4i M00657862 Qualtrics Survey 31_3_21	31/03/2021	1
Informed Consent Form	4.4i M00657862 Qualtrics Survey 31_3_21	31/03/2021	1
Permission/Agreement Letter	5.5b Gatekeeper letter 31.3.21 Headed v2	31/03/2021	2
Resubmission Response to Feedback Summary	M 00657862 JMG Combined Resubmission Feedback Summary 31.03.2021 vs 2	31/03/2021	2

Although your application has been approved, the reviewers of your application may have made some useful comments on your application. Please look at

Page 1 of 2

your online application again to check whether the reviewers have added any comments for you to look at.

Also, please note the following:

1. Please ensure that you contact your supervisor/research ethics committee (REC) if any changes are made to the research project which could affect your ethics approval. There is an Amendment sub-form on MORE that can be completed and submitted to your REC for further review.

2. You must notify your supervisor/REC if there is a breach in data protection management or any issues that arise that may lead to a health and safety concern or conflict of interests.

3. If you require more time to complete your research, i.e., beyond the date specified in your application, please complete the Extension sub-form on MORE and submit it your REC for review.

4. Please quote the application number in any correspondence.

5. It is important that you retain this document as evidence of research ethics approval, as it may be required for submission to external bodies (e.g., NHS, grant awarding bodies) or as part of your research report, dissemination (e.g., journal articles) and data management plan.

6. Also, please forward any other information that would be helpful in enhancing our application form and procedures - please contact MOREsupport@mdx.ac.uk to provide feedback.

Good luck with your research.

Yours sincerely

Ruth Miller

Co-chair

Health and Social Care REC

2. Ethics Approval - UoH

From:
To: Judith Gilroy
Subject: Ethics Application approved
Date: Tuesday 25 May 2021 17:32:36

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know that the content is safe.

Dear Judith Gilroy,

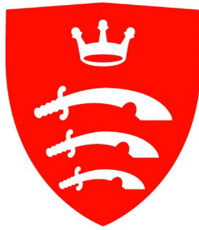
Your Ethics application has been reviewed and approved:

- Record ID: 212554856
- PI Name: Judith Gilroy
- Project Title: Professional identity formation and the built environment
- Ethics Type: HUMAN
- Reviewer Comments:

The application can be reviewed on the RIMS system.

3. Consent – Qualtrics Survey

4.4i M00657862
Qualtrics Survey 31_3



Informed Consent

Welcome!
You are being invited to take part in a research study. The study is titled "Is professional identity formation in health-professionals' education influenced by the campus built environment?"
Before you decide if you want to take part, you should read the information provided below carefully and if you wish, you can discuss it with others.
Take time to ask questions and don't feel rushed or under pressure to make a quick decision. It is important for you to understand why the research is being done and what it will involve.
Ask us if there is anything that is not clear or if you would like more information. Make sure you understand the risks and benefits of taking part in this study so that you can make a decision that is right for you. This process is known as 'Informed Consent'.
You don't have to take part in this study. If you decide not to take part, that will be ok and it won't affect you as a student in any way.
You can change your mind about taking part in the study any time you like. Even if the study has started, you can still opt out. You don't have to give us a reason. If you do opt out, rest assured it won't affect you as a student in the future.
What is the purpose of the study?

Professional identity formation has been described as the backbone of medical education. Educators are increasingly committed to developing curricula that deliver the requisite knowledge, skills and attributes required as well as assisting learners transition from being a “member of the public” to becoming a healthcare professional. Literature suggests that this is primarily a dynamic social process.
Alongside curricula developments, universities have been investing heavily in their campus facilities. These investments have been driven by a range of objectives including improving formal learning spaces; responding to advances in technology; creating student social spaces and enhancing a sense of attachment with the institution.
In this study, we want to explore if the development of professional identify formation of health professional students is or isn’t impacted by the campus building as students become doctors, pharmacists or physiotherapists.
Any findings will be applied to future campus developments and refurbishments.

Why have I been chosen?
You are being asked to take part in a focus group because you are a student studying either medicine, pharmacy or physiotherapy. The study will explore the different experiences of students.
In particular, we want to recruit students who have recently joined their programmes.
The study will aim to be representative of the student body.
Each group will have a maximum of 8 participants.
All data will be anonymised and you won’t be identifiable in any way.
All participants will be over 18 years of age.

Do I have to take part?
No –your participation in this study is completely optional.
It is up to you to decide whether or not to take part. If you do decide to take part you will keep this information sheet and indicate your consent at the end of this form.
You are still free to withdraw at any time and without giving a reason. If you do decide to withdraw from the study then please inform the group facilitator as soon as possible, and they will facilitate your withdrawal.

If, for any reason, you wish to withdraw your data, please contact the deansoffice@xxxx.ie within one month of your participation. After this date, it may not be possible to withdraw your individual data as the results may have already been

published. However, as all data are anonymised, your individual data will not be identifiable in any way.
A decision to withdraw at any time, or a decision not to take part, will not affect your status, now or in the future, in any way.

What will I have to do?

If you do decide to take part:
You will be invited to an on-line focus group. A focus group is when you sit and discuss items related to the study with a group of participants. The focus group will be run by a skilled facilitator.
The focus group will be scheduled between March and September 2021.
The focus group will be approx. 60 minutes long. The discussion will be guided by the facilitator asking the group to describe or recall a range of things including how you feel your personal and professional identity has developed since you started you programme.
The discussion will be guided through a series of headings, derived from previous research. In your focus group, you may be in a group with a mixture of students from different programmes, but you will all be in the "early" stages.
The focus group will take place on-line and will be scheduled so that it does not interfere with your scheduled learning / teaching activities.
Each focus group will be recorded, to make sure the researchers capture everything said by participants. The recordings will be transcribed and only the transcripts will be provided to the PI for analysis, to ensure your anonymity.
You have the right, should you wish, to review and edit any transcripts to which you have contributed.

What are the possible benefits of taking part?

We hope participating in the study will have benefits for you such as gaining a perspective in undertaking research, meeting other students or reflecting on your own professional identity. However, this cannot be guaranteed.

The information we get from this study will help us to ensure that student feedback is incorporated in to future campus developments, and in particular to design spaces which assist in the professional identity formation of students.

Will my taking part in this study be kept confidential?

Yes.

The research team has put a number of procedures in place to protect the confidentiality of participants.

You will be allocated a participant code that will always be used to identify any data you provide. Your name or other personal details will not be associated with your data, for example, the consent form that you sign will be kept separate from your data.

All paper records will be stored in a locked filing cabinet, accessible only to the research team, and all electronic data will be stored on a password protected Middlesex University OneDrive folder.

Personal data (e.g. your name, email address, voice or any data that can identify you) WILL BE collected by this study and your confidentiality will be protected.

All information you provide will be treated in accordance with the UK Data Protection Act 2018 and the Data Protection Act 2018 (Ireland). Please click on the link to view a Participant Privacy Notice. https://www.mdx.ac.uk/aboutus/policies/privacy

Please note that in order to ensure quality assurance and equity this project may be selected for audit by a designated member of the relevant committee. This means that the designated member can request to see signed consent forms. However, if this is the case your signed consent form will only be accessed by the designated auditor or member of the audit team.

The University has a Safeguarding policy and the research team members are guided by professional codes of conduct which requires us to report any information to the appropriate authority where a person may be at risk of serious harm. We will always endeavour to discuss this with you first.

What will happen to the results of the research study?

The results of the research study will be used as part of a Postgraduate dissertation. The results may also be presented at conferences or in journal articles. However, the data will only be used by members of the research team and at no point will your personal information or data be revealed.

Who has reviewed the study?

The study has received full ethical clearance from the Research ethics committee who reviewed the study. The committee is the Health and Social Care Research Ethics Committee.

Contact for further information

If you require further information or have any questions then please contact:

Researcher and doctoral candidate Judith Gilroy, jg1053@live.mdx.ac.uk
Supervisor Dr Gordon Weller, Middlesex
University, g.weller@mdx.ac.uk

CONSENT STATEMENT

I have read and understood the participant information above and I freely and voluntarily give my consent to participate in this project/study.

By clicking the button below, you acknowledge: Your participation in the study is voluntary. You are 18 years of age. You are aware that you may choose to terminate your participation at any time for any reason.

○ Yes, I consent.

Please provide your name and email address. This will not be shared with the Researcher directly and will only be available to the focus group facilitator.

Powered by Qualtrics

https://mdxl.eu.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview?ContextSurveyID=SV_2lCPokwolvO14yNandContextLibraryID=…

4. Gatekeeper Agreement

Tuesday, 31st March 2021

deansoffice

To whom it may concern:

I certify that Judith Mary Gilroy has been granted permission to collect data as part of a programme towards a DProf in relation to the study:

Is professional identity formation in health-professionals' education influenced by the campus built environment?

Data collection will relate to the following:

1. Focus groups
2. Observations

Specifically, this involves data collection with undergraduate students enrolled in full time programmes leading to the award of pharmacy, physiotherapy and medicine (1 & 2) and staff and visitors to [redacted].

I acknowledge that Judith Mary Gilroy will be required to provide Consent Forms and Participation Information Sheet to those taking part in the study. Judith has permission to recruit participants by emailing them using their [redacted] emails.

Yours sincerely

Chief Academic Officer

5. Focus Group Guide

Judith Prompt question.

DRAFT Focus Group Guide – post review pre pilot June 2021

Intro – 5 minutes
Q1 – 5 min (maybe less)
Q2 – Q8 7 min each (49 min total).
*Q6 may require 8-9 min.

Welcome everyone and on behalf of the P.I., Judith Gilroy, thank you all for joining us this evening / today.

As a quick reminder, the reason for this session is to explore with you your usage of the university campus.

The researchers want to do this so that we can better serve students in future developments of the campus. Specifically, we want to understand what works for you and what doesn't work in helping you to become physiotherapists, pharmacists and doctors.

Enhancing our understanding, will allow us to modify future developments. You have a better understanding of what works because you are experiencing it every day, and this is why we are talking with you today. There are no right or wrong answers.

You may have differing views – its ok not to agree – we want to hear from each of you.

I am Dr Colm Healy and I will be the moderator in today's focus group discussion.

Focus groups are conversations focused on specific research questions, where the conversation is had in a confidential environment. My role today is to guide your conversation, ask questions and ensure everyone gets a chance to contribute.

As I said - there are no right or wrong answers to these questions. What we really need to hear is honest feedback. As in any conversation – you can respond to each other's comments, by building on them or by disagreeing. My job to make sure everyone participates, and we stay on track.

You don't have to answer any question if you do not feel comfortable – but sometimes it can be useful to explore these areas – and I will be guided by you.

This group is anonymous. You will all be given participant codes and won't be identifiable in any way. Any quotes used in the final write up and dissemination of the results will not be attributable to you.

This group is also confidential. I would ask you to respect the confidentiality of each other and to not repeat what you hear each other say outside of this group.

Finally, before we start the actual discussion there are a couple of things I need to run through:

1. Please keep your mic and camera on for the session.
2. Please put your hand up if you want to make a point.
3. The session will be recorded, and the recording will only be used to provide a written transcript to the PI. It will not be provided to anyone else.
4. The information you provide will be transcribed and you will get an opportunity to review and validate this.
5. It will then be analysed and compiled into a thesis as part of a doctoral award which Judith Gilroy is working towards.

6. The findings will also be used by [redacted] in its curriculum and campus developments.

Any questions?

OK - Let's begin with brief introductions

Q1. *"What I would like you to do is to share your first name, where you were born, your programme of study and why you chose to become a health professional. I can start as an example"*

> *"My name is Colm, I'm from Cork, Ireland, I did a PHD in the psychiatry department in [redacted] and I chose to become a researcher because I believe that scientific study is the best way to provide evidence based care that can improve the lives of patients as well as providing preventative information to policy makers and the general population."*

Q2. *"So this question comes in a couple of parts. "I know the programmes here are very busy. So what I want you to do is to think back over your entire time in [redacted] I want you to help me understand where and when you hung-out, Caught up with people and socialised"*

2a. Development of relationship sub-questions

Lets start with who you hung out with while at [redacted]? Were they people in the same program as you? Were they in the same year as you? Were they people who were in different programs in [redacted]? Or people from outside the university? Or did you not hang out with people while you were at university?

2a. *Ok so can you tell me a little bit about the reason you hang out with these people?*

Or - if you prefer not to hang out with others can you tell me some of the reasons for that?

2c. Where and when this takes place

Can I ask a little more about where you liked to hang out? Think about lunch breaks, evenings and weekends.

If on campus *– can you tell me about what's there and some of the reason you chose to hang out there*

Thinking about this year - and the impact that covid had on all of this – specifically what was your experience of the home rooms that had been assigned?

If the students have been in [redacted] for more than one year, i.e. they entered through Foundation Year and are now in First Year – you can follow up with:

How was this different before?

If off campus *– Sometimes you hung out in _______ was there a reason you choose to go to go there? Was there something you could do there that you couldn't on campus?*

Switch: *What about anyone else? Did you have a similar / different experience?*

Q3. *"Now – thinking about your time in your programme so far, can you think of an experience that has made you take a step back and think "ok – this is really it now"? Maybe a time when you felt you were "becoming a …….. physio / doctor / pharmacist" rather than simply studying (towards a degree)?"*

3a. **Prompts**: *e.g. for first year medics, it may be the anatomy room and the cadaver?*

Describe where was this and the circumstances?

3b. *Are there times when you felt you were "pretending" – sort of or "fake it 'till you make it" – "not meant to be here"?*

Describe where was this and the circumstances?

CORE Follow up questions to include *– what happened after the experience? Did you hang out with peers on campus or off? Find some space on your own? Talk to people outside the programme?*

Switch: *What about anyone else? Did you have a similar / different experience?*

Q4. *Working as part of a team will be a core part of your future role. Can you describe a time where you have had an opportunity to join / create teams – either in your course or socially?*

Core Follow up – *Can you describe the when and where you experienced this?*
What do you think contributes to a successful space for team working?
What are the barriers to a creating a successful space for team work? Can you give me an example?

Switch. What about anyone else? Did you have a similar / different experience?

Q5. *"Reflection – by yourself and with peers – has been documented in the literature as being important to foster self-awareness and develop lifelong learning skills. Can we explore any opportunities you have had to reflect on your progress?"*

Follow up - *Can you tell me a little about when you had an opportunity to reflect on your progress? Can you describe where you were when you were reflecting on your progress?*

If a place is identified - *What was it about the place that you were in that allowed for this reflection? Was there anything special about the space/place you were in?*

If a place on campus is not identified. – So you felt you hadn't an opportunity reflect on your progress, can you think of any reasons why that might be the case?
Was there a lack of space or places conducive to reflecting? Did you have a lack of time to reflect on your progress?

Switch. What about anyone else? Did you have a similar / different experience?

Q6. *"Now thinking about where you spend time on campus, can you pick out some locations which you feel particularly are meaningful for your learning?"*

a. *What words would you use to describe the atmosphere in these places?*
b. *What is it about these places that creates an atmosphere of (inclusion / homely etc – reflect the words used by the group participants)?*
    i. *Can you describe how you feel when you are here?*
c. *Are there other spaces where the opposite happens? Perhaps where it's hostile or you feel excluded? Or spaces where you see unprofessional behaviours?*
    i. *Can you describe how you feel when you are here? What do you do afterwards?*
    ii. *Can anything be done to prevent this or to make it different next time?*
d. *Where's your best place on campus? Where's the worst?*

Q7. *We are nearly at an end, could you think about the actual campus buildings and the spaces within them, and pick out spaces that you feel reflect your chosen professions?*

For example – *helped you to settle in to the programme and assist you in becoming a "physiotherapist / pharmacist or doctor"*

And if time – *what about the opposite? Are there places that you avoid? What is it about those spaces?*

Q8. *"Finally – [redacted] have planning permission for another development on SSG – what advice would you have for them in relation to providing spaces to assist students becoming health professionals?"*

6. Emails to participants

From: The Dean's Office
To: The Dean's Office
Bcc: All GEM Year 1; All Medicine Dublin Year 1; All Medicine Dublin Foundation Year; All Medicine Penang Year 1; All Pharmacy Year 1; All Physiotherapy Foundation Year; All Physiotherapy Year 1
Subject: RE: Student volunteers needed for Research study.
Date: Sunday 30 May 2021 18:02:00

Dear Students

My name is Judith Gilroy and I am a member of staff in [redacted] based in [redacted]en, Dublin. You have been sent this email as I would like to invite you to assist me in conducting a research study. Research volunteers are needed to participate in a study looking at how first year and foundation year students use the campus in [redacted] [redacted]esearch is part of my doctoral thesis which aims to explore what impact, if any, campus buildings have on your learning experience.

Before you decide, it is important that you understand why the research is being done and what it would involve for you. Please take time to read this email and the information sheet carefully. There is no obligation to take part. If you do decide to take part, you may withdraw at any time. In order to comply with data protection regulations and ethical approval, the [redacted] Deans Office acts as gatekeeper in the project and has issued this email. Responses will not be returned to Judith Gilroy.

If you volunteer, you will be asked to attend an on-line focus group for approx. 60 minutes during which you will confidentially share your experiences of using [redacted] and other campus buildings, as part of a group of 8 students (max). The discussion will be on-line, using MS Teams, taking place before the end of June. Your participation in the focus group will be anonymised prior to the analysis of the data.

While the Principal Investigator is Ms Judith Gilroy, Associate Director for Academic Affairs, the focus group will be facilitated b[redacted] Post-doctorate researcher. Ms Gilroy will analyse the data generated by the study, but will not know the identity of any of the participants.

Are you interested? Would you like to know more?

Then click here for a link to the information sheet and consent form.

Thank you for reading this email,
Best Wishes

Judith

From:	The Dean's Office
To:	The Dean's Office
Bcc:	All GEM Year 1; All Medicine Dublin Year 1; All Medicine Dublin Foundation Year; All Medicine Penang Year 1; All Pharmacy Year 1; All Physiotherapy Foundation Year; All Physiotherapy Year 1; Colm Healy
Subject:	Reminder - request to participate in an online Focus group.
Date:	Friday 4 June 2021 17:22:00

Dear Students

Firstly, thank you to those students who have already volunteered to participate. Dr Healy will be in touch early next week to arrange a suitable time to host the focus groups on line with you.

For those of you who may have missed my email last week, my name is Judith Gilroy and I am a member of staff in [redacted] based in [redacted], Dublin. This email is an invitation to you to assist me in conducting a research study. Research volunteers are needed to participate in a study looking at how first year and foundation year students use the campus in [redacted] This research is part of my doctoral thesis which aims to explore what impact, if any, campus buildings have on your learning experience.

Before you decide, it is important that you understand why the research is being done and what it would involve for you. Please take time to read this email and the information sheet carefully. There is no obligation to take part. If you do decide to take part, you may withdraw at any time. In order to comply with data protection regulations and ethical approval, the [redacted] eans Office acts as gatekeeper in the project and has issued this email. Responses will not be returned to Judith Gilroy.

If you volunteer, you will be asked to attend an on-line focus group for approx. 60 minutes, which **we will take place in June**, during which you will confidentially share your experiences of using [redacted] nd other campus buildings, as part of a small group of students (8 max). The discussion will be on-line, using MS Teams. Your participation in the focus group will be anonymised prior to the analysis of the data.

While the Principal Investigator is Ms Judith Gilroy, Associate Director for Academic Affairs, the focus group will be facilitated by [redacted] Post-doctorate researcher. Ms Gilroy will analyse the data generated by the study, but will not know the identity of any of the participants.

Are you interested? Would you like to know more? Then click here for a link to the information sheet and consent form. To help with the scheduling of the Focus Groups, I would be grateful if you could complete the form by Tuesday 8th June.

Thank you for reading this email, and for considering taking part in the survey,

Best Wishes

Judith

7. Observation Template

(Note: printed and used A4 landscape)

TIME	Physical environment: SPACE: Chairs / tables as situated Observation of Covid protocol Anything else	Human setting: Organisation of the people Characteristics and makeup of the group (gender / programme / age) Who? How many? How are they there?	Interactional setting: "acts and activities" Formal / Informal (F / IF); Work / Social (W/S); Planned / unplanned? (P / UP); Verbal / non Verbal (V / NV) Eating? Prevalence of behaviours

Template completed over a 7 minute period on Friday evening.

8. Focus group coding and themes

Codes are arranged alphabetically under the themes generated through Reflexive TA of the focus group data.

The Destination …. and the Journey. Subtheme: Past Lives.	Building Connections for Now and for the Future.	Part of Something Bigger Subthemes: Pointers help us find our way and Escape Valves.	Authenticity and Experientiality Subthemes: Sense of Development and Progression.	Reasons to Linger Subthemes: Agency, choice and control.
Challenging	Collaborate	Anonymity	Acquisition of	Avoid Campus
Destiny	Communal	Art and artefacts	Act as a ..	Belong and Inhabit
Dissonance	COVID-19	Awe	Anatomy	Coffee / Food
Growing up	Dreams	Commonality	Application of knowledge	Collaborative space
Inter Professional Education	Future Focus	Design cues	Authentic	Communal
Motivation	Gatherings	Escape / exercise (Excape)	Doing Well	COVID-19
Multi-layered identity	Hanging out	Joint purpose	Experience	Discuss
New to me	Kitchens	Nature	Feel like a med student	Kitchens
Past life: experiences	Learning Together	Not alone	Fulfilment	Not Welcomed
Past life: family	Living Together	Other People	Hands on learning	Pedagogic Space
Project Forward	Lonely	Outside Connections	Hierarchy	Peer Support
Role Models	Loss	Outside Spaces	Kit	Personal Control
Self-Drive	Meet people	Pressure	Learning together	Purposeful

The Destination …. and the Journey. Subtheme: Past Lives.	Building Connections for Now and for the Future.	Part of Something Bigger Subthemes: Pointers help us find our way and Escape Valves.	Authenticity and Experientiality Subthemes: Sense of Development and Progression.	Reasons to Linger Subthemes: Agency, choice and control.
Self-Identify as leader	Peers +ve	Purpose	Mentors / near peers	Relaxed
Sense of perspective	Peers -ve	Role models	Mentors / professional	Restrictions
Transition	Socialisation	Symbolism	Practice	Safe
	Symbolic events – WCC	Together-apart	Practise your craft	Surveillance
	Understanding of others	Views	Professional Mentors	Talk
		Visible and transparent	Progression	Third Spaces
		Worldview	Reflection	Variety of Spaces
			Separation	Welcoming and Inclusive
			Team work	

9. Additional Images of the Campus

Note: any images showing students are from UoH photo banks, where students have consented for their images to be used and shared. All images are used with permission from the University of Health and / or Henry J Lyon, Architects.

FIGURE 39 3D SECTION OF N-BUILDING WITH GUIDE

FIGURE 40 STUDENTS AT THE BLUE COUCHES, GROUND FLOOR LEARNING COMMONS

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

Figure 41 Views from the blues: Learning Commons, Ground Floor, N-Building

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 42 THE STUDY PODS, GROUND FLOOR LEARNING COMMONS N-BUILDING

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 43 VIEW FROM THE DISPENSARY CAFÉ BACK THROUGH THE STUDY PODS

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 44 THE DISPENSARY CAFÉ, GROUND FLOOR N-BUILDING

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 45 THE PODS: DISPENSARY CAFÉ BEHIND AND VIEWS THROUGH TO THE COURTYARD

Figure 46 Red line boundary of the city centre campus, showing key buildings and relationship to city centre park and ponds. Source: Google Maps

FIGURE 47 EVENING VIEW FROM THE CITY STREET – SEE AND BE SEEN AT THE BLUE COUCHES

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 48 N-BUILDING MAIN ENTRANCE: BLUE COUCHES ROUND TO THE LEFT

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 49 VIEWS FROM THE 2ND FLOOR STAIRS OUT TO THE STREET

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 50 VIEWS: INSIDE AND OUT: STUDENTS WORKING PRE COVID-19

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

FIGURE 51 HISTORICAL ARTEFACTS AND PRIZE BOARDS IN THE ORIGINAL 1810 BUILDING WALKWAYS

FIGURE 52 STUDENTS IN A TEACHING SCENARIO IN THE MOCK OPERATING THEATRE, BEING OBSERVED THROUGH ONE-WAY GLASS

FIGURE 53 "MOCK" PHARMACY: CREATING THE MISE-EN-SCÈNE

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

Figure 54 Student using a task trainer to practice laparoscopic surgical skills

Figure 55 Students using blood pressure monitors on each other

FIGURE 56 STUDENTS SITTING UNDERNEATH THE PORTRAIT OF DR MARY SOMERVILLE PARKER STRANGMAN (1872 – 1943) BY MICK O' DEA.

This portrait is part of a series, Women on Walls, commissioned to enhance the visibility of historical female leaders in healthcare, through the production of chronologically accurate portraiture. In this way, these women of stature who were absent on the walls have been added to their rightful places amongst their male counterparts. The portraits were unveiled in 2019. [36]

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

[36] Women on Walls

FIGURE 57 PODS AND LEARNING COMMONS BEING USED TO CELEBRATE LUNAR NEW YEAR FEBRUARY 2022

FIGURE 58 CLASS OF 2017 AT THE LAUNCH OF THE TIME CAPSULE INSTALLATION

Permission was sought and obtained to use these images of students from the University of Health. They are from UoH photo banks, where students have consented for their images to be used and shared.

10. Awards and Accolades for N-Building

N-Building has earned multiple awards since opening in Autumn 2017 including:

1. RIAI Architecture Awards 2018: Public Choice Award – 1st Place.
    - The Royal Institute of the Architects of Ireland (RIAI) announced N-Building as Ireland's Favourite Building, when it became the winner of the Public Choice category in June 2018, receiving more than 22% of votes cast in the competition.

- RIAI Architecture Awards 2018: Education Building of the Year Winner
- RIAI Architecture Awards 2018: Universal Design – Highly Commended
- Building of the Year Awards 2018: Overall Building of the Year
- Building of the Year Awards 2018: Educational Building of the Year
- Irish Concrete Awards 2018: Winner of the Building Category
- Irish Construction Excellence Awards 2018: Winner of the Education/Healthcare Award
- Irish Laboratory Awards 2019: Winner Education Laboratory of the Year
- Fitout Awards 2018: Fitout Project of the Year – Winner Overall Category
- Fitout Awards 2018: Fitout Project of the Year – Winner Healthcare Category
- Property Excellence Awards 2018: Winner Design Project of the Year
- Winner: The Society of College, National and University Libraries (SCONUL) Library Design Awards 2019

11. White Coat Ceremony Declaration

WHITE COAT CEREMONY

- Today I will begin to practice my profession in [*only name the profession relevant to you - Medicine, Pharmacy, Physiotherapy, Physicians Associate*] with conscience and dignity.
- As I learn, the health of my patient will be my first concern.
- I will maintain the utmost respect for human life.
- I will remember that there is art to my profession, as well as science, and that warmth, empathy, and understanding, skills I will strive to develop, may outweigh treatment alone.
- I will respect the confidential information that is entrusted in me, even after a patient has died.
- I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient nor to influence the appropriate completion of my duties as a health professional student.
- I will not use my professional knowledge to violate human rights and civil liberties, even under threat.
- I will study and respect the hard-won scientific gains of those in whose steps I walk, and gladly share such knowledge with those that follow – when and where I am appropriately qualified to do so.
- I will abide by the code of conduct of my profession and during my studies in I will strive to develop high standards of practice, lifelong education and research in the interest of human health.
- I make these promises solemnly, freely and upon my honour.

This page is intentionally blank.